



JEISOON KANG
HANWHA TECHWIN CO LTD
6, PANGYO-RO 319BEON-GIL, BUNDANG-GU
SEONGNAM-SI GYEONGGI-DO 13488 KOREA

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The following material resulting from the investigation under the above numbers is enclosed.

Issue

<u>Date</u>	<u>Vol</u>	<u>Sec</u>	<u>Pages</u>	<u>Revised Date</u>
	X1		Index Page(s)	
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<u>Product Type</u>	<u>Model/Type Reference</u>	<u>Report Reference #</u>	<u>Status</u>
Digital Video Recorder	SVR-430	E158873-A2-UL	
Video Presenter	UF-80, UF-80DX, UF-80ST	E158873-A4-UL	
Video Presenter	SVP-5300N	E158873-A5-UL	
Video Presenter	SDP-900DXAN, SDP-950DXAN, SDP-950STAN	E158873-A6-UL	
Video Presenter	SDP-850, SDP-850DX	E158873-A9-UL	
Digital Video Recorder	SVR-1650, SVR-1650E, SVR-1640, SVR-1640E, SVR-950, SVR-950E and SVR-1640A	E158873-A11-UL	
Video Presenter	SDP-6500DXA	E158873-A12-UL	
Video Presenter	UF-130DX	E158873-A14-UL	
Video Presenter	UF-130ST	E158873-A15-UL	
Network Video Recorder	SNR-6400, SNR-3200, SRN-3250, SRN-6450	E158873-A16-UL	
Digital Video Recorder.	SVR-480	E158873-A17-UL	Withdrawn
Video Presenter	SDP-860	E158873-A18-UL	
Digital Video Recorder.	SVR-1670	E158873-A19-UL	
UTP Power Supply Unit	SPU-400	E158873-A20-UL	Withdrawn
Digital Presenter	SDP-760	E158873-A44-UL	
Network Camera	SNP-5300H*, SNP-6201H* (* is Blank or N or P: N = NTSC, P=PAL)	E158873-A45-UL	
Network Camera	SND-7011*, SND-5011*, SND-5061*, SND-7061*, SNV-5010*, SNZ-5200* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A46-UL	
Network Camera	SNP-5300*, SNP-6201* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A47-UL	
Digital Color Camera	SCP-3371H*, SCP-2371H*, SCP-2271H*, SCP-2373H*, SCP-2273H* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A48-UL	
Digital Color Camera	SCP-3371*, SCP-2371*, SCP-2271*, SCP-2373*, SCP-2273* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A49-UL	
Network Camera	SND-7082*, SND-7082F*, SNV-7082* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A50-UL	
Network Camera	SNB-7001*, SNB-5001*, SNB-3002* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A51-UL	
Network Camera	SNO-7082R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A52-UL	
Network Camera	SNB-7002* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A53-UL	

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DIGITAL COLOR CAMERA	SCV-2010F*, SCD-1020R*, SCD-2080R*, SCD-2020R*, SCD-2010*, SCD-2010B*, SCD-2010F*, SCB-3020*, SCB-3021*, SCB-2010*, SCO-1020R* (* is blank or N or P: N=NTSC, P=PAL)	E158873-A54-UL	
Network Camera	SNB-6004*, SNB-6003*, SNB-5004*, SNB-5003*, SNB-7004*, SNB-6005* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A55-UL	
Network Camera	SND-6084*, SND-6083*, SND-5084*, SND-5083*, SND-7084* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A56-UL	
DIGITAL COLOR CAMERA	SCD-2022*, SCD-2022R*, SCD-2042R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A58-UL	
Digital Color Camera	SCB-2004*, SCB-2005* (* is blank or N or P: N = NTSC, P=PAL);	E158873-A59-UL	
Digital Color Camera	SCD-2082*, SCV-2082R*, SCV-3083*, SCD-3083* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A60-UL	
Network Camera	SND-6084R*, SND-7084R*, SND-5084R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A61-UL	
NETWORK CAMERA	SNO-6084R*. SNO-7084R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A62-UL	
Network Camera	SNV-6084R*, SNV-6084*, SNV-5084*, SNV-7084*, SNV-7084R*, SNV-5084R*, SNV-6084T* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A63-UL	
Digital Color Camera	SCO-2081R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A64-UL	
DIGITAL COLOR CAMERA	SCB-2004*D, SCB-2005*D (* is blank or N or P: N = NTSC, P=PAL)	E158873-A65-UL	
DIGITAL VIDEO RECORDER	SRD-1673D*, SRD-1654D*, SRD-854D*, SRD-852D*, SRD-1673*, SRD-1653*, SRD-873*, SRD-1640*, SRD-840*(* is blank or N or P, N=NTSC / P=PAL)	E158873-A66-UL	
Network Camera	SNP-6200RH*, SCP-2370RH* (* is blank or N or P: N=NTSC,P=PAL)	E158873-A67-UL	
Network Camera	SNV-6012M* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A68-UL	
Network Camera	SNF-7010*, SNF-7010V*, SNF-7010VM* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A69-UL	
Network Camera	SNO-6011R* (* is blank or N or	E158873-A72-UL	

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	P: N = NTSC, P=PAL)		
Network Camera	SND-6011R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A73-UL	
Digital Video Recorder	SRD-1680D*, SRD-880D* (* is blank or N or P : N=NTSC, P=PAL)	E158873-A74-UL	
DIGITAL COLOR CAMERA	SCZ-2373*, SCZ-2273* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A75-UL	
NETWORK CAMERA	SCO-6081R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A76-UL	
DIGITAL COLOR CAMERA	SCV-6081R* and SCD-6081R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A77-UL	
NETWORK VIDEO RECORDER	SRN-4000	E158873-A78-UL	
DIGITAL COLOR CAMERA	SCD-6021* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A81-UL	
NETWORK CAMERA	SNV-6013* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A83-UL	
NETWORK CAMERA	SNB-6010*, SNB-6010A*, SNB-6011*, SNB-6010B*, SNB-6011B* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A85-UL	
NETWORK CAMERA	SNP-6320H*, SNP-5430H* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A86-UL	
NETWORK CAMERA	SNP-6320*, SNP-5430* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A87-UL	
Network Video Recorder	SRN-472S, XRN-810S* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A88-UL	
Digital Video Recorder	SRD-1676D*, SRD-1656D*, SRD-876D* (* is blank or N or P, N=NTSC/ P=PAL)	E158873-A89-UL	
DIGITAL COLOR CAMERA	SCB-5000* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A90-UL	
DIGITAL COLOR CAMERA	SCB-5000*D (* is blank or N or P: N = NTSC, P=PAL)	E158873-A91-UL	
DIGITAL COLOR CAMERA	SCD-5080* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A92-UL	
DIGITAL COLOR CAMERA	SCB-5003*, SCB-5005*, HCB-6001* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A94-UL	
DIGITAL COLOR CAMERA	SCV-5082* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A95-UL	
DIGITAL COLOR CAMERA	SCD-5083*, SCD-5083R*, SCD-5082*, SCD-5083B*, SCD-5081R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A96-UL	
DIGITAL COLOR CAMERA	SCV-5083* (* is blank or N or P: N = NTSC, P=PAL) SCV-5083R* (* is blank or N or	E158873-A97-UL	

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	P: N = NTSC, P=PAL) SCV-5081R* (* is blank or N or P: N = NTSC, P=PAL)		
NETWORK CAMERA	SNF-8010VM*, SNF-8010* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A98-UL	
DIGITAL COLOR CAMERA	SCD-5030*, SCD-5020* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A99-UL	
NETWORK CAMERA	SNO-5084R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A100-UL	
DIGITAL COLOR CAMERA	SCO-5083R*, SCO-5081R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A101-UL	
NETWORK CAMERA	SNP-6321*, SNP-L6233* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A102-UL	
NETWORK CAMERA	SNP-6321H*, SNP-L6233H* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A103-UL	
DIGITAL COLOR CAMERA	SCV-5085* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A104-UL	
NETWORK CAMERA	SNB-8000* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A105-UL	
NETWORK CAMERA	SNV-8080* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A106-UL	
NETWORK CAMERA	SNZ-6320	E158873-A107-UL	
NETWORK CAMERA	SNP-6320RH*, SNP-L6233RH* (* is blank or N or P: N=NTSC,P=PAL)	E158873-A108-UL	
NETWORK CAMERA	SNP-5321H*, SNP-L5233H* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A109-UL	
NETWORK CAMERA	SNP-5321*, SNP-L5233* (* is blank or N: NTSC or P:PAL)	E158873-A110-UL	
NETWORK CAMERA	SND-L6013R*, SND-L6013*, SND-L6012*, SND-L5013* (* is blank or N or P: N:NTSC/P:PAL)	E158873-A111-UL	
NETWORK CAMERA	SNO-L6083R*, SNO-L5083R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A113-UL	
Network Video Recorder	SRN-1673S*(* is blank or N or P: N = NTSC, P=PAL)	E158873-A115-UL	
NETWORK CAMERA	SNO-L6013R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A118-UL	
NETWORK CAMERA	SND-L6083R*, SND-L5083R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A119-UL	
Network Video Recorder	SRN-873S* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A120-UL	
NETWORK CAMERA	SNV-L6083R*, SNV-L5083R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A121-UL	

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NETWORK CAMERA	SNB-9000* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A122-UL	
Optical PTZ Accessary	SBP-301HF	E158873-A125-UL	
Optical PTZ Accessary	SBP-300HF	E158873-A126-UL	
NETWORK CAMERA	SNV-8081R* (* is Blank or N or P: N = NTSC, P=PAL)	E158873-A127-UL	
NETWORK CAMERA	SNO-8081R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A128-UL	
NETWORK CAMERA	SNV-6085R* (* is blank or N or P: N = NTSC, P=PAL) SNV-6085* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A129-UL	
DIGITAL COLOR CAMERA	SCB-6003* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A130-UL	
DIGITAL COLOR CAMERA	SCO-6023R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A132-UL	
DIGITAL COLOR CAMERA	SCV-6083R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A133-UL	
DIGITAL COLOR CAMERA	SCV-6023R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A135-UL	
DIGITAL COLOR CAMERA	SCD-6023R*, SCD-6013* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A136-UL	
DIGITAL COLOR CAMERA	SCD-6083R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A137-UL	
DIGITAL COLOR CAMERA	SCO-6083R*(* is blank or N or P: N = NTSC, P=PAL)	E158873-A138-UL	
NETWORK CAMERA	SNV-L6014RM*, SNV-L6013R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A139-UL	
DIGITAL COLOR CAMERA	PNO-9080R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A140-UL	
NETWORK CAMERA	PNV-9080R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A141-UL	
NETWORK CAMERA	PND-9080R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A142-UL	
Digital Video Recorder	SRD-1685*, SRD-894*, HRD-842* (* is blank or N or P, N=NTSC/ P=PAL)	E158873-A143-UL	
Digital Video Recorder	SRD-1694*, HRD-1642* (* is blank or N or P, N=NTSC/ P=PAL)	E158873-A144-UL	
Network Video Recorder (NVR)	XRN-2011*, XRN-2010*, XRN-3010*, XRN-1610* (* is blank or N or P: N=NTSC, P=PAL) XRN-2010P/DM, XRN-3010P/DM, XRN-3010A, XRN-2011A, XRN-2010A, XRN-1610A	E158873-A146-UL	
NETWORK CAMERA	QNO-7030R*, QNO-7020R*, QNO-7010R*, QNO-6030R*, QNO-6020R*, QNO-6010R*, QNO-6070R*, QNO-7080R*, QNO-6071R* (* is blank or N or	E158873-A147-UL	

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	P: N = NTSC, P=PAL)		
NETWORK CAMERA	QND-7030R*, QND-7020R*, QND-7010R*, QND-6030R*, QND-6020R*, QND-6010R*, QND-6070R*, QND-7080R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A148-UL	
NETWORK CAMERA	QNV-7030R*, QNV-7020R*, QNV-7010R*, QNV-6030R*, QNV-6020R*, QNV-6010R*, QNV-6070R*, QNV-7080R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A149-UL	
Network Video Recorder	XRN-1610S* (* is blank or N or P: N=NTSC, P=PAL) XRN-1610SP/DM, XRN-1610SA	E158873-A150-UL	
NETWORK CAMERA	PNF-9010RV*, PNF-9010R*, PNF-9010RVM* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A151-UL	
NETWORK CAMERA	PNM-9020V* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A152-UL	
Network Video Recorder	PRN-4011* (* is blank or N or P: N=NTSC, P=PAL)	E158873-A153-UL	
DIGITAL COLOR CAMERA	HCP-6320*, HCP-6320A*, HCP- 6230* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A154-UL	
DIGITAL COLOR CAMERA	HCP-6320H*, HCP-6320HA*, HCP-6230H* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A155-UL	
NETWORK CAMERA	PNP-9200RH*, XNP-6370RH*, XNP-6330RH* (* is blank or N or P: N=NT, P=PAL)	E158873-A156-UL	
NETWORK CAMERA	XNB-8000*, XNB-6000* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A157-UL	
NETWORK CAMERA	XNO-8080R*, XNO-6080R*, XNO-6120R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A158-UL	
NETWORK CAMERA	XNV-8040R*, XNV-8030R*, XNV-8020R*, XNV-6020*, XNV- 6010*, XNV-6020R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A159-UL	
NETWORK CAMERA	XND-8040R*, XND-8030R*, XND-8020R*, XND-6020*, XND- 6010*, XND-6020R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A160-UL	
NETWORK CAMERA	XNV-8080R*, XNV-6080R*, XNV-6080*, XNV-6120R*, XNV- 6120* (* is blank or N or P: N = NTSC, P=PAL) , XNV-8080RS, XNV-6080RS, XNV-6120RS.	E158873-A161-UL	
NETWORK CAMERA	XND-8080RV*, XND-8080R*, XND-6080RV*, XND-6080R*, XND-6080V*, XND-6080* (* is	E158873-A162-UL	

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	blank or N or P: N = NTSC, P=PAL)		
AHD Multi Directional Camera	HCM-9020VQ* (is blank or N or P: N = NTSC, P=PAL)	E158873-A163-UL	
NETWORK CAMERA	XNO-8020R*, XNO-8030R*, XNO-8040R*, XNO-6010R*, XNO-6020R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A164-UL	
NETWORK CAMERA	XNV-6011* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A165-UL	
DIGITAL COLOR CAMERA	HCD-6080R*, HCD-6070R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A167-UL	
DIGITAL COLOR CAMERA	HCV-6080R*, HCV-6070R* (* is N or P: N = NTSC, P=PAL)	E158873-A168-UL	
NETWORK CAMERA	XNP-6120H* (* is N or P: N = NTSC, P=PAL)	E158873-A169-UL	
NETWORK CAMERA	XND-8020F*, XND-6011F* (* is N or P: N = NTSC, P=PAL)	E158873-A170-UL	
NETWORK CAMERA	PNM-9080VQ* (* is N or P: N = NTSC, P = PAL)	E158873-A172-UL	
Network Storage	SRB-160S	E158873-A173-UL	
NETWORK CAMERA	TNB-6030* (* is N or P: N = NTSC, P = PAL)	E158873-A174-UL	
NETWORK CAMERA	PNM-9081VQ* (* is N or P: N = NTSC, P = PAL)	E158873-A176-UL	
NETWORK CAMERA	XNO-6085R* (* is N or P: N = NTSC, P=PAL)	E158873-A177-UL	
NETWORK CAMERA	XNB-6005* (* is N or P: N = NTSC, P=PAL)	E158873-A178-UL	
NETWORK VIDEO RECORDER	SNR-D5401N	E158873-A179-UL	
NETWORK CAMERA	XND-6085*, XND-6085V* (* is N or P: N = NTSC, P=PAL)	E158873-A180-UL	
NETWORK CAMERA	XNV-6085* (* is N or P: N = NTSC, P=PAL)	E158873-A181-UL	
NETWORK CAMERA	XNP-6040H* (* is N or P: N = NTSC, P=PAL)	E158873-A182-UL	
NETWORK VIDEO DECODER	SPD-150* (* is N or P: N = NTSC, P=PAL)	E158873-A184-UL	
DIGITAL COLOR CAMERA	HCB-6000*, HCB-7000* (* is N or P: N = NTSC, P=PAL)	E158873-A185-UL	
DIGITAL COLOR CAMERA	HCZ-6320* (* is N or P: N = NTSC, P=PAL)	E158873-A186-UL	
NETWORK CAMERA	XNF-8010RVM*, XNF-8010RV*, XNF-8010R* (* is N or P: N = NTSC, P=PAL)	E158873-A187-UL	
DIGITAL COLOR CAMERA	HCO-6070R*, HCO-6080R* (* is N or P: N = NTSC, P=PAL)	E158873-A188-UL	
NETWORK CAMERA	XNB-6001* (* is N or P: N = NTSC, P=PAL)	E158873-A189-UL	
DIGITAL COLOR CAMERA	HCO-7070R* (* is N or P: N = NTSC, P=PAL)	E158873-A190-UL	

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LENS MODULE	SLA-T2480*, SLA-T2480V*, SLA-T4680*, SLA-T4680V* (* is N or P: N = NTSC, P=PAL), SLA-T4680D, SLA-T4680DW, SLA-T4680DS, SLA-T2415, SLA-T2815B.	E158873-A191-UL	
DIGITAL COLOR CAMERA	HCD-7070R* (* is N or P: N = NTSC, P=PAL)	E158873-A192-UL	
DIGITAL COLOR CAMERA	HCV-7070R* (* is N or P: N = NTSC, P=PAL)	E158873-A193-UL	
NETWORK VIDEO RECORDER	TRM-1610S	E158873-A194-UL	
LENS MODULE	SLA-T1080F* (* is N or P: N = NTSC, P=PAL)	E158873-A195-UL	
NETWORK SWITCH	SPN-10080P, SPN-10080PM	E158873-A196-UL	
ANALOG CAMERA	HCV-7010R*, HCV-7020R*, HCV-7030R* (* is N or P: N = NTSC, P=PAL)	E158873-A197-UL	
DIGITAL COLOR CAMERA	HCD-7010R*, HCD-7020R*, HCD-7030R* (* is N or P: N = NTSC, P=PAL)	E158873-A198-UL	
DIGITAL COLOR CAMERA	HCO-7010R*, HCO-7020R*, HCO-7030R* (* is N or P: N = NTSC, P=PAL)	E158873-A199-UL	
NETWORK CAMERA	XNP-6320, QNP-6230, XNP-6321	E158873-A200-UL	
NETWORK CAMERA	XNP-6320H, XNP-6320HS, QNP-6230H, XNP-6321H	E158873-A201-UL	
NETWORK THERMAL CAMERA	TNO-4050T, TNO-4030T, TNO-4040T	E158873-A202-UL	
NETWORK THERMAL CAMERA	TNO-4051T, TNO-4041T	E158873-A204-UL	
NETWORK CAMERA	XNV-6013M	E158873-A205-UL	
NETWORK CAMERA	XNV-6012M, XNV-6012	E158873-A206-UL	
NETWORK CAMERA	XNV-6022R, XNV-6022RM	E158873-A207-UL	
NETWORK CAMERA	LNO-6070R, LNO-6071R	E158873-A208-UL	
NETWORK CAMERA	LNO-6030R, LNO-6020R, LNO-6010R, LNO-6031R, LNO-6021R, LNO-6011R, LNO-6011RW	E158873-A209-UL	
NETWORK CAMERA	LNV-6070R	E158873-A210-UL	
NETWORK CAMERA	LND-6070R, LND-6071R	E158873-A213-UL	
NETWORK CAMERA	LNV-6030R, LNV-6020R, LNV-6010R, LNV-6031R, LNV-6021R, LNV-6011R	E158873-A214-UL	
NETWORK CAMERA	LND-6030R, LND-6020R, LND-6010R	E158873-A215-UL	
NETWORK CAMERA	XNV-L6080R, XNV-L6080	E158873-A216-UL	
NETWORK CAMERA	XND-L6080RV, XND-L6080R, XND-L6080V	E158873-A217-UL	
NETWORK CAMERA	XNO-L6080R	E158873-A218-UL	
NETWORK CAMERA	PNM-7000VD	E158873-A220-UL	

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E158873	Index	X1	9	24-Nov-19

NETWORK VIDEO ENCODER	SPE-410, SPE-410A* (* is Blank or N or P, N = NTSC, P = PAL)	E158873-A222-UL	
NETWORK VIDEO ENCODER	SPE-1610, SPE-1610A* (* is Blank or N or P, N = NTSC, P = PAL), NVE3016	E158873-A223-UL	
NETWORK POSITIONING CAMERA	TNU-6320	E158873-A224-UL	
Network Video Recorder	QRN-1610S	E158873-A225-UL	
NETWORK CAMERA	QNE-7080RV, QNE-6080RV	E158873-A226-UL	
NETWORK CAMERA	PNM-9000VQ	E158873-A227-UL	
Network Camera	XNP-6550RH, XNP-6320RH, XNP-6250RH, QNP-6230RH	E158873-A229-UL	
NETWORK CAMERA	PNM-9320VQP, PNM-9321VQP.	E158873-A230-UL	
NETWORK CAMERA	XNZ-6320	E158873-A231-UL	
NETWORK ENCODER	SPE-110N, SPE-110A* (* is Blank or N or P, N = NTSC, P = PAL)	E158873-A232-UL	
THERMAL POSITIONING CAMERA	TNU-4041T, TNU-4051T	E158873-A233-UL	
NETWORK CAMERA	PNM-9030V	E158873-A234-UL	
NETWORK CAMERA	TNV-7010RC	E158873-A235-UL	
NETWORK CAMERA	XND-8081VZ, XND-8081FZ, XND-6081VZ, XND-6081FZ	E158873-A236-UL	
DIGITAL COLOR CAMERA	HCF-8010V	E158873-A239-UL	
ANALOG CAMERA	HCO-6020R	E158873-A241-UL	
NETWORK CAMERA	XNV-6081, XNV-6081R, XNV-8081R	E158873-A242-UL	
NETWORK VIDEO RECORDER	TRM-810S, TRM-410S	E158873-A243-UL	
ANALOG CAMERA	HCD-6020R, HCD-6010	E158873-A244-UL	
NETWORK CAMERA	XND-6081V, XND-6081F, XND-6081RV, XND-6081RF, XND-8081RV, XND-8081RF	E158873-A245-UL	
NETWORK CAMERA	XND-L6080	E158873-A246-UL	
NETWORK CAMERA	TNO-6010M	E158873-A247-UL	
ANALOG CAMERA	SCO-6085R	E158873-A248-UL	
NETWORK CAMERA	PNM-9000VD	E158873-A249-UL	
NETWORK CAMERA	QND-6083R, QND-6082R, QND-6073R, QND-6072R, QND-6032R, QND-6022R, QND-6012R	E158873-A250-UL	
NETWORK CAMERA	QNE-8021R, QNE-8011R	E158873-A251-UL	
NETWORK CAMERA	QND-8021, QND-8011	E158873-A252-UL	
NETWORK CAMERA	QNO-8080R, QNO-8010R, QNO-8020R, QNO-8030R	E158873-A253-UL	
NETWORK CAMERA	QND-6021, QND-6011	E158873-A254-UL	
NETWORK CAMERA	QNO-6083R, QNO-6082R, QNO-6012R, QNO-6022R,	E158873-A255-UL	

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E158873	Index	X1	10	24-Nov-19

	QNO-6032R, QNO-6072R, QNO-6073R		
NETWORK CAMERA	QNV-6083R, QNV-6082R, QNV-6073R, QNV-6072R, QNV-6012R, QNV-6022R, QNV-6032R	E158873-A256-UL	
NETWORK CAMERA	QNV-8080R, QNV-8010R, QNV-8020R, QNV-8030R	E158873-A257-UL	
NETWORK CAMERA	QND-8080R, QND-8010R, QND-8020R, QND-8030R	E158873-A258-UL	
NETWORK CAMERA	QNF-8010	E158873-A259-UL	
NETWORK CAMERA	LNV-6012R, LNV-6022R, LNV-6032R	E158873-A260-UL	
NETWORK CAMERA	LNV-6072R	E158873-A261-UL	
NETWORK CAMERA	LND-6012R, LND-6022R, LND-6032R	E158873-A262-UL	
NETWORK CAMERA	LND-6072R	E158873-A263-UL	
NETWORK CAMERA	QNV-6024RM, QNV-6023R	E158873-A264-UL	
NETWORK CAMERA	LNO-6012R, LNO-6022R, LNO-6032R	E158873-A265-UL	
NETWORK CAMERA	LNO-6072R	E158873-A266-UL	
Digital Video Recorder	HRX-1621* (* is Blank or N or P : P=PAL, N=NTSC)	E158873-A267-UL	
Digital Video Recorder	HRX-821* (* is Blank or N or P : P=PAL, N=NTSC)	E158873-A268-UL	
NETWORK THERMAL CAMERA	TNO-3010T, TNO-3020T, TNO-3030T	E158873-A269-UL	
NETWORK CAMERA	PNM-9084QZ	E158873-A270-UL	
NETWORK CAMERA	XNP-6371RH	E158873-A275-UL	
NETWORK CAMERA	XNZ-L6320	E158873-A276-UL	
NETWORK VIDEO RECORDER	WRN-1610S	E158873-A6002-UL	
NETWORK VIDEO RECORDER	WRN-810S* (* is Blank or N or P : P=PAL, N=NTSC)	E158873-A6003-UL	

CERTIFICATE OF COMPLIANCE

Certificate Number 20191126-E158873
Report Reference E158873-A275-UL
Issue Date 2019-NOVEMBER-26

Issued to: Hanwha Techwin Co Ltd
6, Pangyo-ro 319beon-gil, Bundang-gu Seongnam-si
Gyeonggi-do 13488 KOREA

This certificate confirms that representative samples of INFORMATION TECHNOLOGY EQUIPMENT INCLUDING ELECTRICAL BUSINESS EQUIPMENT NETWORK CAMERA, XNP-6371RH

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 60950-1 and CAN/CSA C22.2 No. 60950-1-07, Information Technology Equipment - Safety - Part 1: General Requirements

Additional Information: See the UL Online Certifications Directory at <https://iq.ulprospector.com> for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 2nd Edition, 2019-05-09 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements)
Certification Type:	Listing
CCN:	NWGQ, NWGQ7 (Information Technology Equipment Including Electrical Business Equipment)
Product:	NETWORK CAMERA
Model:	XNP-6371RH
Rating:	24 Vac, 50/60 Hz, 4.2 A
Applicant Name and Address:	HANWHA TECHWIN CO LTD 6, PANGYO-RO 319BEON-GIL, BUNDANG-GU SEONGNAM-SI KOREA, REPUBLIC OF

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared by: Sungil Kim

Reviewed by: Seulki Park

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

- A. Authorization - The Authorization page may include additional Factory Identification Code markings.
- B. Generic Inspection Instructions -
 - i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
 - ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
 - iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

NETWORK CAMERA intended for indoor use.

Electronic components were mounted on PWB and housed in plastic and metal enclosure and supplied by SELV and LPS.

Model Differences

N/A

Technical Considerations

- Equipment mobility : Fixed
- Connection to the mains : No direct connection
- Operating condition : continuous
- Access location : operator accessible
- Over voltage category (OVC) : OVC I
- Mains supply tolerance (%) or absolute mains supply values : No direct connection
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Class III (supplied by SELV)
- Considered current rating of protective device as part of the building installation (A) : N/A
- Pollution degree (PD) : N/A
- IP protection class : IP X0
- Altitude of operation (m) : Up to 2 000
- Altitude of test laboratory (m) : less than 2000 meters
- Mass of equipment (kg) : 7.0
- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 55 °C,
- The product was investigated to the following additional standards: IEC 62471:2006 (1st edition)
- The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual

Additional Information	
Original (4789186683) - Maximum normal load: Continuous operation with IR LED on.	
Additional Standards	
The product fulfills the requirements of: N/A	
Markings and instructions	
Clause Title	Marking or Instruction Details
Power rating - Ratings	Ratings (voltage, frequency/dc, current)
Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
Power rating - Model	Model Number
Fuses - Rating	Rated current and voltage and type located on or adjacent to fuse or fuseholder.
Replaceable batteries	"CAUTION: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions."
Website Manual -1	The Users Manual should provide simple instructions for the correct selection of a suitable Listed Class 2 Power Units, including a statement such as "This product is intended to be supplied by Power Unit marked "Class 2" or "LPS" and rated 24 Vac(50 or 60 Hz), Min. 4.2 A.
Website Manual -2	ITE is to be connected only to PoE networks without routing to the outside plant. Unit is intended for installation in a Network Environment 0 as defined in IEC TR 62102. As such, associated Ethernet wiring shall be limited to inside the building.
Hard Copy	A. IMPORTANT B. Please check 'Manuals' from our website, before connecting to the Supply, C. Company website URL (https://www.~~)
Special Instructions to UL Representative	
N/A	

Production-Line Testing Requirements

Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.

Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
N/A						

Earthing Continuity Test Exemptions - This test is not required for the following models:

All models

Electric Strength Test Exemptions - This test is not required for the following models:

All models

Electric Strength Test Component Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:

Sample and Test Specifics for Follow-Up Tests at UL

Model	Component	Material	Test	Sample(s)	Test Specifics
N/A					

1.5.1	TABLE: list of critical components					Pass
Object/part or Description	Manufacturer/ trademark	type/model	technical data	Product Category CCN(s)	Required Marks of Conformity	Supplement ID
Power Supply (Optional)	Interchangeable	Interchangeable	Rated output 24 Vac, 50/60 Hz, min.4.2 A, marked "LPS" or "Class 2"	QQGQ or EPBU	UL	
Enclosure	SABIC INNOVATIVE PLASTICS B V	925U(f1)(GG)	Min. 1.5 mm thickness, rated V-0, 115 deg.C, see enclosure for dimension.	QMFZ2	UL (E45329)	
External Side Dome Cover	SAMYANG CORPORATION	3500G-(z)	Min. 1.5 mm thickness, rated V-0, 125 deg.C, see enclosure for dimension.	QMFZ2/8	UL (E121254)	
Camera Front Cover	SAMYANG CORPORATION	3500G-(z)	Min. 1.5 mm thickness, rated V-0, 125 deg.C, see enclosure for dimension.	QMFZ2/8	UL (E121254)	
Camera Rear Cover	LOTTE ADVANCED MATERIALS CO LTD	NH-1035(+)	Min. 1.5 mm thickness, rated Min. V-0, 80 deg.C, see enclosure for dimension.	QMFZ2/8	UL (E115797)	
Internal Metal Cover	Interchangeable	Interchangeable	Aluminium, Min. 1.5 mm thickness.	-	-	
Fuse (F1)	ORISEL CO LTD	OS5	250 V, 6.3 A	JDYX2/8	UL (E126056)	
Fuse (F1) - (Alternate)	COOPER BUSSMANN LLC	SS-5	250 V, 6.3 A	JDYX2/8	UL (E19180)	
Fuse (F2)	ORISEL CO LTD	OS5	250 V, 4 A	JDYX2/8	UL (E126056)	
Fuse (F2) - (Alternate)	COOPER BUSSMANN LLC	SS-5	250 V, 4 A	JDYX2/8	UL (E19180)	
Transformer (T1)	DONG HEUNG ELECTRONICS CO LTD	SNP-6320RH-T1	CLASS B, marked with ???DHB-001???, 130 deg.C, see enclosure for more detail.	OBJY2	UL (E141730)	
Transformer (T1) - (Alternate)	DONG IN SYSTEM CO LTD	SNP-6320RH-T1	CLASS B, marked with ???DIS-10B???, 130 deg.C, see enclosure for more detail.	OBJY2	UL (E242921)	
Transformer (L32)	DONG HEUNG ELECTRONICS CO	SNP-6320RH-L32	CLASS B, marked with ???DHB-001???, 130 deg.C,	OBJY2	UL (E141730)	

	LTD		see enclosure for more detail.			
Transformer (L32) - (Alternate)	DONG IN SYSTEM CO LTD	SNP-6320RH-L32	CLASS B, marked with ???DIS-10B???, 130 deg.C, see enclosure for more detail.	OBJY2	UL (E242921)	
Line Filter (CT1)	DONG HEUNG ELECTRONICS CO LTD	SNP-6320RH-CT1	Rated Min. 0.5 uH, Base: V-0, RTI 150 deg.C	-	-	
Line Filter (CT1) - (Alternate)	DONG IN SYSTEM CO LTD	SNP-6320RH-CT1	Rated Min. 0.5 uH, Base: V-0, RTI 130 deg.C	-	-	
Line Filter (LF1)	TNC CO LTD	CH970020	Rated Min. 2.0 mH, Base: V-0, RTI 130 deg.C	-	-	
Line Filter (NL1)	TNC CO LTD	CV36045USA2	Rated Min. 450 uH, Base: V-0, RTI 150 deg.C	-	-	
Elec-capacitor (C60,C61, C62, C63)	Interchangeable	Interchangeable	Rated 50 V, 3300 uF, 105 deg.C	-	-	
Inductor (L31)	Interchangeable	Interchangeable	Rated 1.5 uH	-	-	
Optocoupler (PC1, PC2)	LITE-ON TECHNOLOGY CORP	LTV-817	Isolation Voltage: 5000. Max. Operation Temperature:110 deg. C	FPQU2/8	UL (E113898)	
Optocoupler (PC1, PC2) - (Alternate)	AUK CORP	PC-17K1C	Isolation Voltage: 5000. Max. Operation Temperature:100 deg. C	FPQU2/8	UL (E107486)	
Pan / Tilt Motor (Stepping type)	SHINANO KENSHI CO LTD	STH-42C2010	Rated 12 Vdc, 1.0 A Hybrid stepping type	-	-	
DC Fan (near SMPS)	MINEBEAMITSUMI INC.	1604KL-04W-B50	Rated 12 Vdc, 0.1 A	GPWV2/8	UL (E89936)	
DC Fan (near Camera)	MINEBEAMITSUMI INC.	BM4515-04W-B50	Rated 12 Vdc, 0.25 A,	GPWV2/8	UL (E89936)	
DC Fan (near IR LED)	MINEBEAMITSUMI INC.	1204KL-04W-B39	Rated 12 Vdc, 0.09 A	GPWV2/8	UL (E89936)	
Heater (near SMPS)	JEIL ELECTRONICS CO LTD	RH30190	Rating: 24 Vac, 30 W	-	-	
Heater (near Camera)	JEIL ELECTRONICS CO LTD	RH1015	Rating: 12 Vdc, 10 W	-	-	
Lithium Battery (BAT1)	FDK CORPORATION	ML614R	Lithium ion (Coin), Rechargeable, Max. ChargingVoltage: 5.0 Vdc,	BBCV2	UL (MH13421)	

			Max. Charging Current: 300 mA			
LED	OSRAM	SFH4715AS	VF = Max. 4.7 V, IF = Max.3 A	-	-	
Internal Wiring (Secondary)	Interchangeable	Interchangeable	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; Min. 30 V, 80 deg. C	AVLV2	UL	
Cable	Interchangeable	Interchangeable	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; Min. 30 V, 80 deg. C	AVLV2	UL	
Connectors and Receptacles (Secondary circuits)	Interchangeable	Interchangeable	-	ECBT2 or RTRT2	UL	
Connectors and Receptacles (Secondary circuits) (Alternate)	Interchangeable	Interchangeable	Copper alloy pins housed in bodies of plastic rated Min. V-2	QMFZ2	UL	
FPWB	Interchangeable	Interchangeable	Min. V-0, 80 deg.C.	QMFZ2 or QMTS2	UL	
PWB	Interchangeable	Interchangeable	Min. V-1, 105 deg.C	ZPMV2	UL	
Label	Interchangeable	Interchangeable	Min.55 deg.C if max. surface temperature not specified.	PGDQ2 or PGJ12	UL	

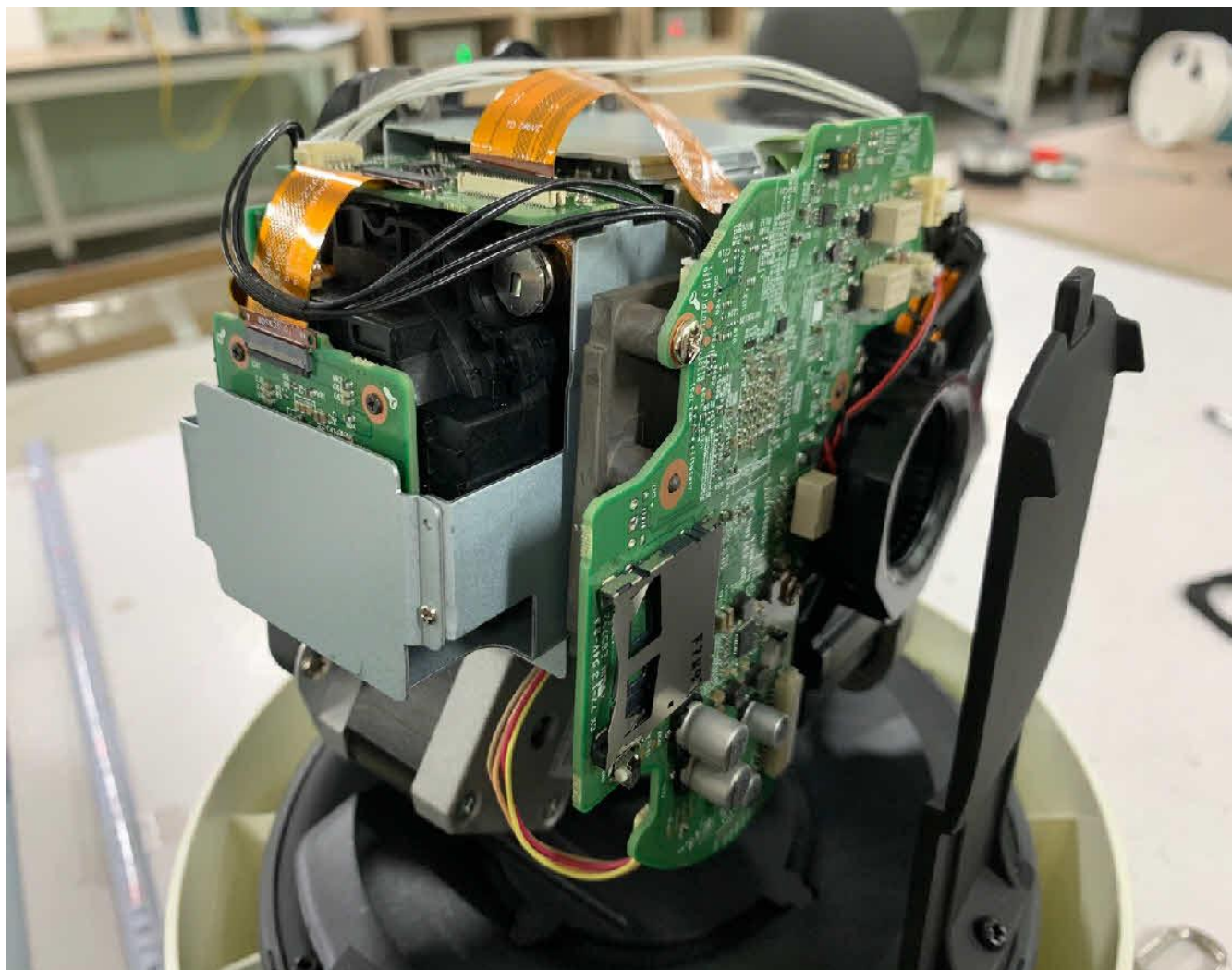
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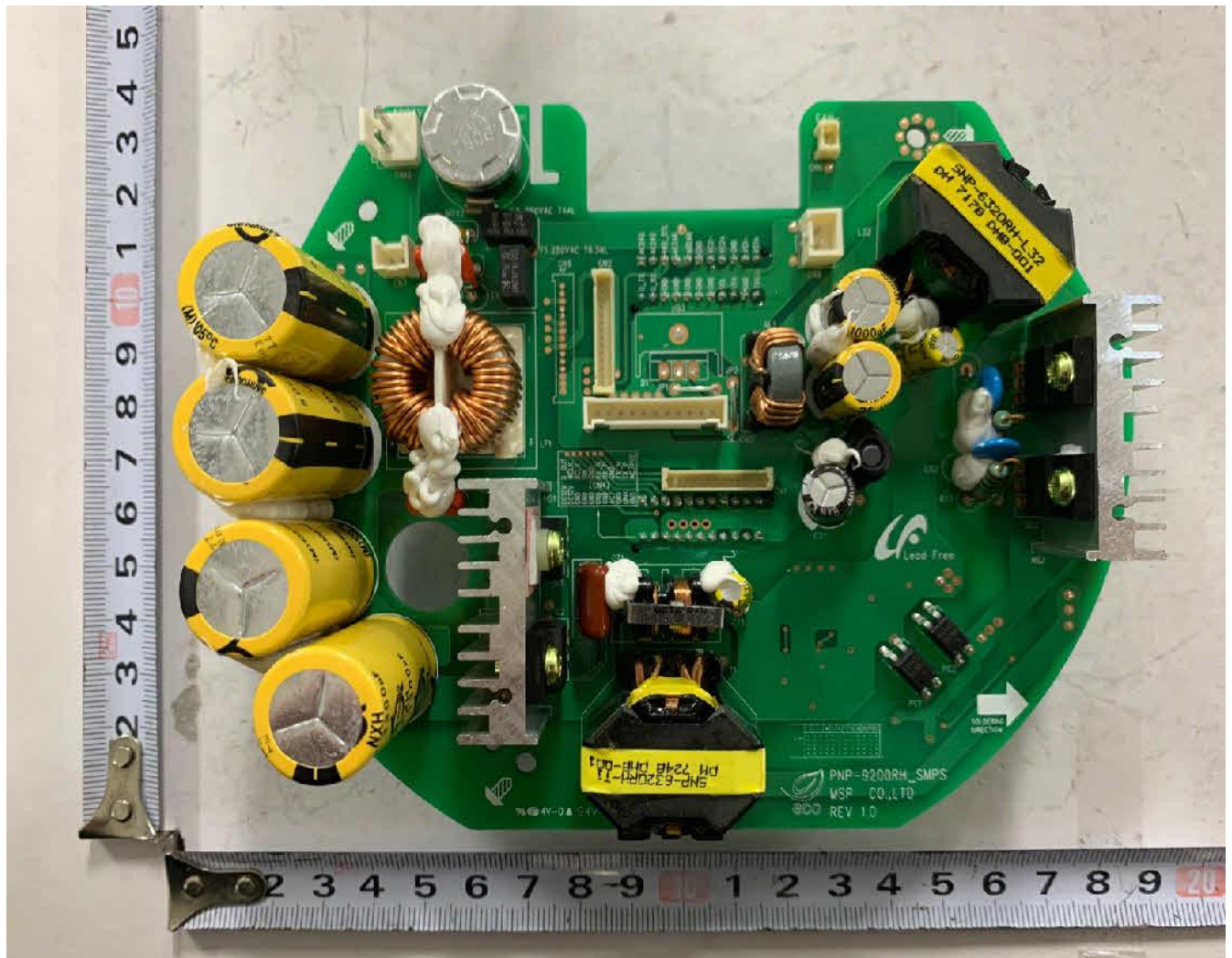
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Photographs	3-01	Overall - 1
Photographs	3-02	Overall - 2
Photographs	3-03	Internal - 1
Photographs	3-04	Internal - 2
Photographs	3-05	Power board Top
Photographs	3-06	Power board Bottom
Photographs	3-07	Network board Top
Photographs	3-08	Network board Bottom
Photographs	3-09	LED control board Top
Photographs	3-10	LED control board Bottom
Manuals	6-01	Safety Manual
Miscellaneous	7-01	Transformer (T1) spec by DONG HEUNG ELECTRONICS CO LTD
Miscellaneous	7-02	Transformer (T1) spec by DONG IN SYSTEM CO LTD
Miscellaneous	7-03	Transformer (L32) spec by DONG HEUNG ELECTRONICS CO LTD
Miscellaneous	7-04	Transformer (L32) spec by DONG IN SYSTEM CO LTD
Miscellaneous	7-05	Enclosure dimension
Miscellaneous	7-06	Label
Miscellaneous	7-07	Dual language safety labeling CRD

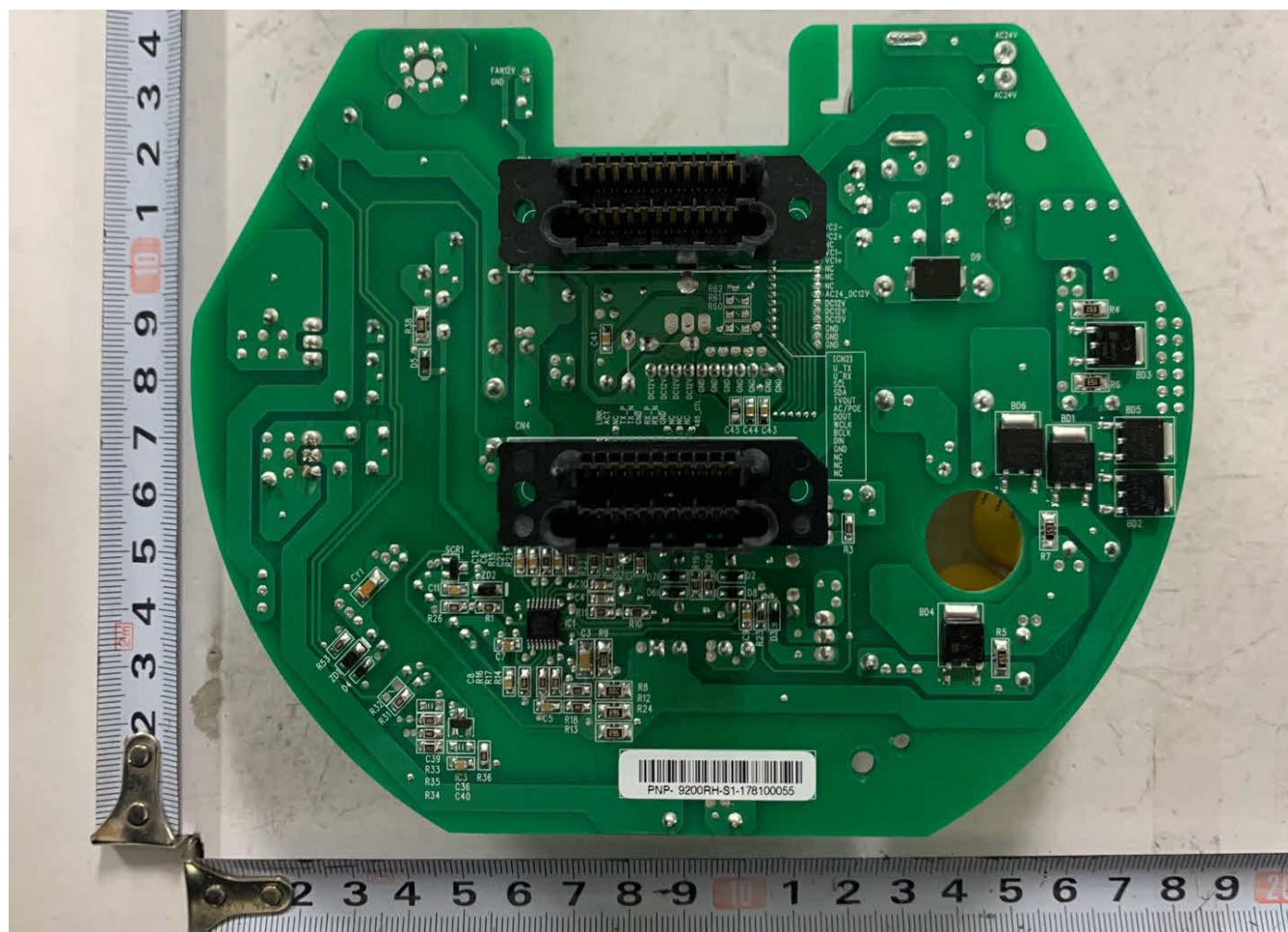


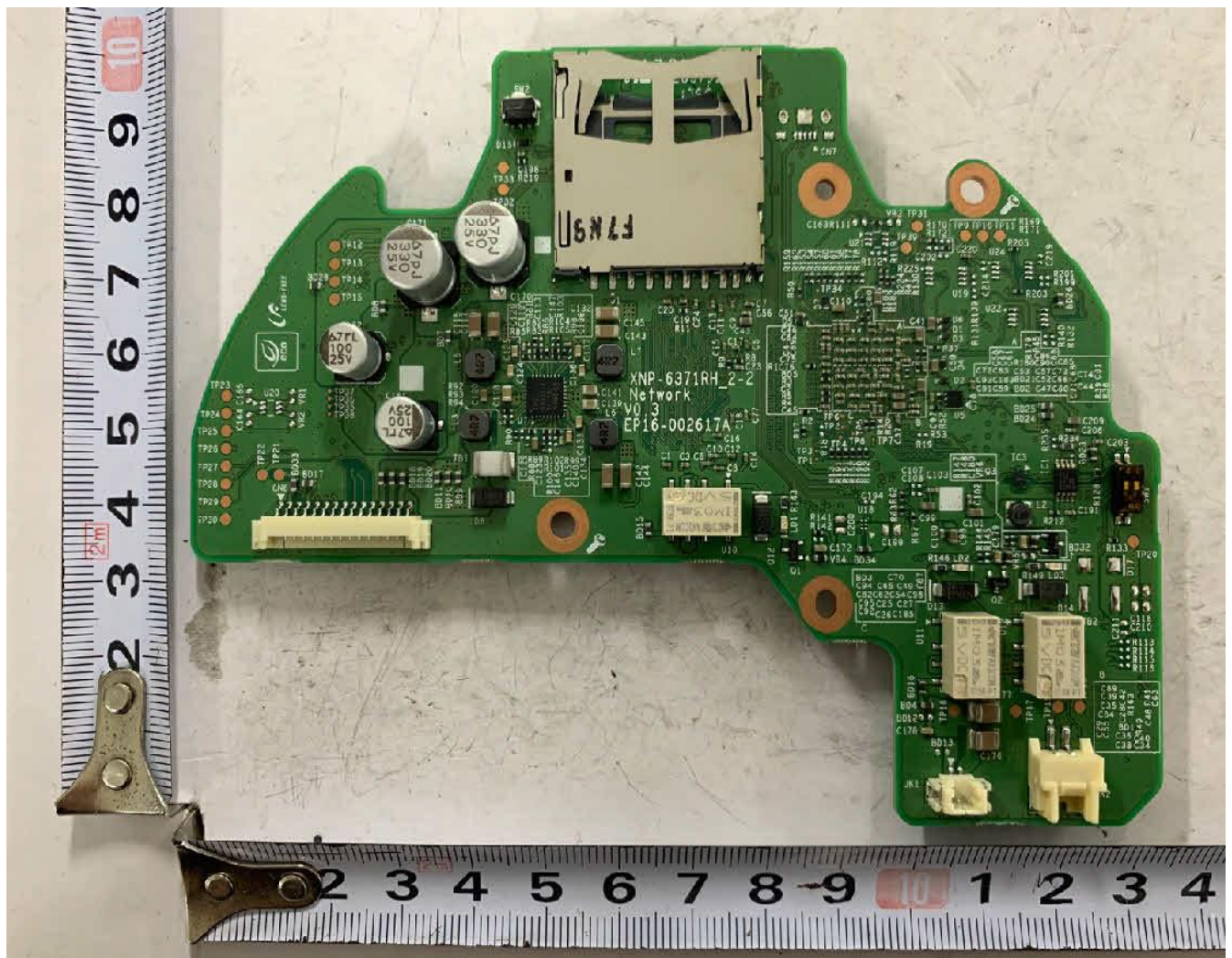


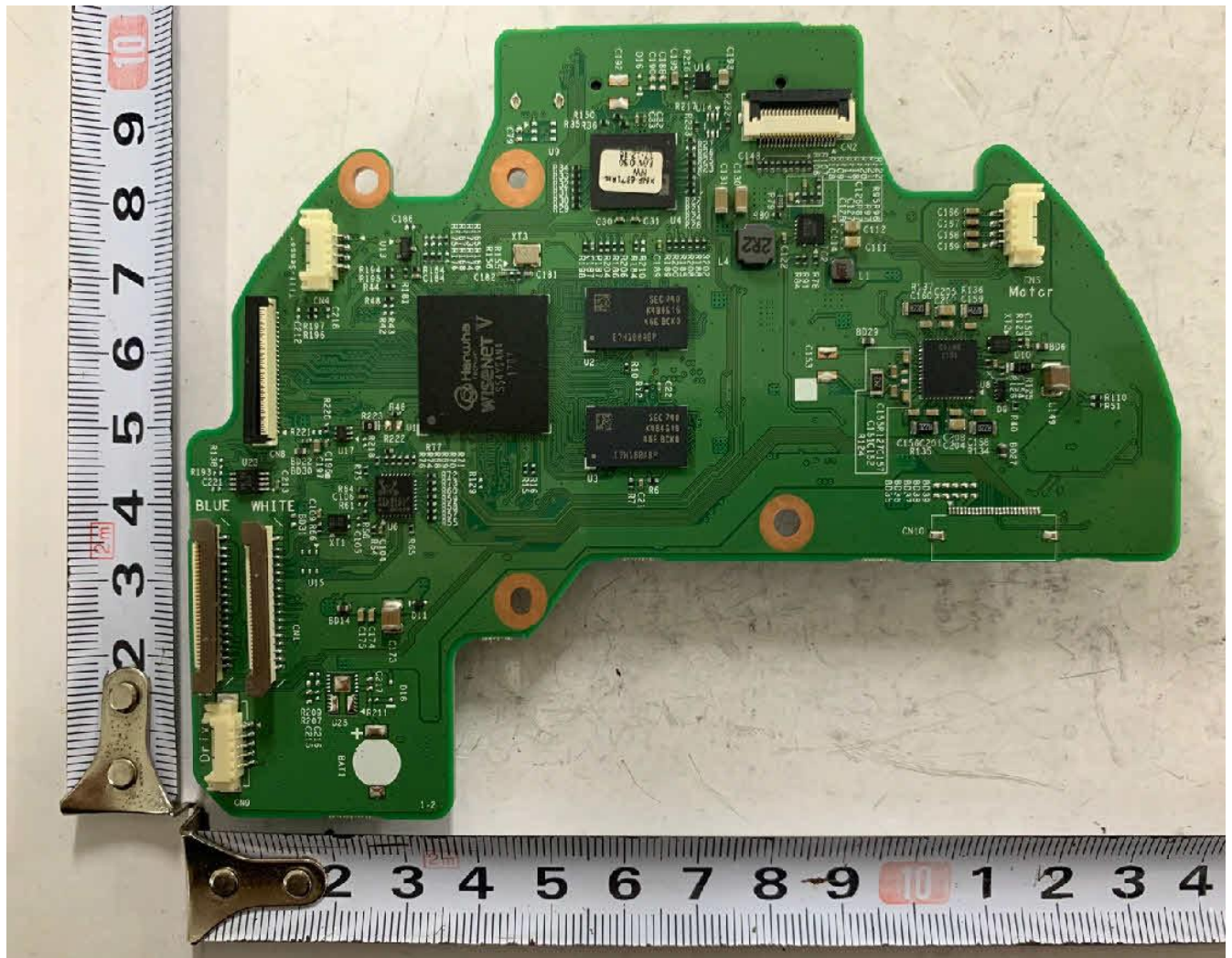


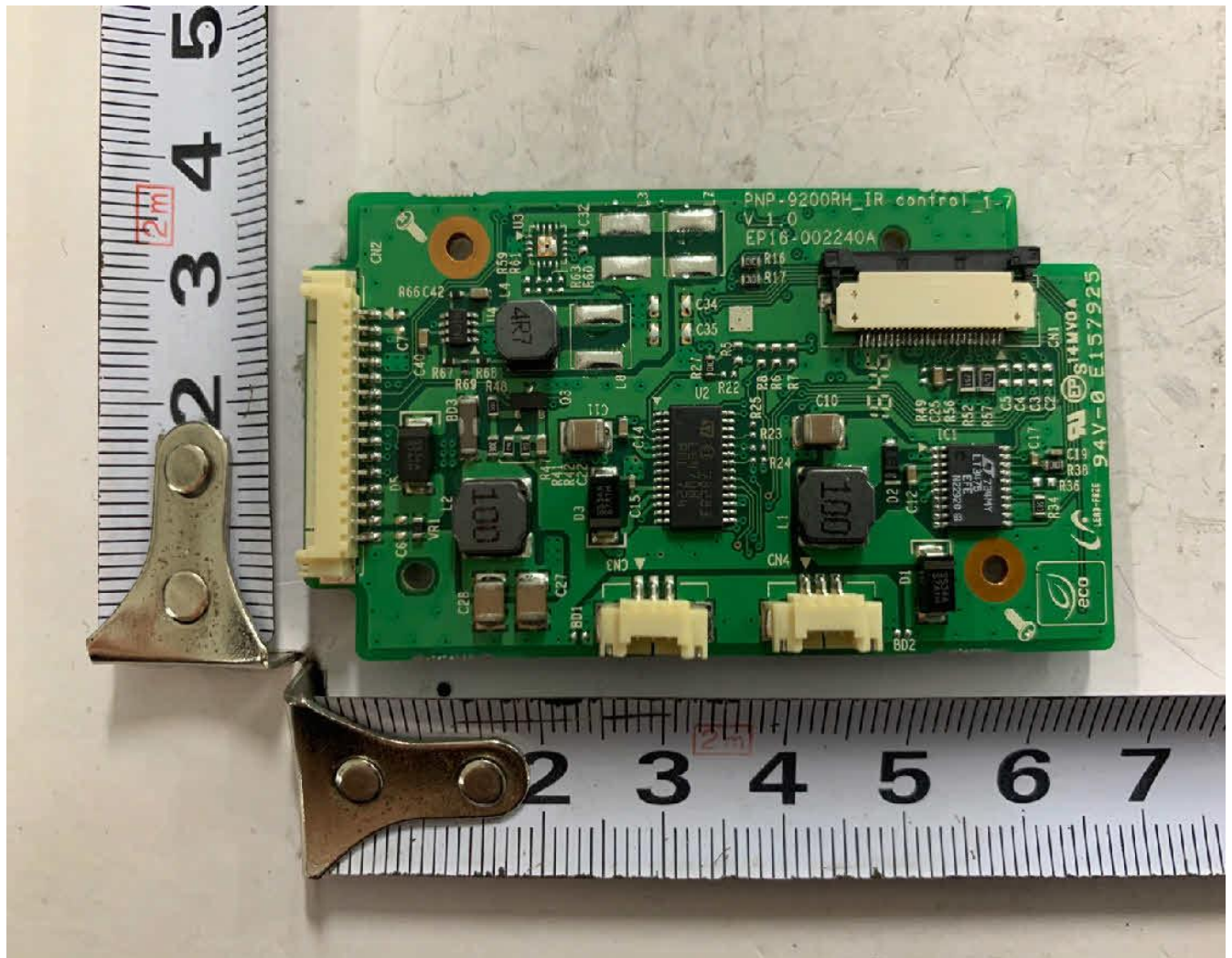


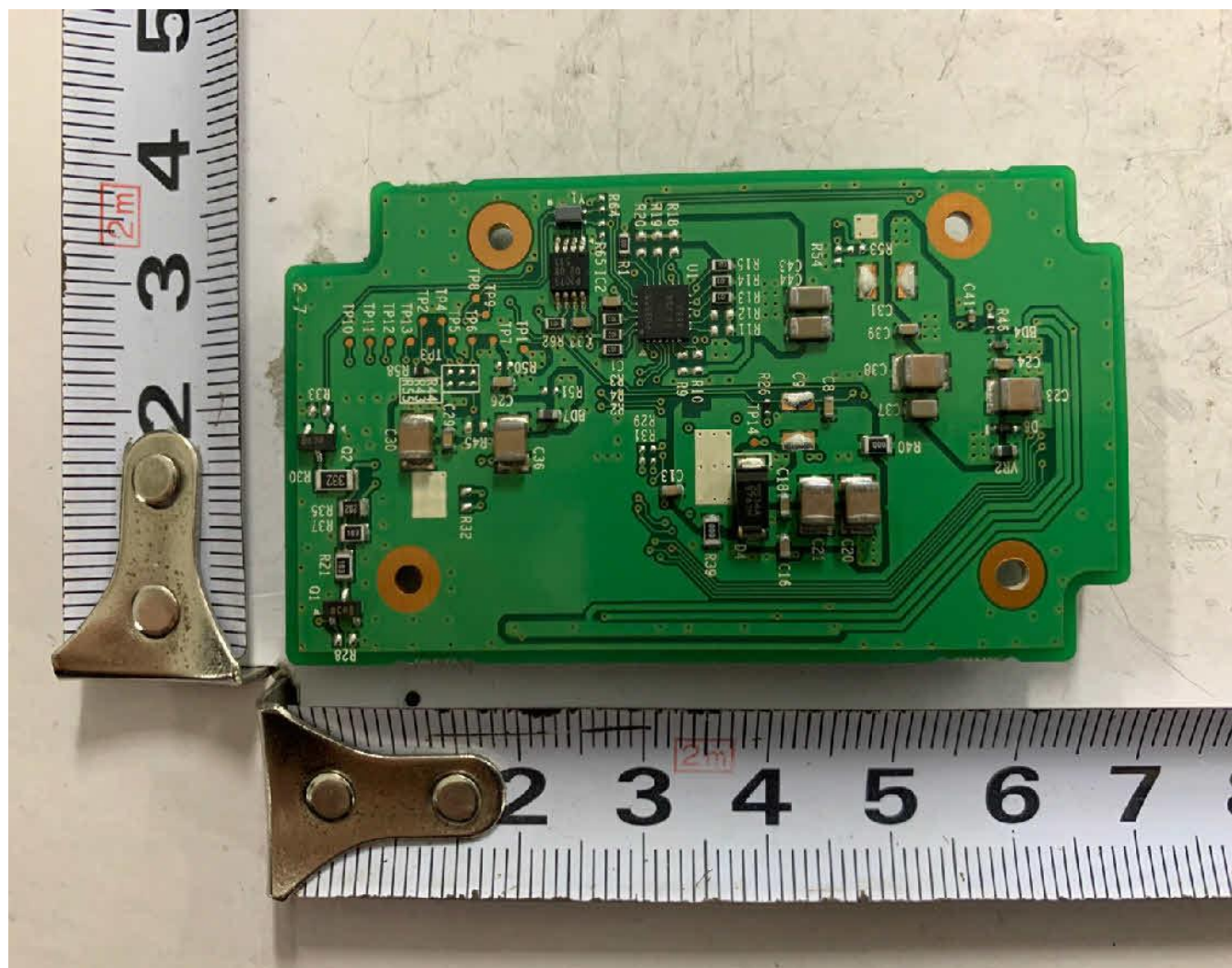












overview

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean the contaminated area on the product surface with a soft, dry cloth or a damp cloth.
(Do not use a detergent or cosmetic products that contain alcohol, solvents or surfactants or oil constituents as they may deform or cause damage to the product.)
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/ accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This product is intended to be supplied by a Listed Power Supply Unit marked "Class 2" or "LPS" and rated from 24 Vac (50/60 Hz) min. 4.2 A.
16. If you use excessive force when installing the product, the camera may be damaged and malfunction. If you forcibly install the product using non-compliant tools, the product may be damaged.
17. Do not install the product in a place where chemical substances or oil mist exists or may be generated. As edible oils such as soybean oil may damage or warp the product, do not install the product in the kitchen or near the kitchen table.
This may cause damage to the product.
18. When installing the product, be careful not to allow the surface of the product to be stained with chemical substance.
Some chemical solvents such as cleaner or adhesives may cause serious damage to the product's surface.
19. If you install/disassemble the product in a manner that has not been recommended, the production functions/ performance may not be guaranteed.
Install the product by referring to "Installation & connection" in the user manual.
20. Installing or using the product in water can cause serious damage to the product.



WARNING

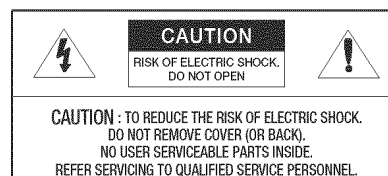
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECT THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

To prevent injury, this apparatus must be securely attached to the Wall/ceiling in accordance with the installation instructions.

Pan/Tilt/Zoom motors and slip ring are warranted for one year under continuous operation.

CAUTION



EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

overview

Class I construction

An apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.

Battery

Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

The battery cannot be replaced.

Disconnection Device

Disconnect the main plug from the apparatus, if it's defected. And please call a repair man in your location.

When used outside of the U.S., it may be used HAR code with fittings of an approved agency is employed.

CAUTION

These servicing instructions are for use by qualified service personnel only.
To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

The CVBS out terminal of the product is provided for easier installation, and is not recommended for monitoring purposes.

Please use the input power with just one camera and other devices must not be connected.

The ITE is to be connected only to PoE networks without routing to the outside plant.

The wired LAN hub providing power over the Ethernet (PoE) in accordance with IEEE 802-3af shall be a UL Listed device with the output evaluated as a Limited Power Source as defined in UL60950-1.

Unit is intended for installation in a Network Environment 0 as defined in IEC TR 62102. As such, associated Ethernet wiring shall be limited to inside the building.

Please read the following recommended safety precautions carefully.

- Do not place this apparatus on an uneven surface.
- Do not install on a surface where it is exposed to direct sunlight, near heating equipment or heavy cold area.
- Do not place this apparatus near conductive material.
- Do not attempt to service this apparatus yourself.
- Do not place a glass of water on the product.
- Do not install near any magnetic sources.
- Do not block any ventilation openings.
- Do not place heavy items on the product.
- Please wear protective gloves when installing/removing the camera.
The high temperature of the product surface may cause a burn.

User's Manual is a guidance book for how to use the products.

The meaning of the symbols are shown below.

- Reference : In case of providing information for helping of product's usages
 - Notice : If there's any possibility to occur any damages for the goods and human caused by not following the instruction
- ※ Please read this manual for the safety before using of goods and keep it in the safe place.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

NO :20141013-189

S P E C I F I C A T I O N

APPLICATION FOR APPROVAL OF

ITEM : TRANS

DESCRIPTION : RM10 5+3P

CODE NO : MSS10-404C

MODEL NO : SNP-6320RH-T1

This space is used for customer's approval

DESIGN	CHECK	APPROVAL
A TERM OF VALIDITY		YEAR

DONG HEUNG ELECTRONICS CO., LTD.

36, BAEKSEOKGONGDAN 6-GIL, SEOBUK-GU,
CHEONAN-SI, CHUNGCHEONGNAM-DO, KOREA

TEL : (041)552-1106~9

FAX : (041)552-3784

BAZHOU DONGXING

LAO DICUN, BAZHOU, HEIBEI PROVINCE, CHINA

YANTAI

SHENG QUAN INDUSTRIAL, LAISHAN DISTRICT, YANTAI,
SHANDONG PROVINCE, CHINA

DATE : 2014. 10. 14.

DRAWN BY S. J. PARK		DATE 2014. 10. 14.
CHECKED BY J. C. JI		DATE 2014. 10. 14.
APPROVED BY Y. S. KIM		DATE 2014. 10. 14.

0705-00양식03

부 품 승 인 원 개 정 이 력 지			
ITEM : TRANS		MODEL NAME : SNP-6320RH-T1	CODE NO. : MSS10-404CA
No.	년 월 일	개 정 내 용	해 당 Page
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CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	1 OF 16			
		DATE	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-6320RH-T1			
CODE NO.	MSS10-404C	DESCRIPTION	RM10			
1. APPEARANCE & DIMENSION (UNIT:mm) 31.0 MAX 31.0 MAX << TOP VIEW >> 21.0 MAX 3.5 ± 1.0 << FRONT VIEW >> 3.5 ± 0.5 25.0 ± 0.5 5.0 ± 0.5 << BOTTOM VIEW >> * MARKING (BLACK) SNP-6320RH-T1 DH 0000 DHB-001 MODEL NO. ← CLASS B ← PRODUCTION LINE ← WEEK ← YEAR ← PRODUCTION MAKER ← ※ PRODUCTION LINE 1. A : CHUN AN 2. B : BAZHOU 3. Y : YANTAI 0.8Φ ± 0.1 << SIDE VIEW >> Cu Fe Sn ※ PIN LENGTH: BEFORE SOLDERING						
NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION				SHEET NO.		2 OF 16																																																															
				D A T E		2014. 10. 14.																																																															
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CODE NO.		MSS10-404C		DESCRIPTION		RM10																																																															
2. WINDING SPECIFICATION ■ * START MARK.				<table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th>WINDING</th> <th>BOTTOM VIEW</th> <th>C.C.W</th> </tr> </thead> <tbody> <tr> <td>REMOVED PIN</td> <td>#3,7</td> <td></td> </tr> <tr> <td>CUT PIN</td> <td></td> <td></td> </tr> <tr> <td>N.C PIN</td> <td></td> <td></td> </tr> <tr> <td>TUBE</td> <td></td> <td></td> </tr> </tbody> </table>				WINDING	BOTTOM VIEW	C.C.W	REMOVED PIN	#3,7		CUT PIN			N.C PIN			TUBE																																																	
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	3 OF 16			
		D A T E	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-632ORH-T1			
CODE NO.	MSS10-404C	DESCRIPTION	RM10			
4. 신뢰성 시험(Reliability Test)						
ITEM	TEST CONDITION		SPEC			
내 습 성 (HUMIDITY-RESISTANCE)	40±2℃ 90~95℃RH 96HR, 상온에서 60분 이상 방치 후 측정 (Measure after leave more than 60Min, Normal Temperature.)		INITIAL INDUCTANCE ±10%			
열 충격 (HEAT SHOCK-RESISTANCE)	-20℃→85℃ 1시간→10CYCLE 시험 후 상온에서 60분 이상 보존 후 측정 (Measure after keep more than 60Min, Normal Temperature after Test.)		INITIAL INDUCTANCE ±10%			
내 열 성 (HEAT-RESISTANCE)	105±2℃ 96HR 방치 후 상온에서 60분 이상 보존 후 측정 (Measure after keep more than 60Min, Normal Temperature after leave 105±2℃, 96HR.)		INITIAL INDUCTANCE ±10%			
내 한 성 (COLD-RESISTANCE)	-25±2℃ 96HR, 상온에서 60분 이상 방치 후 측정 (Temperature.Measure after leave more than 60Min, Normal)		INITIAL INDUCTANCE ±10%			
5. 내구성 시험(Endurance Test)						
ITEM	TEST CONDITION		SPEC			
SOLDERING 부착성 (ADHESION)	SOLDER POT ℃ : 280±5℃ SOLDERING HR : 2±0.5 SEC		90% 이상			
SOLDERING 내열성 (HEAT RESISTANCE)	SOLDER WAVE ℃ : 260±5℃ SOLDERING HR : 10±1.0 SEC		90% 이상			
SOLDERING 내열성 (HEAT RESISTANCE)	SOLDERING IRON ℃ : 400±5℃ SOLDERING HR : 5±1.0 SEC		90% 이상			
NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	4 OF 16			
		D A T E	2014. 10. 14.			
PART NAME	TRANS		MODEL NAME	SNP-632ORH-T1		
CODE NO.	MSS10-404C		DESCRIPTION	RM10		
6. TEST SPECIFICATION AT 25℃						
NO.	ITEM	TERMINAL	SPECIFICATION	REMARKS		
1	INDUCTANCE	1,2 - 4,5	400 uH MIN	HP-4284A at 1KHz, 1Vrms		
2	DC RESISTANCE	1,2 - 4,5	0.05 [Ω] MAX	WHEATSTONE BRIDGE YEW TYPE 2755 HIOKI TYPE RM3544		
3	WITHSTANDING VOLTAGE	COIL - CORE	AC 1.50KV, 1 MINUTE	KIKUSUI : TOS-9200 (1MINUTE CURRENT 5mA)		
4	INSULATION RESISTANCE	COIL - CORE	100M Ω MIN at DC 500V	KIKUSUI : TOS-9200		
5	IMPULSE TEST (SURGE TEST)	AC 1.5KV / 3PULSE				
NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	5 OF 16			
		DATE	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-632ORH-T1			
CODE NO.	MSS10-404C	DESCRIPTION	RM10			

7. INTERNAL CONSTRUCTION

TOP
BOTTOM

3 LAYERS
0.025tx7.0mm{Y} [5]

* WINDING

* P.S TAPE

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	6 OF 16			
		D A T E	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-632ORH-T1			
CODE NO.	MSS10-404C	DESCRIPTION	RM10			
8. MATERIAL LIST						
NO	I T E M	MATERIALS & DIMENSIONS	MANUFACTURER	REMARK		
1	CORE	RM 10 PL-7, KP-4, DMR40, K2.3P, NH2B, JF4, KP4, TY40 or Equiv.	SAM HWA ELECTRONICS CO., LTD. ZAOZHUNG KINGTECH ELECTRONICS CO., LTD. ZHEJIANG DONGYANG DMEGC MAGNETIC CO., LTD. ZHEJIANG LINAN HE SHUN MAGNETIC FLUX ELECTRONIC CO., LTD. ZHEJIANG HAINING LIANFENG MAGNET INDUSTRY CO., LTD. WUXI SPINEL MAGNETICS CO., LTD. SHANGHAI KANGSHUN MAGNETIC COMPONENT CO., LTD. Guangzhou Tongyang Electronics Co., Ltd or Equiv.			
2	BOBBIN	RM10 [8P] PHENOL (94V-0)	SUMITOMO BAKELITE CO., LTD. HITACHI CHEMICAL CO LTD	E41429 E42926		
3	COPPER WIRE	USTC 0.10 ϕ x30# USTC 0.10 ϕ x40#	DONG YANG ELECTRONICS IND CO., LTD. SHANDONG PENGTAI STOCK CO., LTD. ZHEJIANG XIANDENG ELECTRICAL APPLIANCES CO., LTD JIANGSU DARTONG M&E CO., LTD HANGZHOU WEIFENG ELECTRONIC CO LTD	E102761 E166187 E218270 E237377 E229341		
4	INSULATION TAPE	POLYESTER TAPE 0.025t x 10.5mm 0.025t x 10.5mm {YELLOW}	DUCK SUNG HITECH CO., LTD. JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO., LTD. METAL LINE CO., LTD.	E105147 E165111 E162848		
5	CORE FIXING TAPE	POLYESTER TAP 0.025t x 7.0mm {YELLOW}				
6	IMPREGNATION	EPOXY	HITACHI CHEMICAL CO., LTD. KYOCERA CHEMICAL CORP SE KYE CHEMICAL CO LTD NOROO PAINT & COATINGS CO LTD	E72979 E83702 E257443 E93947		
7	SOLDER BAR	SN98CU2-B20	SAMWOO METAL CO., LTD. YUNNAN TIN CO., LTD. ASIA GENERAL ELECTRONICS CO., LTD			
8	INK	JP-K12.K33 BON MARQUE MS-6853	HITACHI INDUSTRIAL EQUIPMENT CO., LTD T&K TOKA CO., LTD SHANGHAI LEADJET INKJET PRINTER TECHNIQUE CO., LTD.			
9	FLUX	SV-PBF-304 FC-113	KOKI SANEI KOREA CO., LTD TAMURA KAKEN CORPORATION			
NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	7 OF 16	
		DATE	2014. 10. 14.	
PART NAME	TRANS	MODEL NAME	SNP-632ORH-T1	
CODE NO.	MSS10-404C	DESCRIPTION	RM10	

***DONG HEUNG**

Systems, Electrical Insulation - Component

DONG HEUNG ELECTRONICS CO LTD **E141730**

555-31 BAEKSSUK-DONG

CHONAN-SHI, CHUNG-NAM 330-220 REPUBLIC OF KOREA

Class 130 (B) transformer insulation system, designated DHB-001.

Marking: Company name or tradename "DH" and system designation.

Last Updated on 2003-05-22

*** BOBBIN**

SUMITOMO BAKELITE CO LTD **E41429**

5-8 HIGASHI-SHINAGAWA 2-CHOME, SHINAGAWA-KU, TOKYO 140-0002 JP

PM-9630

Phenolic (PF), "Sumikon", furnished as pellets, granular material

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK	0.16	V-0	4	0	150	150	150
BK,BN	0.32	V-0	3	0	150	150	150
	0.51	V-0	3	0	170	155	160
	1.5	V-0	0	1	180	160	170
	3.0	V-0	0	1	180	170	180

Comparative Tracking Index (CTI):**3** Inclined Plane Tracking (IPT):-
 Dielectric Strength (kV/mm):-
 High-Voltage Arc Tracking Rate (HVTR):**0** Volume Resistivity (10x ohm-cm) :-
 Dimensional Stability (%):- High Volt, Low Current Arc Resis (D495):**4**

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date:1997-11-05
 Last Revised:2013-10-15

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SUMITOMO BAKELITE CO LTD **E41429**

5-8 HIGASHI-SHINAGAWA 2-CHOME, SHINAGAWA-KU, TOKYO 140-0002 JP

PM-9820

Phenolic (PF), "Sumikon", furnished as pellets, granular material

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK	0.16	V-0	-	-	150	150	150
BK,BN	0.18	V-0	-	-	150	150	150
	0.51-0.69	V-0	3	1	150	150	150
	0.70	V-0	1	2	150	150	150
	1.5	V-0	0	2	150	150	150
	3.0	V-0	0	2	150	150	150

Comparative Tracking Index (CTI):**3** Inclined Plane Tracking (IPT):-
 Dielectric Strength (kV/mm):**14** Volume Resistivity (10x ohm-cm) :-
 High-Voltage Arc Tracking Rate (HVTR):**0** High Volt, Low Current Arc Resis (D495):**5**

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date:1997-11-03
 Last Revised:2012-11-20

© 2013 UL LLC

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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0705-00양식04

DONG HEUNG ELECTRONICS CO. , LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	8 OF 16																																																				
		D A T E	2014. 10. 14.																																																				
PART NAME	TRANS	MODEL NAME	SNP-6320RH-T1																																																				
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HITACHI CHEMICAL CO LTD GRANTOKYO S TOWER, 9-2 MARUNOUCHI, 1-CHOME, CHIYODA-KU TOKYO 100-6606 JP E42956 CP-J-8600, CP-J-ALPHA-G Phenolic (PF), furnished as granular material, finished parts <table border="1" style="width: 100%; border-collapse: collapse; font-size: 10pt;"> <thead> <tr> <th>Color</th> <th>Min Thk (mm)</th> <th>Flame Class</th> <th>HWI</th> <th>HAI</th> <th>RTI Elec</th> <th>RTI Imp</th> <th>RTI Str</th> </tr> </thead> <tbody> <tr> <td rowspan="5" style="text-align: center; vertical-align: middle;">BK</td> <td>0.16</td> <td>V-0</td> <td>-</td> <td>-</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>0.38</td> <td>V-0</td> <td>3</td> <td>3</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>0.75</td> <td>V-0</td> <td>1</td> <td>2</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>1.5</td> <td>V-0</td> <td>0</td> <td>2</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>3.0</td> <td>V-0</td> <td>0</td> <td>2</td> <td>150</td> <td>150</td> <td>150</td> </tr> </tbody> </table> Comparative Tracking Index (CTI):3 Dielectric Strength (kV/mm):32 High-Voltage Arc Tracking Rate (HVTR):4 Dimensional Stability (%):0 Inclined Plane Tracking (IPT):- Volume Resistivity (10x ohm-cm) :12 High Volt, Low Current Arc Resis (D495):4 ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL. Report Date:1973-05-14 Last Revised:2005-02-28 © 2013 UL LLC					Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	BK	0.16	V-0	-	-	150	150	150	0.38	V-0	3	3	150	150	150	0.75	V-0	1	2	150	150	150	1.5	V-0	0	2	150	150	150	3.0	V-0	0	2	150	150	150							
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	1.5	V-0	0	2	150	150	150																																																
	3.0	V-0	0	2	150	150	150																																																
HITACHI CHEMICAL CO LTD GRANTOKYO S TOWER, 9-2 MARUNOUCHI, 1-CHOME, CHIYODA-KU TOKYO 100-6606 JP E42956 CP-J-8800, CP-J-NAF, CP-J-F(N) Phenolic (PF), furnished as granular material, finished parts <table border="1" style="width: 100%; border-collapse: collapse; font-size: 10pt;"> <thead> <tr> <th>Color</th> <th>Min Thk (mm)</th> <th>Flame Class</th> <th>HWI</th> <th>HAI</th> <th>RTI Elec</th> <th>RTI Imp</th> <th>RTI Str</th> </tr> </thead> <tbody> <tr> <td rowspan="5" style="text-align: center; vertical-align: middle;">BK</td> <td>0.16</td> <td>V-0</td> <td>-</td> <td>-</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>0.38</td> <td>V-0</td> <td>0</td> <td>0</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>0.46</td> <td>V-0</td> <td>0</td> <td>0</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>0.87</td> <td>V-0</td> <td>0</td> <td>0</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>1.6</td> <td>V-0</td> <td>0</td> <td>0</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>3.0</td> <td>V-0</td> <td>0</td> <td>0</td> <td>150</td> <td>150</td> <td>150</td> </tr> </tbody> </table> Comparative Tracking Index (CTI):3 Dielectric Strength (kV/mm):25 High-Voltage Arc Tracking Rate (HVTR):0 Dimensional Stability (%):0 Inclined Plane Tracking (IPT):- Volume Resistivity (10x ohm-cm) :12 High Volt, Low Current Arc Resis (D495):5 ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL. Report Date:1987-01-08 Last Revised:2010-03-29 © 2013 UL LLC					Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	BK	0.16	V-0	-	-	150	150	150	0.38	V-0	0	0	150	150	150	0.46	V-0	0	0	150	150	150	0.87	V-0	0	0	150	150	150	1.6	V-0	0	0	150	150	150	3.0	V-0	0	0	150	150	150
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	9 OF 16			
		DATE	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-632ORH-T1			
CODE NO.	MSS10-404C	DESCRIPTION	RM10			

***WIRE**

Magnet Wire – Component

DONG YANG ELECTRONICS IND CO LTD
5-20 BANGYE-RI MUNMAK-EUB
WONJU-SHI, KANGWON-DO 220-800 REPUBLIC OF KOREA

E102761

Mtl Dsg	BC	Coat Type	OC	ANSI Type	TI
NY-PEW(F)	Polyester		Polyamide	MW24	155
DNY-UW	Polyurethane		Polyamide	MW80,	155,
				MW28#	130
UEW(F)	Polyurethane	-		MW79,	155,
UEW(B)	Polyurethane	-		MW75#	130
UAL	Polyurethane	-		@	155
PEW	Polyester	-		@	180
NY-UW	Polyurethane		Polyamide	MW5#	155

Note: UAL is the alternate aluminum grade designation of magnet wire designated UEW(F). @- Non-ANSI type.

#- The magnet wire may perform better than the rating reflects and may not be suitable for insulation system, varnish or end product testing. Further consideration is necessary prior to its use in testing.

Marking: Company name or "E102761" and material designation or marked designation on package or reel.

Last Updated on 2012-08-21

Magnet Wire – Component

SHANDONG PENGTAI STOCK CO LTD
DAXINDIAN TOWN
PENGLAI SHANDONG 265612, CHINA

E166187

Mtl Dsg	BC	Coat Type	OC	ANSI Type	Temp Class
PTMW35, xAI/EIW x(PEI/PAI)/200, Q(ZY/XY)-x/200		Polyester	Polyamide-imide	MW35	200
Q(ZY/XY)/200					
PTMW30, xEIW-180, PEI/180, QZY-x/180		Polyester-imide		MW30	180
PTMW73, EIA-W,		Polyester	Polyamide	MW73	200
(PEI/PAI)/200, Q(ZY/XY)/200		imide			
PTMW75, xUEW/130, QA-x/130		Polyurethane		MW75	130
EI/AIW220,		Polyester	Polyamide-imide	@	220
(PEI/PAI)/220		imide		MW35,MW73#	200
Q(ZY/XY)/220					
xAEI/AIW/220, Q(ZY/XY)L-x/220		Polyesterimide	Polyamideimide	MW 35-A	220
xAEI/AIW/200, Q(ZY/XY)L-x/200		Polyesterimide	Polyamideimide	@#	200
EI/AIW(F)/220, Q(ZY/XY)B-x/220		Polyesterimide	Polyamideimide	@	220
EI/AIW(F)/200, Q(ZY/XY)B-x/200		Polyesterimide	Polyamideimide	MW 36-C#	200
PTMW82, xUEW/180, QA-x/180		Polyurethane		MW82	180
xAUEW/180, QAL-x/180		Polyurethane		@	180
xAUEW/155, QAL-x/155		Polyurethane		@#	155
xUEWF/180, QAB-x/180		Polyurethane		@	180
xUEWF/155, QAB-x/155		Polyurethane		@#	155
PTMW79, xUEW/155, QA-x/155		Polyurethane		MW79	155
PTMW5, PEW, QZ(G)/155		Polyester		MW5	155
xAPEW/155, QZL-x/155		Polyester		@	155
PTMW5, PEW, QZ(G)/155		Polyester		MW5	155
QP-x/220		Theic-Modified Polyesterimide	Polyamideimide	MW37-C	220
QP-x/200		Theic-Modified Polyesterimide	Polyamideimide	MW73-C,MW35-C#	200
SEIW/180 or QZYH-x/180		Polyester-imide		MW77-C#	155
xSEIW(F)/180, QZYH(B)-x/180		Polyester-imide		@	180
xSPEW(F)/155, QZH(B)-x/155		Polyester-imide		@#	155
SPEW /155		Polyester-imide		MW26-C#	155
PTMW80 xUEW-N/155 or QA(X)-x/155		Polyurethane	Polyamide	MW80-C	155
xAUEW-N/155, QAXL-x/155		Polyurethane	Polyamide	MW80-A	155
xAUEW-N/130, QAXL-x/130		Polyurethane	Polyamide	MW28-A#	130
xUEW-N(F)/155, QAXB-x/155		Polyurethane	Polyamide	@	155
xUEW-N(F)/130, QAXB-x/130		Polyurethane	Polyamide	@#	130
PTMW28 xUEW-N/130 or QA(X)-x/130		Polyurethane	Polyamide	MW28-C#	130

@ - NON-ANSI Type.

- The magnet wire may perform better than the rating reflects and may not be suitable for insulation system, varnish or end product testing. Further consideration is necessary prior to its use in testing.

x - May be prefixed by 0, 1, 2, 3 to indicate coating thickness.

Marking: Company name or trademark and material designation or marked designation on package or reel and Recognized Component Mark.

Last Updated on 2013-05-23

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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	10 OF 16																																																																																																																								
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Magnet Wire - Component ZHEJIANG XIANDENG ELECTRICAL APPLIANCES CO LTD E218270 INDUSTRIAL AREA YANGDAO SHUANG LIN HUZHOU, ZHEJIANG 313012 CHINA <table border="1"> <thead> <tr> <th>Mtl Dsg</th> <th>Mark Dsg</th> <th>Coat Type BC</th> <th>OC</th> <th>ANSI Type</th> <th>Temp Class</th> </tr> </thead> <tbody> <tr> <td>UEW</td> <td>-</td> <td>Polyurethane</td> <td>-</td> <td>MW82</td> <td>180</td> </tr> <tr> <td>EI/AIW</td> <td>-</td> <td>Polyesterimide</td> <td>Polyamide-imide</td> <td>MW##@</td> <td>220</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>MW35#, MW73#</td> <td>200</td> </tr> <tr> <td>PEW</td> <td>-</td> <td>Polyester</td> <td>-</td> <td>MW5#</td> <td>155</td> </tr> <tr> <td>EIW/180</td> <td>-</td> <td>Polyesterimide</td> <td>-</td> <td>MW30-C</td> <td>180</td> </tr> <tr> <td>EIW/155</td> <td>-</td> <td>Polyesterimide</td> <td>-</td> <td>MW5-C#</td> <td>155</td> </tr> <tr> <td>QZ-130L</td> <td>-</td> <td>Polyesterimide</td> <td>-</td> <td>--#</td> <td>130</td> </tr> </tbody> </table> @- MW 35C construction but with a 220°C thermal rating. # - The magnet wire may perform better than the rating reflects and may not be suitable for insulation System, varnish or end product testing. Further consideration is necessary prior to its use in testing. --None ANSI Type. Marking: Company name, material designation or marked designation on package or reel, and Recognized Component Mark. Last Updated on 2012-08-07				Mtl Dsg	Mark Dsg	Coat Type BC	OC	ANSI Type	Temp Class	UEW	-	Polyurethane	-	MW82	180	EI/AIW	-	Polyesterimide	Polyamide-imide	MW##@	220					MW35#, MW73#	200	PEW	-	Polyester	-	MW5#	155	EIW/180	-	Polyesterimide	-	MW30-C	180	EIW/155	-	Polyesterimide	-	MW5-C#	155	QZ-130L	-	Polyesterimide	-	--#	130																																																																								
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DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	11 OF 16			
		DATE	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-632ORH-T1			
CODE NO.	MSS10-404C	DESCRIPTION	RM10			

Magnet Wire - Component

HANGZHOU WEIFENG ELECTRONIC CO LTD E229341

DAICUN
XIAOSHAN
HANGZHOU, ZHEJIANG 311261 CHINA

Mtl Dsg	Mark Dsg	Coat Type BC OC	ANSI Type	Temp Class
UEW-@, QA-@/130	UEW-@, QA-@/130	Polyurethane -	MW 75-C	130[#]
UEW/NY-@, QAN-@/130	UEW/NY-@, QAN-@/130	Polyurethane Polyamide	MW 28-C	130[#]
UEWF-@, QA-@/155	UEWF-@, QA-@/155	Polyurethane -	MW 79-C	155
UEWF/NY-@, QAN-@/155	UEWF/NY-@, QAN-@/155	Polyurethane Polyamide	MW 80-C	155[#]
UEWH/NY-@, QAN-@/180	UEWH/NY-@, QAN-@/180	Polyurethane Polyamide	MW 83-C	180
WF-@	WF-@	Polyurethane -	MW75-C	130[#]

[#] - The magnet wire may perform better than the rating reflects and may not be suitable for insulation system, varnish or end-product testing. Further consideration is necessary prior to its use in testing.

@ - May be USTC (include polyester filament yarn covering) or LITZ (twisted wire only).

Marking: Company name, material designation or marked designation and the Recognized Component Mark, on the shipping spool label or smallest unit container in which the product is packaged.

Last Updated on 2014-03-06

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DONG HEUNG ELECTRONICS CO., LTD.

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* TAPE																																																																																																																																																																																																																																																																						
Insulating Tape - Component DUCK SUNG HITECH CO LTD 225-2 SHINNEUNG-RI SEOUN-MYEON ANSEONG-SI, GYEONGGI-DO 456-850 REPUBLIC OF KOREA E105147 <table border="1"> <thead> <tr> <th>Cat. No.</th> <th>Color</th> <th>Temp (°C)</th> <th>Flame Retardant+</th> <th>Optional Ratings Sunlight Resistant+</th> <th>Cold Resistant+</th> </tr> </thead> <tbody> <tr> <td colspan="6">Acetate cloth insulating tapes with acrylic adhesive</td> </tr> <tr> <td>231</td> <td>All</td> <td>105</td> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td colspan="6">Acetate cloth insulating tapes with rubber adhesive</td> </tr> <tr> <td>DTS-230</td> <td>All</td> <td>105</td> <td></td> <td>No</td> <td>No</td> </tr> <tr> <td colspan="6">Flame retardant acetate cloth tapes with rubber adhesive</td> </tr> <tr> <td>DTS-232F</td> <td>All</td> <td>-</td> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td colspan="6">Flame retardant aluminum foil tapes with acrylic adhesive</td> </tr> <tr> <td>DTS-800A</td> <td>Silver</td> <td>-</td> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td colspan="6">Flame retardant aluminum foil with PET film tapes with acrylic adhesive</td> </tr> <tr> <td>DTS-810</td> <td>Silver</td> <td>-</td> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td colspan="6">Flame retardant copper foil tapes with acrylic adhesive</td> </tr> <tr> <td>DTS-820</td> <td>Copper</td> <td>-</td> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td colspan="6">Flame retardant cotton cloth tapes with rubber adhesive</td> </tr> <tr> <td>DTS-250F</td> <td>Ivory</td> <td>-</td> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td colspan="6">Flame retardant nickel coated polyester fiber tapes with acrylic adhesive</td> </tr> <tr> <td>DTS-830</td> <td>Gray</td> <td>-</td> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td colspan="6">Glass cloth insulating tapes with acrylic adhesive</td> </tr> <tr> <td>DTS-221F</td> <td>Ivory</td> <td>155</td> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td colspan="6">Glass cloth insulating tapes with rubber adhesive</td> </tr> <tr> <td>220-B</td> <td>White</td> <td>130</td> <td></td> <td>No</td> <td>No</td> </tr> <tr> <td colspan="6">Glass cloth insulating tapes with silicone adhesive</td> </tr> <tr> <td>221-H</td> <td>Ivory</td> <td>180</td> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td colspan="6">Nomex (Aramid fiber) film insulating tapes with non-woven polyester fiber reinforcement with acrylic adhesive</td> </tr> <tr> <td>DTS-241</td> <td>White</td> <td>130</td> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td colspan="6">PET film insulating tapes with acrylic adhesive</td> </tr> <tr> <td>DTS-204F (b)</td> <td>All</td> <td>130</td> <td></td> <td>No</td> <td>No</td> </tr> <tr> <td colspan="6">PET film insulating tapes with acrylic adhesive</td> </tr> <tr> <td>DTS-204B (e)</td> <td>All</td> <td>130</td> <td></td> <td>No</td> <td>No</td> </tr> <tr> <td>DTS-204K (f)</td> <td>All</td> <td>130</td> <td></td> <td>No</td> <td>No</td> </tr> <tr> <td>DTS-207 (g)</td> <td>All</td> <td>130</td> <td></td> <td>No</td> <td>No</td> </tr> <tr> <td colspan="6">PET film insulating tapes with acrylic adhesives POLYESTER TAPE</td> </tr> <tr> <td>DTS-204 (e)</td> <td>All and clear</td> <td>130</td> <td></td> <td>No</td> <td>No</td> </tr> <tr> <td>DTS-280A</td> <td>White</td> <td>130</td> <td></td> <td>No</td> <td>No</td> </tr> <tr> <td colspan="6">PET film insulating tapes with non-woven polyester fiber reinforcement with rubber adhesive</td> </tr> <tr> <td>DTS-280B (d)</td> <td>Clear</td> <td>130</td> <td></td> <td>No</td> <td>No</td> </tr> <tr> <td colspan="6">PET film insulating tapes with synthetic rubber adhesive</td> </tr> <tr> <td>DTS-204R (c)</td> <td>All</td> <td>130</td> <td></td> <td>No</td> <td>No</td> </tr> <tr> <td colspan="6">Polyester film insulating tapes with acrylic adhesive</td> </tr> <tr> <td>DTS-280</td> <td>White</td> <td>130</td> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td>DTS-280B</td> <td>White</td> <td>130</td> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td colspan="6">Polyimide film insulating tapes with silicone base adhesive</td> </tr> <tr> <td>DTS-701</td> <td>Amber</td> <td>180</td> <td></td> <td>Yes</td> <td>No</td> </tr> </tbody> </table> + Complies with "Flame Retardant" and/or "Cold Resistant" and/or "Sunlight Resistant" requirements if authorized in the table above and when so marked. (b) - May be marked: "Film side CTI Performance Level Category PLC=3 Voltage 235, per UL 746A/ASTM D 3638", and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. (c) - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 325, per UL 746A/ASTM D 3638", and/or "Adhesive side CTI Performance Level Category PLC=1 Voltage 575, per UL 746A/ASTM D 3638" or equivalent. (d) - May be marked: "Film side CTI Performance Level Category PLC=0 Voltage 600+, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600+, per UL 746A/ASTM D 3638" or equivalent. (e) - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 260, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. (f) - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 250, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. (g) - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 272, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. Marking: Company name or tradename "E105147" or trademark  and catalog designation printed on the central paper core or outer package. Last Updated on 2014-05-21					Cat. No.	Color	Temp (°C)	Flame Retardant+	Optional Ratings Sunlight Resistant+	Cold Resistant+	Acetate cloth insulating tapes with acrylic adhesive						231	All	105		Yes	No	Acetate cloth insulating tapes with rubber adhesive						DTS-230	All	105		No	No	Flame retardant acetate cloth tapes with rubber adhesive						DTS-232F	All	-		Yes	No	Flame retardant aluminum foil tapes with acrylic adhesive						DTS-800A	Silver	-		Yes	No	Flame retardant aluminum foil with PET film tapes with acrylic adhesive						DTS-810	Silver	-		Yes	No	Flame retardant copper foil tapes with acrylic adhesive						DTS-820	Copper	-		Yes	No	Flame retardant cotton cloth tapes with rubber adhesive						DTS-250F	Ivory	-		Yes	No	Flame retardant nickel coated polyester fiber tapes with acrylic adhesive						DTS-830	Gray	-		Yes	No	Glass cloth insulating tapes with acrylic adhesive						DTS-221F	Ivory	155		Yes	No	Glass cloth insulating tapes with rubber adhesive						220-B	White	130		No	No	Glass cloth insulating tapes with silicone adhesive						221-H	Ivory	180		Yes	No	Nomex (Aramid fiber) film insulating tapes with non-woven polyester fiber reinforcement with acrylic adhesive						DTS-241	White	130		Yes	No	PET film insulating tapes with acrylic adhesive						DTS-204F (b)	All	130		No	No	PET film insulating tapes with acrylic adhesive						DTS-204B (e)	All	130		No	No	DTS-204K (f)	All	130		No	No	DTS-207 (g)	All	130		No	No	PET film insulating tapes with acrylic adhesives POLYESTER TAPE						DTS-204 (e)	All and clear	130		No	No	DTS-280A	White	130		No	No	PET film insulating tapes with non-woven polyester fiber reinforcement with rubber adhesive						DTS-280B (d)	Clear	130		No	No	PET film insulating tapes with synthetic rubber adhesive						DTS-204R (c)	All	130		No	No	Polyester film insulating tapes with acrylic adhesive						DTS-280	White	130		Yes	No	DTS-280B	White	130		Yes	No	Polyimide film insulating tapes with silicone base adhesive						DTS-701	Amber	180		Yes	No
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	13 OF 16			
		D A T E	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-632ORH-T1			
CODE NO.	MSS10-404C	DESCRIPTION	RM10			
Insulating Tape - Component						
JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD SOUTHWEST AROUND RD JINGJIANG, JIANGSU 214500 CHINA			E165111			
Cat. No.	Color	Temp (°C)	Flame Retardant+	Optional Ratings Sunlight Resistant+	Cold Resistant+	
Flame retardant copper foil tapes						
CP-3002	Copper	-		Yes	No	
Nonwoven cloth/polyethylene terephthalate film insulating tapes						
WF* (c)(h)	White	130		Yes	No	
PET films with acrylic adhesive insulating tape						
CT-280B	Yellow	130		No	Yes	
Polyethylene terephthalate film insulating tapes POLYESTER TAPE						
CT* (b)(g)	All except Yellow	130		No	No	
CT* Yellow (c)(g)	Yellow	130		Yes	No	
PZ* (b)	Yellow	130		Yes	No	
Polyimide film insulating tapes						
PF* (d)(g)	Amber	180		Yes	No	
+ Complies with "Flame Retardant" and/or "Cold Resistant" and/or "Sunlight Resistant" requirements If authorized in the table above and when so marked.						
(b) - Comparative Tracking Index (CTI) performance indicates material Group IIIa, PLC=2, CTI equal to or greater than 250 but less than 400 v.						
(c) - Comparative Tracking Index (CTI) performance indicates material Group I, PLC=0, CTI equal to or greater than 600 v.						
(d) - Comparative Tracking Index (CTI) performance indicates material Group IIIb, PLC=4, CTI equal to or greater than 100 v but less than 175v.						
(g) - The CTI test was conducted per IEC 112, 3rd Edition 1979 and the assigned level is based on the testing of both film and adhesive sides.						
(h) - The CTI test was conducted per IEC 60112, 4th Edition 2003 and the assigned level is based on the testing of both film and adhesive sides.						
* - Followed by suffixes.						
Marking: Company name or tradename "E165111" and catalog designation printed on the central paper core or outer package.						
Last Updated on 2014-05-21						
Insulating Tape - Component					E162848	
METAL LINE CO LTD 252-6 DEOKJEONG-RI SAMSEONG-MYEON EUMSEONG-GUN, CHUNGCHONGBUK-DO 369-832 REPUBLIC OF KOREA						
Cat. No.	Color	Temp (°C)	Flame Retardant+	Optional Ratings Sunlight Resistant+	Cold Resistant+	
Flame retardant Al foil tapes with acrylic adhesive						
FG80AL	Silver	-		Yes	No	
Flame retardant Ni coated woven polyester fiber tapes with acrylic adhesive						
FG110R	Gray	-		Yes	No	
Flame retardant polyester/AL foil tapes with conductive acrylic adhesive						
FG65PAL	Silver	-		Yes	No	
Polyester PET tapes with acrylic adhesive POLYESTER TAPE						
800 (a)	All	130		No	No	
8000	All	130		No	No	
Reinforced polyester PET tapes with acrylic adhesive						
800BT	White	130		No	No	
+ Complies with "Flame Retardant" and/or "Cold Resistant" and/or "Sunlight Resistant" requirements If authorized in the table above and when so marked.						
(a) - May be marked: "Film side CTI Performance Level Category PLC=0, Voltage 600+, per UL 746A/ASTM D 3638" and/or "Film side CTI 600 + per IEC112, First Edition (1979), CTI Material Group I" or equivalent.						
Marking: Company name or tradename "E162848" and catalog designation printed on the central paper core or outer package.						
Last Updated on 2014-05-21						
NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	14 OF 16			
		D A T E	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-632ORH-T1			
CODE NO.	MSS10-404C	DESCRIPTION	RM10			

*IMPREGNATION

KYOCERA CHEMICAL CORP

KAWAGUCHI WORKS
5-14-25 RYOKE
KAWAGUCHI, SAITAMA 332-8533 JAPAN

E83702

Varnish Dsg	ANSI Magnet Wire Type	TP	Varnish Thermal Class C	HC	CE
TVB2024@@	MW75	130	130	130	-
TVB2122++, TVB2123, TVB2155	MW5	155	155	155	-
TVB2148	MW5	155	155	155	-
TVB2166++@	MW24	180	180	180	-
TVB2166++@	MW35	180	200	200	-
TVB2168++@	MW35	200	200	200	-
TVB2176	MW5	180	180	180	-
TVB2178	MW35	220	220	220	-
TVB2180T++@	MW5	155	130	130	-
	MW28	155	-	-	-
TVB2190	MW35	155	155	155	-
TVB2190D	MW5	180	180	180	-
TVB2191K++, TVB2190K, TVB2190KL	MW5	180	180	180	-
TVB2319++	MW24	180	180	180	-
	MW35	200	180	180	-
TVB2643/2644	MW35	180	180	180	-
TVB2918**	MW35	200	180	180	-

++ - May be followed by optional suffix. The suffix is denoting changing in the varnish density.
 @ - May be filled with silica.
 @@ - May be followed by a two character alphanumeric suffix denoting changes in viscosity accomplished by solvent variations.
 ** - May be followed by optional suffix.
 Marking: Company name and varnish designation on shipping container.

Last Updated on 2012-06-05

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
2						
3						
4						

0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	15 OF 16			
		DATE	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-632ORH-T1			
CODE NO.	MSS10-404C	DESCRIPTION	RM10			

SE KYE CHEMICAL CO LTD E257443 360 GUIJEON-RI TONGJIN-EUP KIMPO-SI, KYUNGGI-DO 415-862 REPUBLIC OF KOREA		
Varnish Dsg SR-337(##)	ANSI Magnet Wire Type MW75	Varnish Theermal Class C TP 130 HC 130 CE -
# - May be followed by 1 or 2 suffix numeric and /or alpha characters to denote viscosity change accomplished via solvents due to production tolerance. Marking: Company name and varnish designation on shipping container.		
Last Updated on 2006-06-28		

NOROO PAINT & COATINGS CO LTD E93947 615 PAKDAL-DONG ANYANG-SHI, KYONGGI-DO 430-030 REPUBLIC OF KOREA		
Varnish Dsg DVB-2152(##) DVB-2148L DVB-2148L(*) TVB2168++@ DVB-2085(*) DVB-2177(@) DVB-2156(##)	ANSI Magnet Wire Type MW5 MW35C MW35A MW5 MW24 MW5 MW28 MW5 MW80 MW35A	Varnish Theermal Class C TP 180 200 220 155 200 240 155 155 155 155 130 200 155 - - 200 220 -
(##) = May be filled with 0 -30 percent silica. (*) = To be followed by 1 or 2 numbers and/or 1 or 2 letters. (@) = May be followed by suffix XX in which XX represents percentage of solid content. Marking: Company name and varnish designation on shipping container.		
Last Updated on 2012-12-13		

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	16 OF 16			
		D A T E	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-632ORH-T1			
CODE NO.	MSS10-404C	DESCRIPTION	RM10			
Varnishes – Component						
HITACHI CHEMICAL CO LTD SHIBAURA SQUARE BLDG 4-9-25 SHIBAURA MINATO-KU, TOKYO 108-0023 JAPAN				E72979		
Varnish	ANSI Magnet Wire Type	TP	Varnish Thermal Class C	CE		
HPD-200, HPD-200S3, HPD-200S4, HPD-200S5, HPD-200S6	M W35	200	—	180		
NP-2020	M W5	130	—	—		
NP-2023	M W5	155	155	—		
NP-2050	M W35	200	220	—		
NP-2052	M W35	200	220	—		
PS-202	M W5	155	130	—		
WP-435	M W5	155	155	—		
WP-2763	M W5	155	155	—		
WP-2780	M W30	220	220	—		
	M W35	200	220	—		
	M W24	180	—	—		
	M W75	155	—	—		
	M W79	180	—	—		
WP-2790	M W35	220	220	—		
WP-2820	M W5	155	155	—		
	M W35	180	200	—		
WP-2952, WP-2952F-5, WP-2952F-11, WP-2952F-5(FC)	M W5	155	155	—		
	—	—	—	130		
WP-2952, WP-2952F-5, WP-2952F-11, WP-2952F-5(FC)	M W28	130	130	—		
WP-2782, WP-2782-VT	M W35	200	200	—		
WP-2782F, WP-2782F-VT	M W35	200	200	—		
WA-238A	M W28	130	130	—		
WF-285	M W28	130	130	—		
WP-2952-1G, WP-2952-1G(H), WP-2952-1G(K1)	M W28	130	130	—		
WP-2952B	M W28	130	130	—		
WP-2952F-2G, WP-2952F-2G(Y), WP-2952F-2G(YL), WP-2952F-2G(YS), WP-2952F-2G(FC), WP-2952F-2G(H), WP-2952F-2G(K)	M W28	130	130	—		
	M W24	155	—	—		
KE-573D	M W35	180	180	—		
WP-2854 (WP-2851, WP-2853, WP-2854, WP-2856, WP-2858)	M W35	180	180	—		
KE-573DH	M W35	200	200	—		
WP-2008	M W35	200	200	—		
WP-2008(L)	M W35	200	200	—		
WB-8000	M W28	130	130	—		
@Polyamide-imide.						
Marking: Company name or trademarks "HC", HC , "HCJH", HCJH , "HCDG" or HCDG and varnish designation on shipping container.						
Last Updated on 2013-01-17						
NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
2						
3						
4						

0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.



TO MESSRS : M S P

(SWITCHING TRANS) SPECIFICATION

MODEL NAME : PART NO : SNP-6320RH-T1
CUSTOMER'S SPEC. NO : DI SPEC. NO : RM10 5+3P

APPROVED	REFERENCE

DATE : 2014. 11. 07.

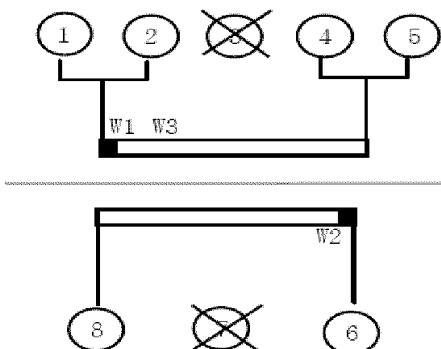


DONG IN SYSTEM CO.,LTD.



HEAD OFFICE	124-116 SUNG-EU DONG NAM-KU , INCHEON , KOREA TEL : 82-32-887-0040 FAX : 82-32-887-0111
CHINA PLANT	GANGTOU VILLAGE YANGTING TOWN HUANCUI ZONE WEIHAI CITY CHINA TEL : 86-631-5763828 FAX : 86-631-5763925

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PART NAME	SWITCHING TRANS	MODEL NO.															
PART NO.	SNP-6320RH-T1	DESCRIPTION	RM10 5+3P														
1. DIMENSIONS (UNIT:mm) ◎TOP VIEW◎ ◎FRONT VIEW◎ ◎BOTTOM VIEW◎ * MARKING * PART NO → SNP-6320RH-T1 DIS-10B ← INSULATION DONGIN AA BB ← SYSTEM ← LOT NO ← MONTH ← YEAR ← MAKER <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th colspan="2" style="text-align: center;">MARKING</th> </tr> </thead> <tbody> <tr> <td>PART NO.</td> <td>SNP-6320RH-T1</td> </tr> <tr> <td>(LOT NO)</td> <td>AA : YEAR</td> </tr> <tr> <td></td> <td>BB : MONTH</td> </tr> <tr> <td>MAKER</td> <td>DONG IN SYSTEM</td> </tr> <tr> <td>DIS-10B</td> <td>INSULATION SYSTEM</td> </tr> </tbody> </table> ◎SIDE VIEW◎ ★. PIN 도금 사양 Cu Fe Sn						MARKING		PART NO.	SNP-6320RH-T1	(LOT NO)	AA : YEAR		BB : MONTH	MAKER	DONG IN SYSTEM	DIS-10B	INSULATION SYSTEM
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2. CONNECTION (BOTTOM VIEW)																		
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DOT MARK	■ START OF WINDING																	
3. WINDING SPECIFICATION																		
NO	TERMINAL		WIRE	Ts	WINDING METHOD	INSULATION		BARRIER										
	S	F				MATERIAL (t / mm)	Ts	TOP	PIN	Ts								
W1	1,2	4,5	USTC 0.10Ø X 30P X 2	12	SOLENOID	POLYESTER TAPE 0.025 / 10.5	2											
W2	6	8	USTC 0.10Ø X 40P	10	SOLENOID	POLYESTER TAPE 0.025 / 10.5	2											
W3	1,2	4,5	USTC 0.10Ø X 30P X 2	12	SOLENOID	POLYESTER TAPE 0.025 / 10.5 (YELLOW)	2											
CORE FIXING TAPE					POLYESTER TAPE 0.025 / 7.0 (YELLOW)	3												
DRAWN BY		CHECK BY		APPR. BY		REVISION				DATE								
																		

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PART NAME	SWITCHING TRANS	MODEL NO.			
PART NO.	SNP-6320RH-T1	DESCRIPTION	RM10 5+3P		
6. ELECTRICAL CHARACTERISTICS					
NO	ITEM	TERMINAL	SPECIFICATION	REMARKS	
1	INDUCTANCE	1,2 - 4,5	400uH $\pm$ MIN (NO GAP)	HP 4284A LCR-METER AT 1kHz 1V	
2	DC RESISTANCE	1,2 - 4,5	0.09ohm MAX	HIOKI-3540 m Ω TESTER	
3	WITHSTANDING VOLTAGE	P COIL - CORE	AC 1,5 KV RMS 10mA 60 SEC.	KIKUSUI TOS8850	
4	INSULATION RESISTANCE	P COIL - S COIL	100Mohm MIN DC 500V	KIKUSUI TOS8850	
5	SURGE TEST	PRI. - SEC.	AC 1.5 KV 1SEC.		
7. CONSTRUCTION					
TOP BOTTOM					
* WINDING * P.S TAPE NO GAP FERRITE CORE [1] NO GAP FERRITE CORE [1]					
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PART NAME	SWITCHING TRANS		MODEL NO.		
PART NO.	SNP-6320RH-T1		DESCRIPTION	RM10 5+3P	
8. MATERIAL LIST					
NO	ITEM	MATERIAL	MANUFACTURER	FILE NO.	
1	CORE	PC-40 RM10 HX-4P RM10	JI SHUN MAGNETIC CO.,LTD. NANTONG HUAXING MAGNETIC MATERIAL CO.,LTD		
2	BOBBIN	PHENOL 94V-0 RM10 8PIN	SUMITOMO BAKELITE CO., LTD.	E41429	
3	WIRE	POLYURETHANE ENAMELED COPPER WIRE USTC 0.10Ø X 30P USTC 0.10Ø X 40P	DONG YANG ELECTRONICS IND CO LTD.	E102761	
4	INSULATION TAPE	POLYESTERS TAPE T = 0.025mm , T = 0.050mm W = 10.5mm (YELLOW)	DUCK SUNG HITECH CO LTD.	E105147	
5	CORE FIXING TAPE	POLYESTERS TAPE T = 0.025mm , W=7.0mm (YELLOW)			
6	PIN TERMINAL	SOLDER COATED COPPER	DAE-A LEAD CO.,LTD.		
7	VARNISH	SR-337A,B	SEKYE CHEMICAL CO.,LTD.	E257443	
8	SOLDER	Sn99.3 / Cu0.7 or EQV.	ALPHA METALS CO.,LTD or EQV.		
9	MARKING	INK (BON MARQUE) or EQV.	ATL CO.,LTD or EQV.		
10	FLUX	EF9301, DP-500K	ALPHA METALS CO.,LTD DUIYUAN TECH(HUIZHOU)CO.,LTD		
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9.UL LIST the standard in safety Underwriters Laboratories NOTICE OF AUTHORIZATION TO APPLY THE UL MARK — Dong In System Co Ltd — Mr. Young-Hoo Kim 97bi-5lt Namdong Industrial Complex 664-4 Gojan-dong Namdong-gu Incheon 405-617, K- 01/04/2011 Our Reference: — File E242921 Vol. 1 — Your Reference: Jae Kim 11/30/2010 Project Scope: <u>USK: ELECTRONIC ADOPTION OF COSMOLINK CIS-04 (E268545) TO BE DESIGNATED DIS-10B</u> Project Number: 10CA62347 APPLICATION FOR INSULATION SYSTEM / CLASS B (130°C)																																																																																												
BOBBIN SUMITOMO BAKELITE CO LTD 5-8 HIGASHI-SHINAGAWA 2-CHOME SHINAGAWA-KU TOKYO, 140-0002 JAPAN E41429 <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 20px;"> <thead> <tr> <th rowspan="2">Mtl Dsg</th> <th rowspan="2">Color</th> <th rowspan="2">Min. Thk mm</th> <th rowspan="2">Flame Class</th> <th colspan="3">H</th> <th colspan="2">RTI</th> <th rowspan="2">C</th> </tr> <tr> <th>W</th> <th>A</th> <th>V</th> <th>Elec</th> <th>Mech</th> </tr> <tr> <th></th> <th></th> <th></th> <th></th> <th>I</th> <th>I</th> <th>A</th> <th></th> <th>Imp</th> <th>Str</th> <th>I</th> </tr> </thead> <tbody> <tr> <td rowspan="2">PM-8375</td> <td rowspan="2">BK</td> <td>0.49</td> <td>V-0</td> <td>-</td> <td>-</td> <td>-</td> <td>150</td> <td>150</td> <td>150</td> <td>3</td> </tr> <tr> <td>3.0</td> <td>V-0</td> <td>-</td> <td>-</td> <td>-</td> <td>150</td> <td>150</td> <td>150</td> <td></td> </tr> <tr> <td rowspan="2">PM-9820</td> <td rowspan="2">BK</td> <td>0.16</td> <td>V-0</td> <td>-</td> <td>-</td> <td>-</td> <td>150</td> <td>150</td> <td>150</td> <td>3</td> </tr> <tr> <td>0.51</td> <td>V-0</td> <td>3</td> <td>1</td> <td>-</td> <td>150</td> <td>150</td> <td>150</td> <td></td> </tr> <tr> <td rowspan="2">PM-9630</td> <td rowspan="2">BK</td> <td>0.16</td> <td>V-0</td> <td>4</td> <td>0</td> <td>-</td> <td>150</td> <td>150</td> <td>150</td> <td>3</td> </tr> <tr> <td>0.32</td> <td>V-0</td> <td>3</td> <td>0</td> <td>-</td> <td>150</td> <td>150</td> <td>150</td> <td></td> </tr> </tbody> </table>							Mtl Dsg	Color	Min. Thk mm	Flame Class	H			RTI		C	W	A	V	Elec	Mech					I	I	A		Imp	Str	I	PM-8375	BK	0.49	V-0	-	-	-	150	150	150	3	3.0	V-0	-	-	-	150	150	150		PM-9820	BK	0.16	V-0	-	-	-	150	150	150	3	0.51	V-0	3	1	-	150	150	150		PM-9630	BK	0.16	V-0	4	0	-	150	150	150	3	0.32	V-0	3	0	-	150	150	150	
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DIS**DONG - IN SYSTEM CO.,LTD.**

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#- The wire may perform better than the rating reflects and hence may not be suitable for insulation system testing.																																																																		
Marking: Company name or "E102761" and material designation or marked designation on package or reel. Last Updated on 2007-03-06																																																																		
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APPROVAL SHEET			DATE	2014. 11. 07.
			PAGE	OF
CUSTOMER	M S P			
PART NAME	SWITCHING TRANS	MODEL NO.		
PART NO.	SNP-6320RH-T1	DESCRIPTION	RM10 5+3P	
P/S TAPE DUCK SUNG HITECH CO. LTD. 225-2 SHINNEUNG-RI SEOUN-MYEON ANSEONG-SI, GYEONGGI-DO 456-850 REPUBLIC OF KOREA E105147 <u>Polyester film insulating tape, acrylic adhesive, Cat. No. DTS-204(a), rated 130 C.</u> <u>Acetate cloth insulating tape, acrylic adhesive, Cat. No. 231", rated 105 C.</u> <u>Glass cloth insulating tape, rubber adhesive, Cat. No. 230-8, rated 130 C.</u> <u>Glass cloth insulating tape, silicone adhesive, Cat. No. 221H", rated 180 C.</u> <u>Acetate cloth insulating tape, rubber adhesive, Cat. No. DTS-230, rated 105 C.</u> <u>Nomex (Aramid fiber) film insulating tape with non-woven polyester fiber reinforcement, acrylic adhesive, Cat. No. DTS-241", rated 130 C.</u> <u>Polyester film insulating tape, acrylic adhesive, Cat. No. DTS-280", rated 130 C.</u> * - Complies with flame retardant requirements when so marked. + - Must be marked "Flame Retardant". @ - May be marked: "Film side CTI Performance Level Category PLC=3 Voltage 235, per UL 746A/ASTM D 3638", and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. % - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 325, per UL 746A/ASTM D 3638", and/or "Adhesive side CTI Performance Level Category PLC=1 Voltage 575, per UL 746A/ASTM D 3638" or equivalent. Ⓢ - May be marked: "Film side CTI Performance Level Category PLC=0 Voltage 600+", per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600+", per UL 746A/ASTM D 3638" or equivalent. Ⓛ - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 260, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. ~ - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 250, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. ⓖ - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 272, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. (a) - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 270, per UL 746A/ASTM D 3638", and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600+", per UL 746A/ASTM D 3638" or equivalent. Marking: Company name or trademark of  Number "E105147" and catalog designation printed on carton, wrapper or core. Last Updated on 2007-07-10				
DRAWN BY	CHECK BY	APPR. BY	REVISION	DATE
				

DIS

DONG - IN SYSTEM CO.,LTD.

APPROVAL SHEET			DATE	2014. 11. 07.														
			PAGE	OF														
CUSTOMER	M S P																	
PART NAME	SWITCHING TRANS	MODEL NO.																
PART NO.	SNP-6320RH-T1	DESCRIPTION	RM10 5+3P															
VARNISH Varnishes - Component <u>See General Information for Varnishes - Component</u> SE KYE CHEMICAL CO LTD E257443 360 GIDEON-RI TONGJIN-EUP KIMPO-SI, KYUNGGI-DO 415-862 REPUBLIC OF KOREA <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2" style="width: 25%;">Varnish Dsg</th> <th rowspan="2" style="width: 25%;">ANSI Magnet Wire Type</th> <th colspan="3" style="width: 50%;">Varnish Thermal Class C</th> </tr> <tr> <th style="width: 16.6%;">TP</th> <th style="width: 16.6%;">HC</th> <th style="width: 16.6%;">CE</th> </tr> </thead> <tbody> <tr> <td>SR-337(#)</td> <td>MW75</td> <td>130</td> <td>130</td> <td>—</td> </tr> </tbody> </table> # - May be followed by 1 or 2 suffix numeric and /or alpha characters to denote viscosity change accomplished via solvents due to production tolerance. Marking: Company name and varnish designation on shipping container. <u>Last Updated on 2006-06-28</u>						Varnish Dsg	ANSI Magnet Wire Type	Varnish Thermal Class C			TP	HC	CE	SR-337(#)	MW75	130	130	—
Varnish Dsg	ANSI Magnet Wire Type	Varnish Thermal Class C																
		TP	HC	CE														
SR-337(#)	MW75	130	130	—														
DRAWN BY	CHECK BY	APPR. BY	REVISION		DATE													
																		

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

NO :20141013-190

S P E C I F I C A T I O N

APPLICATION FOR APPROVAL OF

ITEM : TRANS

DESCRIPTION : RM10 5+3P

CODE NO : MSS10-405C

MODEL NO : SNP-6320RH-L32

This space is used for customer's approval

DESIGN	CHECK	APPROVAL
A TERM OF VALIDITY		YEAR

DONG HEUNG ELECTRONICS CO., LTD.

36, BAEKSEOKGONGDAN 6-GIL, SEOBUK-GU,
CHEONAN-SI, CHUNGCHEONGNAM-DO, KOREA

TEL : (041)552-1106~9

FAX : (041)552-3784

BAZHOU DONGXING

LAO DICUN, BAZHOU, HEIBEI PROVINCE, CHINA

YANTAI

SHENG QUAN INDUSTRIAL, LAISHAN DISTRICT, YANTAI,
SHANDONG PROVINCE, CHINA

DATE : 2014. 10. 14.

DRAWN BY S. J. PARK		DATE 2014. 10. 14.
CHECKED BY J. C. JI		DATE 2014. 10. 14.
APPROVED BY Y. S. KIM		DATE 2014. 10. 14.

0705-00양식03

부 품 승 인 원 개 정 이 력 지			
ITEM : TRANS		MODEL NAME : SNP-632ORH-L32	CODE No. : MSS10-405C
No.	년 월 일	개 정 내 용	해 당 Page
0	2014. 10. 14	*신규제정	ALL

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION				SHEET NO.		2 OF 16																																																				
				DATE		2014. 10. 14.																																																				
PART NAME		TRANS		MODEL NAME		SNP-6320RH-L32																																																				
CODE NO.		MSS10-405C		DESCRIPTION		RM10																																																				
2. WINDING SPECIFICATION ■ * START MARK.				<table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th>WINDING</th> <th>BOTTOM VIEW</th> <th>C.C.W</th> </tr> </thead> <tbody> <tr> <td>REMOVED PIN</td> <td>#1,3,5,7</td> <td></td> </tr> <tr> <td>CUT PIN</td> <td></td> <td></td> </tr> <tr> <td>N.C PIN</td> <td></td> <td></td> </tr> <tr> <td>TUBE</td> <td></td> <td></td> </tr> </tbody> </table>				WINDING	BOTTOM VIEW	C.C.W	REMOVED PIN	#1,3,5,7		CUT PIN			N.C PIN			TUBE																																						
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	3 OF 16			
		D A T E	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-632ORH-L32			
CODE NO.	MSS10-405C	DESCRIPTION	RM10			
4. 신뢰성 시험(Reliability Test)						
ITEM	TEST CONDITION		SPEC			
내 습 성 (HUMIDITY-RESISTANCE)	40±2℃ 90~95℃RH 96HR, 상온에서 60분 이상 방치 후 측정 (Measure after leave more than 60Min, Normal Temperature.)		INITIAL INDUCTANCE ±10%			
열 충격 (HEAT SHOCK-RESISTANCE)	-20℃→85℃ 1시간→10CYCLE 시험 후 상온에서 60분 이상 보존 후 측정 (Measure after keep more than 60Min, Normal Temperature after Test.)		INITIAL INDUCTANCE ±10%			
내 열 성 (HEAT-RESISTANCE)	105±2℃ 96HR 방치 후 상온에서 60분 이상 보존 후 측정 (Measure after keep more than 60Min, Normal Temperature after leave 105±2℃, 96HR.)		INITIAL INDUCTANCE ±10%			
내 한 성 (COLD-RESISTANCE)	-25±2℃ 96HR, 상온에서 60분 이상 방치 후 측정 (Temperature.Measure after leave more than 60Min, Normal)		INITIAL INDUCTANCE ±10%			
5. 내구성 시험(Endurance Test)						
ITEM	TEST CONDITION		SPEC			
SOLDERING 부착성 (ADHESION)	SOLDER POT ℃ : 280±5℃ SOLDERING HR : 2±0.5 SEC		90% 이상			
SOLDERING 내열성 (HEAT RESISTANCE)	SOLDER WAVE ℃ : 260±5℃ SOLDERING HR : 10±1.0 SEC		90% 이상			
SOLDERING 내열성 (HEAT RESISTANCE)	SOLDERING IRON ℃ : 400±5℃ SOLDERING HR : 5±1.0 SEC		90% 이상			
NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	4 OF 16			
		D A T E	2014. 10. 14.			
PART NAME	TRANS		MODEL NAME	SNP-632ORH-L32		
CODE NO.	MSS10-405C		DESCRIPTION	RM10		
6. TEST SPECIFICATION AT 25℃						
NO.	ITEM	TERMINAL	SPECIFICATION	REMARKS		
1	INDUCTANCE	6 - 8	25.0 uH ± 12%	HP-4284A at 1KHz, 1Vrms		
2	DC RESISTANCE	6 - 8	0.06 [Ω] MAX	WHEATSTONE BRIDGE YEW TYPE 2755 HIOKI TYPE RM3544		
3	WITHSTANDING VOLTAGE	COIL - CORE	AC 1.50KV, 1 MINUTE	KIKUSUI : TOS-9200 (1MINUTE CURRENT 5mA)		
4	INSULATION RESISTANCE	COIL - CORE	100MΩ MIN at DC 500V	KIKUSUI : TOS-9200		
5	IMPULSE TEST (SURGE TEST)	AC 1.5KV / 3PULSE				
NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	5 OF 16	
		D A T E	2014. 10. 14.	
PART NAME	TRANS	MODEL NAME	SNP-6320RH-L32	
CODE NO.	MSS10-405C	DESCRIPTION	RM10	

7. INTERNAL CONSTRUCTION

* WINDING

* P.S TAPE

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CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	6 OF 16			
		D A T E	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-632ORH-L32			
CODE NO.	MSS10-405C	DESCRIPTION	RM10			
8. MATERIAL LIST						
NO	I T E M	MATERIALS & DIMENSIONS	MANUFACTURER	REMARK		
1	CORE	RM 10 PL-7, KP-4, DMR40, K2.3P, NH2B, JF4, KP4, TY40 or Equiv.	SAM HWA ELECTRONICS CO., LTD. ZAOZHUNG KINGTECH ELECTRONICS CO., LTD. ZHEJIANG DONGYANG DMEGC MAGNETIC CO., LTD. ZHEJIANG LINAN HE SHUN MAGNETIC FLUX ELECTRONIC CO., LTD. ZHEJIANG HAINING LIANFENG MAGNET INDUSTRY CO., LTD. WUXI SPINEL MAGNETICS CO., LTD. SHANGHAI KANGSHUN MAGNETIC COMPONENT CO., LTD. Guangzhou Tongyang Electronics Co., Ltd or Equiv.			
2	BOBBIN	RM10 [8P] PHENOL (94V-0)	SUMITOMO BAKELITE CO., LTD. HITACHI CHEMICAL CO LTD	E41429 E42926		
3	COPPER WIRE	UEW 0.40Ø USTC 0.10 Øx50#	DONG YANG ELECTRONICS IND CO., LTD. SHANDONG PENGTAI STOCK CO., LTD. ZHEJIANG XIANDENG ELECTRICAL APPLIANCES CO., LTD JIANGSU DARTONG M&E CO., LTD HANGZHOU WEIFENG ELECTRONIC CO LTD	E102761 E166187 E218270 E237377 E229341		
4	INSULATION TAPE	POLYESTER TAPE 0.025t x 10.5mm 0.025t x 10.5mm {GREEN}	DUCK SUNG HITECH CO., LTD. JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO., LTD. METAL LINE CO., LTD.	E105147 E165111 E162848		
5	CORE FIXING TAPE	POLYESTER TAP 0.025t x 7.0mm {YELLOW}				
6	EPOXY	UNI-BOND #812 SK-015B H-907	GREENSTAR CO., LTD. SE KYE CHEMICAL CO., LTD. DONG GUAN SHI PAI HUA CHUANG MATERIAL FTY.			
7	IMPREGNATION	EPOXY	HITACHI CHEMICAL CO., LTD. KYOCERA CHEMICAL CORP SE KYE CHEMICAL CO LTD NOROO PAINT & COATINGS CO LTD	E72979 E83702 E257443 E93947		
8	SOLDER BAR	SN98CU2-B20	SAMWOO METAL CO., LTD. YUNNAN TIN CO., LTD. ASIA GENERAL ELECTRONICS CO., LTD			
9	INK	JP-K12, K33 BON MARQUE MS-6853	HITACHI INDUSTRIAL EQUIPMENT CO., LTD T&K TOKA CO., LTD SHANGHAI LEADJET INKJET PRINTER TECHNIQUE CO., LTD.			
10	FLUX	SV-PBF-304 FC-113	KOKI SANEI KOREA CO., LTD TAMURA KAKEN CORPORATION			
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	7 OF 16			
		DATE	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-632ORH-L32			
CODE NO.	MSS10-405C	DESCRIPTION	RM10			

***DONG HEUNG**

Systems, Electrical Insulation - Component

DONG HEUNG ELECTRONICS CO LTD **E141730**

555-31 BAEKSSUK-DONG

CHONAN-SHI, CHUNG-NAM 330-220 REPUBLIC OF KOREA

Class 130 (B) transformer insulation system, designated DHB-001.

Marking: Company name or tradename "DH" and system designation.

Last Updated on 2003-05-22

*** BOBBIN**

SUMITOMO BAKELITE CO LTD **E41429**
5-8 HIGASHI-SHINAGAWA 2-CHOME, SHINAGAWA-KU, TOKYO 140-0002 JP

PM-9630
Phenolic (PF), "Sumikon", furnished as pellets, granular material

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK	0.16	V-0	4	0	150	150	150
BK,BN	0.32	V-0	3	0	150	150	150
	0.51	V-0	3	0	170	155	160
	1.5	V-0	0	1	180	160	170
	3.0	V-0	0	1	180	170	180

Comparative Tracking Index (CTI):**3**
Dielectric Strength (kV/mm):-
High-Voltage Arc Tracking Rate (HVTR):**0**
Dimensional Stability (%):-
Inclined Plane Tracking (IPT):-
Volume Resistivity (10x ohm-cm) :-
High Volt, Low Current Arc Resis (D495):**4**

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date:1997-11-05
Last Revised:2013-10-15

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SUMITOMO BAKELITE CO LTD **E41429**
5-8 HIGASHI-SHINAGAWA 2-CHOME, SHINAGAWA-KU, TOKYO 140-0002 JP

PM-9820
Phenolic (PF), "Sumikon", furnished as pellets, granular material

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK	0.16	V-0	-	-	150	150	150
BK,BN	0.18	V-0	-	-	150	150	150
	0.51-0.69	V-0	3	1	150	150	150
	0.70	V-0	1	2	150	150	150
	1.5	V-0	0	2	150	150	150
	3.0	V-0	0	2	150	150	150

Comparative Tracking Index (CTI):**3**
Dielectric Strength (kV/mm):**14**
High-Voltage Arc Tracking Rate (HVTR):**0**
Dimensional Stability (%):-
Inclined Plane Tracking (IPT):-
Volume Resistivity (10x ohm-cm) :-
High Volt, Low Current Arc Resis (D495):**5**

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date:1997-11-03
Last Revised:2012-11-20

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NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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0705-00양식04

DONG HEUNG ELECTRONICS CO. , LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	8 OF 16																																																				
		D A T E	2014. 10. 14.																																																				
PART NAME	TRANS	MODEL NAME	SNP-6320RH-L32																																																				
CODE NO.	MSS10-405C	DESCRIPTION	RM10																																																				
HITACHI CHEMICAL CO LTD GRANTOKYO S TOWER, 9-2 MARUNOUCHI, 1-CHOME, CHIYODA-KU TOKYO 100-6606 JP E42956 CP-J-8600, CP-J-ALPHA-G Phenolic (PF), furnished as granular material, finished parts <table border="1" style="width: 100%; border-collapse: collapse; font-size: 10pt;"> <thead> <tr> <th>Color</th> <th>Min Thk (mm)</th> <th>Flame Class</th> <th>HWI</th> <th>HAI</th> <th>RTI Elec</th> <th>RTI Imp</th> <th>RTI Str</th> </tr> </thead> <tbody> <tr> <td rowspan="5" style="text-align: center; vertical-align: middle;">BK</td> <td>0.16</td> <td>V-0</td> <td>—</td> <td>—</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>0.38</td> <td>V-0</td> <td>3</td> <td>3</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>0.75</td> <td>V-0</td> <td>1</td> <td>2</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>1.5</td> <td>V-0</td> <td>0</td> <td>2</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>3.0</td> <td>V-0</td> <td>0</td> <td>2</td> <td>150</td> <td>150</td> <td>150</td> </tr> </tbody> </table> Comparative Tracking Index (CTI):3 Dielectric Strength (kV/mm):32 High-Voltage Arc Tracking Rate (HVTR):4 Dimensional Stability (%):0 Inclined Plane Tracking (IPT):— Volume Resistivity (10x ohm-cm):12 High Volt, Low Current Arc Resis (D495):4 ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL. Report Date:1973-05-14 Last Revised:2005-02-28 © 2013 UL LLC					Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	BK	0.16	V-0	—	—	150	150	150	0.38	V-0	3	3	150	150	150	0.75	V-0	1	2	150	150	150	1.5	V-0	0	2	150	150	150	3.0	V-0	0	2	150	150	150							
Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str																																																
BK	0.16	V-0	—	—	150	150	150																																																
	0.38	V-0	3	3	150	150	150																																																
	0.75	V-0	1	2	150	150	150																																																
	1.5	V-0	0	2	150	150	150																																																
	3.0	V-0	0	2	150	150	150																																																
HITACHI CHEMICAL CO LTD GRANTOKYO S TOWER, 9-2 MARUNOUCHI, 1-CHOME, CHIYODA-KU TOKYO 100-6606 JP E42956 CP-J-8800, CP-J-NAF, CP-J-F(N) Phenolic (PF), furnished as granular material, finished parts <table border="1" style="width: 100%; border-collapse: collapse; font-size: 10pt;"> <thead> <tr> <th>Color</th> <th>Min Thk (mm)</th> <th>Flame Class</th> <th>HWI</th> <th>HAI</th> <th>RTI Elec</th> <th>RTI Imp</th> <th>RTI Str</th> </tr> </thead> <tbody> <tr> <td rowspan="5" style="text-align: center; vertical-align: middle;">BK</td> <td>0.16</td> <td>V-0</td> <td>—</td> <td>—</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>0.38</td> <td>V-0</td> <td>0</td> <td>0</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>0.46</td> <td>V-0</td> <td>0</td> <td>0</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>0.87</td> <td>V-0</td> <td>0</td> <td>0</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>1.6</td> <td>V-0</td> <td>0</td> <td>0</td> <td>150</td> <td>150</td> <td>150</td> </tr> <tr> <td>3.0</td> <td>V-0</td> <td>0</td> <td>0</td> <td>150</td> <td>150</td> <td>150</td> </tr> </tbody> </table> Comparative Tracking Index (CTI):3 Dielectric Strength (kV/mm):25 High-Voltage Arc Tracking Rate (HVTR):0 Dimensional Stability (%):0 Inclined Plane Tracking (IPT):— Volume Resistivity (10x ohm-cm):12 High Volt, Low Current Arc Resis (D495):5 ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL. Report Date:1987-01-08 Last Revised:2010-03-29 © 2013 UL LLC					Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	BK	0.16	V-0	—	—	150	150	150	0.38	V-0	0	0	150	150	150	0.46	V-0	0	0	150	150	150	0.87	V-0	0	0	150	150	150	1.6	V-0	0	0	150	150	150	3.0	V-0	0	0	150	150	150
Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str																																																
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3.0	V-0	0	0	150	150	150																																																	

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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	9 OF 16			
		D A T E	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-6320RH-L32			
CODE NO.	MSS10-405C	DESCRIPTION	RM10			
*WIRE						
Magnet Wire – Component						
DONG YANG ELECTRONICS IND CO LTD				E102761		
5-20 BANGYE-RI MUNMAK-EUB						
WONJU-SHI, KANGWON-DO 220-800 REPUBLIC OF KOREA						
Coat Type						
Mtl Dsg	BC	OC	ANSI Type	TI		
NY-PEW(F)	Polyester	Polyamide	MW24	155		
DNY-UW	Polyurethane	Polyamide	MW80,	155,		
			MW28#	130		
UEW(F)	Polyurethane	-	MW79,	155,		
UEW(B)	Polyurethane	-	MW75#	130		
UAL	Polyurethane	-	@	155		
PEW	Polyester	-	@	180		
NY-UW	Polyurethane	Polyamide	MW5#	155		
Note: UAL is the alternate aluminum grade designation of magnet wire designated UEW(F). @- Non-ANSI type.						
#- The magnet wire may perform better than the rating reflects and may not be suitable for insulation system, varnish or end product testing. Further consideration is necessary prior to its use in testing.						
Marking: Company name or "E102761" and material designation or marked designation on package or reel.						
Last Updated on 2012-08-21						
Magnet Wire – Component						
SHANDONG PENGTAI STOCK CO LTD				E166187		
DAXINDIAN TOWN						
PENGLAI SHANDONG 265612, CHINA						
Mtl Dsg	Coat Type	BC	OC	ANSI Type	Temp Class	
PTMW35, xAI/EIW x(PEI/PAI)/200, Q(ZY/XY)-x/200	Polyester		Polyamide-imide	MW35	200	
Q(ZY/XY)/200						
PTMW30, xEIW-180, PEI/180, QZY-x/180	Polyester-imide			MW30	180	
PTMW73, EIA-W,	Polyester		Polyamide	MW73	200	
(PEI/PAI)/200, Q(ZY/XY)/200	imide					
PTMW75, xUEW/130, QA-x/130	Polyurethane		-	MW75	130	
EI/AIW220,	Polyester		Polyamide-imide	@	220	
(PEI/PAI)/220	imide			MW35,MW73#	200	
Q(ZY/XY)/220						
xAEI/AIW/220, Q(ZY/XY)L-x/220	Polyesterimide		Polyamideimide	MW 35-A	220	
xAEI/AIW/200, Q(ZY/XY)L-x/200	Polyesterimide		Polyamideimide	@#	200	
EI/AIW(F)/220, Q(ZY/XY)B-x/220	Polyesterimide		Polyamideimide	@	220	
EI/AIW(F)/200, Q(ZY/XY)B-x/200	Polyesterimide		Polyamideimide	MW 36-C#	200	
PTMW82, xUEW/180, QA-x/180	Polyurethane			MW82	180	
xAUEW/180, QAL-x/180	Polyurethane			@	180	
xAUEW/155, QAL-x/155	Polyurethane			@#	155	
xUEWF/180, QAB-x/180	Polyurethane			@	180	
xUEWF/155, QAB-x/155	Polyurethane			@#	155	
PTMW79, xUEW/155, QA-x/155	Polyurethane			MW79	155	
PTMW5, PEW, QZ(G)/155	Polyester			MW5	155	
xAPEW/155, QZL-x/155	Polyester			@	155	
PTMW5, PEW, QZ(G)/155	Polyester			MW5	155	
QP-x/220	Theic-Modified Polyesterimide		Polyamideimide	MW37-C	220	
QP-x/200	Theic-Modified Polyesterimide		Polyamideimide	MW73-C,MW35-C#	200	
SEIW/180 or QZYH-x/180	Polyester-imide			MW77-C#	155	
xSEIW(F)/180, QZYH(B)-x/180	Polyester-imide			@	180	
xSPEW(F)/155, QZH(B)-x/155	Polyester-imide			@#	155	
SPEW /155	Polyester-imide			MW26-C#	155	
PTMW80 xUEW-N/155 or QA(X)-x/155	Polyurethane		Polyamide	MW80-C	155	
xAUEW-N/155, QAXL-x/155	Polyurethane		Polyamide	MW80-A	155	
xAUEW-N/130, QAXL-x/130	Polyurethane		Polyamide	MW28-A#	130	
xUEW-N(F)/155, QAXB-x/155	Polyurethane		Polyamide	@	155	
xUEW-N(F)/130, QAXB-x/130	Polyurethane		Polyamide	@#	130	
PTMW28 xUEW-N/130 or QA(X)-x/130	Polyurethane		Polyamide	MW28-C#	130	
@ - NON-ANSI Type.						
# - The magnet wire may perform better than the rating reflects and may not be suitable for insulation system, varnish or end product testing. Further consideration is necessary prior to its use in testing.						
x - May be prefixed by 0, 1, 2, 3 to indicate coating thickness.						
Marking: Company name or trademark and material designation or marked designation on package or reel and Recognized Component Mark.						
Last Updated on 2013-05-23						
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	10 OF 16																																																																																																																								
		D A T E	2014. 10. 14.																																																																																																																								
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Magnet Wire - Component ZHEJIANG XIANDENG ELECTRICAL APPLIANCES CO LTD E218270 INDUSTRIAL AREA YANGDAO SHUANG LIN HUZHOU, ZHEJIANG 313012 CHINA <table border="1"> <thead> <tr> <th>Mtl Dsg</th> <th>Mark Dsg</th> <th>Coat Type BC</th> <th>OC</th> <th>ANSI Type</th> <th>Temp Class</th> </tr> </thead> <tbody> <tr> <td>UEW</td> <td>-</td> <td>Polyurethane</td> <td>-</td> <td>MW82</td> <td>180</td> </tr> <tr> <td>EI/AIW</td> <td>-</td> <td>Polyesterimide</td> <td>Polyamide-imide</td> <td>MW##@</td> <td>220</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>MW35#, MW73#</td> <td>200</td> </tr> <tr> <td>PEW</td> <td>-</td> <td>Polyester</td> <td>-</td> <td>MW5#</td> <td>155</td> </tr> <tr> <td>EIW/180</td> <td>-</td> <td>Polyesterimide</td> <td>-</td> <td>MW30-C</td> <td>180</td> </tr> <tr> <td>EIW/155</td> <td>-</td> <td>Polyesterimide</td> <td>-</td> <td>MW5-C#</td> <td>155</td> </tr> <tr> <td>QZ-130L</td> <td>-</td> <td>Polyesterimide</td> <td>-</td> <td>--#</td> <td>130</td> </tr> </tbody> </table> @- MW 35C construction but with a 220°C thermal rating. # - The magnet wire may perform better than the rating reflects and may not be suitable for insulation System, varnish or end product testing. Further consideration is necessary prior to its use in testing. --None ANSI Type. Marking: Company name, material designation or marked designation on package or reel, and Recognized Component Mark. Last Updated on 2012-08-07				Mtl Dsg	Mark Dsg	Coat Type BC	OC	ANSI Type	Temp Class	UEW	-	Polyurethane	-	MW82	180	EI/AIW	-	Polyesterimide	Polyamide-imide	MW##@	220					MW35#, MW73#	200	PEW	-	Polyester	-	MW5#	155	EIW/180	-	Polyesterimide	-	MW30-C	180	EIW/155	-	Polyesterimide	-	MW5-C#	155	QZ-130L	-	Polyesterimide	-	--#	130																																																																								
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DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	11 OF 16	
		DATE	2014. 10. 14.	
PART NAME	TRANS	MODEL NAME	SNP-632ORH-L32	
CODE NO.	MSS10-405C	DESCRIPTION	RM10	

Magnet Wire - Component

HANGZHOU WEIFENG ELECTRONIC CO LTD E229341

DAICUN
XIAOSHAN
HANGZHOU, ZHEJIANG 311261 CHINA

Mtl Dsg	Mark Dsg	Coat Type BC OC	ANSI Type	Temp Class
UEW-@, QA-@/130	UEW-@, QA-@/130	Polyurethane -	MW 75-C	130[#]
UEW/NY-@, QAN-@/130	UEW/NY-@, QAN-@/130	Polyurethane Polyamide	MW 28-C	130[#]
UEWF-@, QA-@/155	UEWF-@, QA-@/155	Polyurethane -	MW 79-C	155
UEWF/NY-@, QAN-@/155	UEWF/NY-@, QAN-@/155	Polyurethane Polyamide	MW 80-C	155[#]
UEWH/NY-@, QAN-@/180	UEWH/NY-@, QAN-@/180	Polyurethane Polyamide	MW 83-C	180
WF-@	WF-@	Polyurethane -	MW75-C	130[#]

[#] - The magnet wire may perform better than the rating reflects and may not be suitable for insulation system, varnish or end-product testing. Further consideration is necessary prior to its use in testing.

@ - May be USTC (include polyester filament yarn covering) or LITZ (twisted wire only).

Marking: Company name, material designation or marked designation and the Recognized Component Mark, on the shipping spool label or smallest unit container in which the product is packaged.

Last Updated on 2014-03-06

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DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	12 OF 16	
		D A T E	2014. 10. 14.	
PART NAME	TRANS	MODEL NAME	SNP-632ORH-L32	
CODE NO.	MSS10-405C	DESCRIPTION	RM10	

* TAPE																																																																																																																																																																																																																																																																		
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(b) - May be marked: "Film side CTI Performance Level Category PLC=3 Voltage 235, per UL 746A/ASTM D 3638", and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. (c) - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 325, per UL 746A/ASTM D 3638", and/or "Adhesive side CTI Performance Level Category PLC=1 Voltage 575, per UL 746A/ASTM D 3638" or equivalent. (d) - May be marked: "Film side CTI Performance Level Category PLC=0 Voltage 600+, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600+, per UL 746A/ASTM D 3638" or equivalent. (e) - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 260, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. (f) - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 250, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. (g) - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 272, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. Marking: Company name or tradename "E105147" or trademark and catalog designation printed on the central paper core or outer package. Last Updated on 2014-05-21	Cat. No.	Color	Temp (°C)	Flame Retardant+	Optional Ratings Sunlight Resistant+	Cold Resistant+	Acetate cloth insulating tapes with acrylic adhesive						231	All	105		Yes	No	Acetate cloth insulating tapes with rubber adhesive						DTS-230	All	105		No	No	Flame retardant acetate cloth tapes with rubber adhesive						DTS-232F	All	-		Yes	No	Flame retardant aluminum foil tapes with acrylic adhesive						DTS-800A	Silver	-		Yes	No	Flame retardant aluminum foil with PET film tapes with acrylic adhesive						DTS-810	Silver	-		Yes	No	Flame retardant copper foil tapes with acrylic adhesive						DTS-820	Copper	-		Yes	No	Flame retardant cotton cloth tapes with rubber adhesive						DTS-250F	Ivory	-		Yes	No	Flame retardant nickel coated polyester fiber tapes with acrylic adhesive						DTS-830	Gray	-		Yes	No	Glass cloth insulating tapes with acrylic adhesive						DTS-221F	Ivory	155		Yes	No	Glass cloth insulating tapes with rubber adhesive						220-B	White	130		No	No	Glass cloth insulating tapes with silicone adhesive						221-H	Ivory	180		Yes	No	Nomex (Aramid fiber) film insulating tapes with non-woven polyester fiber reinforcement with acrylic adhesive						DTS-241	White	130		Yes	No	PET film insulating tapes with acrylic adhesive						DTS-204F (b)	All	130		No	No	PET film insulating tapes with acrylic adhesive						DTS-204B (e)	All	130		No	No	DTS-204K (f)	All	130		No	No	DTS-207 (g)	All	130		No	No	PET film insulating tapes with acrylic adhesives POLYESTER TAPE						DTS-204 (e)	All and clear	130		No	No	DTS-280A	White	130		No	No	PET film insulating tapes with non-woven polyester fiber reinforcement with rubber adhesive						DTS-280B (d)	Clear	130		No	No	PET film insulating tapes with synthetic rubber adhesive						DTS-204R (c)	All	130		No	No	Polyester film insulating tapes with acrylic adhesive						DTS-280	White	130		Yes	No	DTS-280B	White	130		Yes	No	Polyimide film insulating tapes with silicone base adhesive						DTS-701	Amber	180		Yes	No
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	13 OF 16																																																																															
		D A T E	2014. 10. 14.																																																																															
PART NAME	TRANS	MODEL NAME	SNP-632ORH-L32																																																																															
CODE NO.	MSS10-405C	DESCRIPTION	RM10																																																																															
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DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	14 OF 16			
		D A T E	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-632ORH-L32			
CODE NO.	MSS10-405C	DESCRIPTION	RM10			

*IMPREGNATION

KYOCERA CHEMICAL CORP

KAWAGUCHI WORKS
5-14-25 RYOKE
KAWAGUCHI, SAITAMA 332-8533 JAPAN

E83702

Varnish Dsg	ANSI Magnet Wire Type	TP	Varnish Thermal Class C	HC	CE
TVB2024@@	MW75	130	130	130	-
TVB2122++, TVB2123, TVB2155	MW5	155	155	155	-
TVB2148	MW5	155	155	155	-
TVB2166++@	MW24	180	180	180	-
TVB2166++@	MW35	180	200	200	-
TVB2168++@	MW35	200	200	200	-
TVB2176	MW5	180	180	180	-
TVB2178	MW35	220	220	220	-
TVB2180T++@	MW5	155	130	130	-
	MW28	155	-	-	-
TVB2190	MW35	155	155	155	-
TVB2190D	MW5	180	180	180	-
TVB2191K++, TVB2190K, TVB2190KL	MW5	180	180	180	-
TVB2319++	MW24	180	180	180	-
	MW35	200	180	180	-
TVB2643/2644	MW35	180	180	180	-
TVB2918**	MW35	200	180	180	-

++ - May be followed by optional suffix. The suffix is denoting changing in the varnish density.
@ - May be filled with silica.
@@ - May be followed by a two character alphanumeric suffix denoting changes in viscosity accomplished by solvent variations.
** - May be followed by optional suffix.
Marking: Company name and varnish designation on shipping container.

Last Updated on 2012-06-05

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
2						
3						
4						

0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	15 OF 16	
		D A T E	2014. 10. 14.	
PART NAME	TRANS	MODEL NAME	SNP-632ORH-L32	
CODE NO.	MSS10-405C	DESCRIPTION	RM10	

SE KYE CHEMICAL CO LTD E257443 360 GUIJEON-RI TONGJIN-EUP KIMPO-SI, KYUNGGI-DO 415-862 REPUBLIC OF KOREA				
Varnish Dsg SR-337(##)	ANSI Magnet Wire Type MW75	TP 130	Varnish Theermal Class C HC 130	CE -
# - May be followed by 1 or 2 suffix numeric and /or alpha characters to denote viscosity change accomplished via solvents due to production tolerance. Marking: Company name and varnish designation on shipping container.				
Last Updated on 2006-06-28				

NOROO PAINT & COATINGS CO LTD E93947 615 PAKDAL-DONG ANYANG-SHI, KYONGGI-DO 430-030 REPUBLIC OF KOREA				
Varnish Dsg DVB-2152(##) DVB-2148L DVB-2148L(*) TVB2168++@ DVB-2085(*) DVB-2177(@) DVB-2156(##)	ANSI Magnet Wire Type MW5 MW35C MW35A MW5 MW24 MW5 MW28 MW5 MW80 MW35A	TP 180 200 220 155 155 155 130 180 155 200	Varnish Theermal Class C HC 155 200 240 155 155 155 130 200 - 220	CE - - - - - - - - -
(##) = May be filled with 0 -30 percent silica. (*) = To be followed by 1 or 2 numbers and/or 1 or 2 letters. (@) = May be followed by suffix XX in which XX represents percentage of solid content. Marking: Company name and varnish designation on shipping container.				
Last Updated on 2012-12-13				

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
2						
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4						

0705-00양식04

DONG HEUNG ELECTRONICS CO. , LTD.

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	16 OF 16			
		D A T E	2014. 10. 14.			
PART NAME	TRANS	MODEL NAME	SNP-632ORH-L32			
CODE NO.	MSS10-405C	DESCRIPTION	RM10			
Varnishes – Component						
HITACHI CHEMICAL CO LTD SHIBAURA SQUARE BLDG 4-9-25 SHIBAURA MINATO-KU, TOKYO 108-0023 JAPAN				E72979		
Varnish	ANSI Magnet	Varnish Thermal Class C				
Dsg	Wire Type	TP	HC	CE		
HPD-200, HPD-200S3, HPD-200S4, HPD-200S5, HPD-200S6	M W35	200	—	—		
	—	—	—	180		
NP-2020	M W5	130	—	—		
NP-2023	M W5	155	155	—		
NP-2050	M W35	200	220	—		
NP-2052	M W35	200	220	—		
PS-202	M W5	155	130	—		
WP-435	M W5	155	155	—		
WP-2763	M W5	155	155	—		
WP-2780	M W30	220	220	—		
	M W35	200	220	—		
	M W24	180	—	—		
	M W75	155	—	—		
	M W79	180	—	—		
WP-2790	M W35	220	220	—		
WP-2820	M W5	155	155	—		
	M W35	180	200	—		
WP-2952, WP-2952F-5, WP-2952F-11, WP-2952F-5(FC)	M W5	155	155	—		
	—	—	—	130		
WP-2952, WP-2952F-5, WP-2952F-11, WP-2952F-5(FC)	M W28	130	130	—		
WP-2782, WP-2782-VT	M W35	200	200	—		
WP-2782F, WP-2782F-VT	M W35	200	200	—		
WA-238A	M W28	130	130	—		
WF-285	M W28	130	130	—		
WP-2952-1G, WP-2952-1G(H), WP-2952-1G(K1)	M W28	130	130	—		
WP-2952B	M W28	130	130	—		
WP-2952F-2G, WP-2952F-2G(Y), WP-2952F-2G(YL), WP-2952F-2G(YS), WP-2952F-2G(FC), WP-2952F-2G(H), WP-2952F-2G(K)	M W28	130	130	—		
	M W24	155	—	—		
KE-573D	M W35	180	180	—		
WP-2854 (WP-2851, WP-2853, WP-2854, WP-2856, WP-2858)	M W35	180	180	—		
KE-573DH	M W35	200	200	—		
WP-2008	M W35	200	200	—		
WP-2008(L)	M W35	200	200	—		
WB-8000	M W28	130	130	—		
@Polyamide-imide.						
Marking: Company name or trademarks "HC", HC , "HCJH", HCJH , "HCDG" or HCDG and varnish designation on shipping container.						
Last Updated on 2013-01-17						
NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
2						
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4						

0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.



TO MESSRS : M S P

(SWITCHING TRANS) SPECIFICATION

MODEL NAME : PART NO : SNP-6320RH-L32
CUSTOMER'S SPEC. NO : DI SPEC. NO : RM10 5+3P

APPROVED	REFERENCE

DATE : 2014. 11. 07.



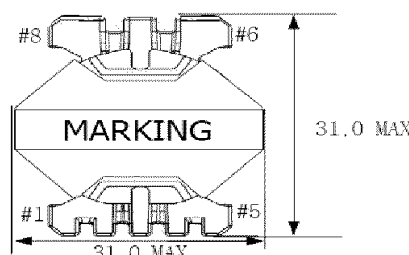
DONG IN SYSTEM CO.,LTD.



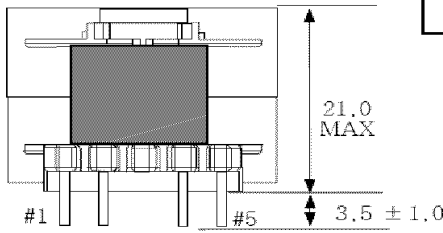
HEAD OFFICE	124-116 SUNG-EU DONG NAM-KU , INCHEON , KOREA TEL : 82-32-887-0040 FAX : 82-32-887-0111
CHINA PLANT	GANGTOU VILLAGE YANGTING TOWN HUANCUI ZONE WEIHAI CITY CHINA TEL : 86-631-5763828 FAX : 86-631-5763925

APPROVAL SHEET			DATE	2014. 11. 07.
			PAGE	OF
CUSTOMER	M S P			
PART NAME	SWITCHING TRANS	MODEL NO.		
PART NO.	SNP-6320RH-L32	DESCRIPTION	RM10 5+3P	

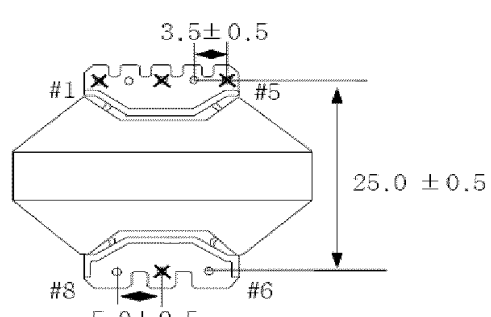
1. DIMENSIONS (UNIT:mm)



◎TOP VIEW◎



◎FRONT VIEW◎



◎BOTTOM VIEW◎

* MARKING *

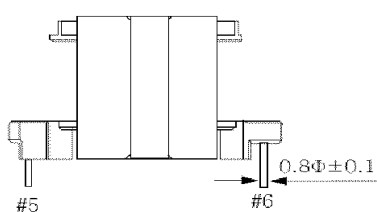
PART NO → SNP-6320RH-L32 DIS-10B ← INSULATION SYSTEM

DONGIN AA BB ← LOT NO

↑ ↑ ↑

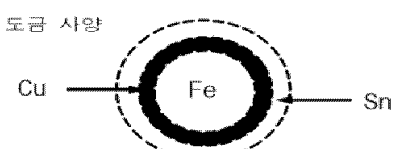
MONTH YEAR MAKER

MARKING	
PART NO.	SNP-6320RH-L32
(LOT NO)	AA : YEAR
	BB : MONTH
MAKER	DONG IN SYSTEM
DIS-10B	INSULATION SYSTEM

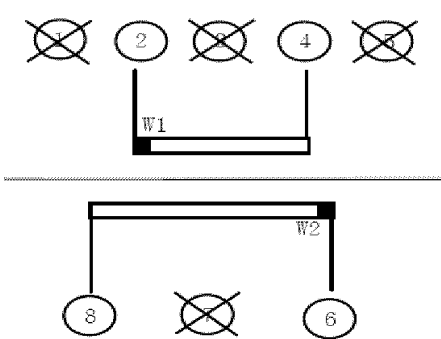


◎SIDE VIEW◎

★. PIN 도금 사양



DRAWN BY	CHECK BY	APPR. BY	REVISION		DATE
[Signature]		[Signature]		Safety	

APPROVAL SHEET				DATE	2014. 11. 07.																
				PAGE	OF																
CUSTOMER	M S P																				
PART NAME	SWITCHING TRANS			MODEL NO.																	
PART NO.	SNP-6320RH-L32			DESCRIPTION	RM10 5+3P																
2. CONNECTION (BOTTOM VIEW)																					
				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>REMOVED PIN</td> <td>#1,3,5,7</td> </tr> <tr> <td>CUT PIN</td> <td>#</td> </tr> <tr> <td>N.C PIN</td> <td>#</td> </tr> <tr> <td>TEFLON TUBE</td> <td>#</td> </tr> <tr> <td>FLUX BAND</td> <td>#6</td> </tr> <tr> <td>DOT MARK</td> <td>#START OF WINDING</td> </tr> <tr> <td colspan="2">* CORE CENTER BOND</td> </tr> </table>				REMOVED PIN	#1,3,5,7	CUT PIN	#	N.C PIN	#	TEFLON TUBE	#	FLUX BAND	#6	DOT MARK	#START OF WINDING	* CORE CENTER BOND	
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N.C PIN	#																				
TEFLON TUBE	#																				
FLUX BAND	#6																				
DOT MARK	#START OF WINDING																				
* CORE CENTER BOND																					
3. WINDING SPECIFICATION																					
NO	TERMINAL		WIRE	Ts	WINDING METHOD	INSULATION		BARRIER													
	S	F				MATERIAL (t / mm)	Ts	TOP	PIN	Ts											
W1	2	4	UEW 0.40Ø X 2	11	SOLENOID	POLYESTER TAPE 0.025 / 10.5	2														
W2	6	8	USTC 0.10Ø X 50P X 2	14	SOLENOID	POLYESTER TAPE 0.025 / 10.5 (GREEN)	2														
CORE FIXING TAPE						POLYESTER TAPE 0.025 / 7.0 (YELLOW)	3														
DRAWN BY	CHECK BY	APPR. BY	REVISION					DATE													
																					

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PART NO.	SNP-6320RH-L32	DESCRIPTION	RM10 5+3P																																			
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PART NAME	SWITCHING TRANS		MODEL NO.		
PART NO.	SNP-6320RH-L32		DESCRIPTION	RM10 5+3P	
6. ELECTRICAL CHARACTERISTICS					
NO	ITEM	TERMINAL	SPECIFICATION	REMARKS	
1	INDUCTANCE	6 - 8	25.0uH $\pm$ 12%	HP 4284A LCR-METER AT 1kHz 1V	
2	DC RESISTANCE	6 - 8	0.06ohm MAX	HIOKI-3540 m Ω TESTER	
3	WITHSTANDING VOLTAGE	P COIL - CORE	AC 1,5 KV RMS 10mA 60 SEC.	KIKUSUI TOS8850	
4	INSULATION RESISTANCE	P COIL - S COIL	100Mohm MIN DC 500V	KIKUSUI TOS8850	
5	SURGE TEST	PRI. - SEC.	AC 1.5 KV 1SEC.		
7. CONSTRUCTION					
TOP 3 LAYERS 0.025x10.5mm {G} [4] W2 [3] 3 LAYERS 0.025x10.5mm [4] W1 [3] BOBBIN [2] BOTTOM GAP FERRITE CORE [1] NO GAP FERRITE CORE [1] 3 LAYERS 0.025x7.0mm{Y} [5] EPOXY [7] * GAP : CENTER AIR GAP * WINDING * P.S TAPE					
DRAWN BY	CHECK BY	APPR. BY	REVISION		DATE

APPROVAL SHEET				DATE	2014. 11. 07.
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PART NAME	SWITCHING TRANS		MODEL NO.		
PART NO.	SNP-6320RH-L32		DESCRIPTION	RM10 5+3P	
8. MATERIAL LIST					
NO	ITEM	MATERIAL	MANUFACTURER	FILE NO.	
1	CORE	PC-40 RM10 HX-4P RM10	JI SHUN MAGNETIC CO.,LTD. NANTONG HUAXING MAGNETIC MATERIAL CO.,LTD		
2	BOBBIN	PHENOL 94V-0 RM10 8PIN	SUMITOMO BAKELITE CO., LTD.	E41429	
3	WIRE	POLYURETHANE ENAMELED COPPER WIRE UEW 0.40Ø USTC 0.10Ø X 50P	DONG YANG ELECTRONICS IND CO LTD.	E102761	
4	INSULATION TAPE	POLYESTERS TAPE T = 0.025mm , T = 0.050mm W = 10.5mm(GREEN)	DUCK SUNG HITECH CO LTD.	E105147	
5	CORE FIXING TAPE	POLYESTERS TAPE T = 0.025mm , W=7.0mm (YELLOW)			
6	PIN TERMINAL	SOLDER COATED COPPER	DAE-A LEAD CO.,LTD.		
7	ADHESIVE	SK-015B	SEKYE EPOXY RESIN CO., LTD.		
8	VARNISH	SR-337A,B	SEKYE CHEMICAL CO.,LTD.	E257443	
9	SOLDER	Sn99.3 / Cu0.7 or EQV.	ALPHA METALS CO.,LTD or EQV.		
10	MARKING	INK (BON MARQUE) or EQV.	ATL CO.,LTD or EQV.		
11	FLUX	EF9301, DP-500K	ALPHA METALS CO.,LTD DUIYUAN TECH(HUIZHOU)CO.,LTD		
DRAWN BY	CHECK BY	APPR. BY	REVISION		DATE
					

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9.UL LIST the standard in safety Underwriters Laboratories NOTICE OF AUTHORIZATION TO APPLY THE UL MARK — Dong In System Co Ltd — Mr. Young-Hoo Kim 97bi-5lt Namdong Industrial Complex 664-4 Gojan-dong Namdong-gu Incheon 405-617, K- Our Reference: — File E242921 Vol. 1 — Your Reference: Jae Kim 11/30/2010 Project Scope: <u>ULR: ELECTRONIC ADOPTION OF COSMOLINK CIS-04 (E268545) TO BE DESIGNATED DIS-10B</u> Project Number 10CA62347 01/04/2011 APPLICATION FOR INSULATION SYSTEM / CLASS B (130°C)																																																																																												
BOBBIN SUMITOMO BAKELITE CO LTD 5-8 HIGASHI-SHINAGAWA 2-CHOME SHINAGAWA-KU TOKYO, 140-0002 JAPAN E41429 <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Mtl Dsg</th> <th rowspan="2">Color</th> <th rowspan="2">Min. Thk mm</th> <th rowspan="2">Flame Class</th> <th colspan="3">H</th> <th colspan="2">RTI</th> <th rowspan="2">C</th> </tr> <tr> <th>W</th> <th>A</th> <th>V</th> <th>Elec</th> <th>Mech</th> </tr> <tr> <th></th> <th></th> <th></th> <th></th> <th>I</th> <th>I</th> <th>A</th> <th></th> <th>Imp</th> <th>Str</th> <th>I</th> </tr> </thead> <tbody> <tr> <td rowspan="2">PM-8375</td> <td rowspan="2">BK</td> <td>0.49</td> <td>V-0</td> <td>-</td> <td>-</td> <td>-</td> <td>150</td> <td>150</td> <td>150</td> <td>3</td> </tr> <tr> <td>3.0</td> <td>V-0</td> <td>-</td> <td>-</td> <td>-</td> <td>150</td> <td>150</td> <td>150</td> <td></td> </tr> <tr> <td rowspan="2">PM-9820</td> <td rowspan="2">BK</td> <td>0.16</td> <td>V-0</td> <td>-</td> <td>-</td> <td>-</td> <td>150</td> <td>150</td> <td>150</td> <td>3</td> </tr> <tr> <td>0.51</td> <td>V-0</td> <td>3</td> <td>1</td> <td>-</td> <td>150</td> <td>150</td> <td>150</td> <td></td> </tr> <tr> <td rowspan="2">PM-9630</td> <td rowspan="2">BK</td> <td>0.16</td> <td>V-0</td> <td>4</td> <td>0</td> <td>-</td> <td>150</td> <td>150</td> <td>150</td> <td>3</td> </tr> <tr> <td>0.32</td> <td>V-0</td> <td>3</td> <td>0</td> <td>-</td> <td>150</td> <td>150</td> <td>150</td> <td></td> </tr> </tbody> </table>							Mtl Dsg	Color	Min. Thk mm	Flame Class	H			RTI		C	W	A	V	Elec	Mech					I	I	A		Imp	Str	I	PM-8375	BK	0.49	V-0	-	-	-	150	150	150	3	3.0	V-0	-	-	-	150	150	150		PM-9820	BK	0.16	V-0	-	-	-	150	150	150	3	0.51	V-0	3	1	-	150	150	150		PM-9630	BK	0.16	V-0	4	0	-	150	150	150	3	0.32	V-0	3	0	-	150	150	150	
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COIL DONG YANG ELECTRONICS IND CO LTD 5-20 BANGYE-RI MUNMAK-EUB WONJU-SHI, KANGWON-DO 220-200 REPUBLIC OF KOREA E102761 <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th rowspan="2">Mtl Dsg</th> <th colspan="2">Coat Typ</th> <th rowspan="2">ANSI Type</th> <th rowspan="2">TI</th> </tr> <tr> <th>BC</th> <th>GC</th> </tr> </thead> <tbody> <tr> <td rowspan="2">EW</td> <td>Polyester-</td> <td rowspan="2"></td> <td rowspan="2">MW30</td> <td rowspan="2">180</td> </tr> <tr> <td>imide</td> </tr> <tr> <td>NY-EW</td> <td>Polyester-</td> <td>Polyamide</td> <td>MW75</td> <td>180</td> </tr> <tr> <td></td> <td>amide-imide</td> <td></td> <td></td> <td></td> </tr> <tr> <td>NY-PEW</td> <td>Polyester</td> <td>Polyamide</td> <td>MW24</td> <td>155</td> </tr> <tr> <td>NY-PEW(F)</td> <td>Polyester</td> <td>Polyamide</td> <td>MW24</td> <td>155</td> </tr> <tr> <td>NY-UW</td> <td>Polyurethane</td> <td>Polyamide</td> <td>MW80,</td> <td>155,</td> </tr> <tr> <td></td> <td></td> <td></td> <td>MW28#</td> <td>130</td> </tr> <tr> <td>UEW(F)</td> <td>Polyurethane</td> <td>—</td> <td>MW75,</td> <td>155,</td> </tr> <tr> <td>UEW(B)</td> <td>Polyurethane</td> <td>—</td> <td>MW75#</td> <td>130</td> </tr> <tr> <td>UAL</td> <td>Polyurethane</td> <td>—</td> <td>@</td> <td>155</td> </tr> <tr> <td>PEW</td> <td>Polyester</td> <td>—</td> <td>@</td> <td>180</td> </tr> <tr> <td></td> <td></td> <td></td> <td>MW5#</td> <td>155</td> </tr> </tbody> </table> Note: UAL is the alternate aluminum grade designation of magnet wire designated UEW. @- Non-ANSI type. #- The wire may perform better than the rating reflects and hence may not be suitable for insulation system testing. Marking: Company name or "E102761" and material designation or marked designation on package or reel. Last Updated on 2007-03-06						Mtl Dsg	Coat Typ		ANSI Type	TI	BC	GC	EW	Polyester-		MW30	180	imide	NY-EW	Polyester-	Polyamide	MW75	180		amide-imide				NY-PEW	Polyester	Polyamide	MW24	155	NY-PEW(F)	Polyester	Polyamide	MW24	155	NY-UW	Polyurethane	Polyamide	MW80,	155,				MW28#	130	UEW(F)	Polyurethane	—	MW75,	155,	UEW(B)	Polyurethane	—	MW75#	130	UAL	Polyurethane	—	@	155	PEW	Polyester	—	@	180				MW5#	155
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PART NAME	SWITCHING TRANS	MODEL NO.		
PART NO.	SNP-6320RH-L32	DESCRIPTION	RM10 5+3P	
P/S TAPE DUCK SUNG HITECH CO. LTD. 225-2 SHINNEUNG-RI SEOUN-MYEON ANSEONG-SI, GYEONGGI-DO 456-850 REPUBLIC OF KOREA E105147 <u>Polyester film insulating tape, acrylic adhesive, Cat. No. DTS-204(a), rated 130 C.</u> <u>Acetate cloth insulating tape, acrylic adhesive, Cat. No. 231", rated 105 C.</u> <u>Glass cloth insulating tape, rubber adhesive, Cat. No. 230-8, rated 130 C.</u> <u>Glass cloth insulating tape, silicone adhesive, Cat. No. 221H", rated 180 C.</u> <u>Acetate cloth insulating tape, rubber adhesive, Cat. No. DTS-230, rated 105 C.</u> <u>Nomex (Aramid fiber) film insulating tape with non-woven polyester fiber reinforcement, acrylic adhesive, Cat. No. DTS-241", rated 130 C.</u> <u>Polyester film insulating tape, acrylic adhesive, Cat. No. DTS-280", rated 130 C.</u> * - Complies with flame retardant requirements when so marked. + - Must be marked "Flame Retardant". @ - May be marked: "Film side CTI Performance Level Category PLC=3 Voltage 235, per UL 746A/ASTM D 3638", and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. % - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 325, per UL 746A/ASTM D 3638", and/or "Adhesive side CTI Performance Level Category PLC=1 Voltage 575, per UL 746A/ASTM D 3638" or equivalent. Ⓢ - May be marked: "Film side CTI Performance Level Category PLC=0 Voltage 600+", per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600+", per UL 746A/ASTM D 3638" or equivalent. Ⓛ - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 260, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. ~ - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 250, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. § - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 272, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent. (a) - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 270, per UL 746A/ASTM D 3638", and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600+", per UL 746A/ASTM D 3638" or equivalent. Marking: Company name or trademark,  Number "E105147" and catalog designation printed on carton, wrapper or core. Last Updated on 2007-07-10				
DRAWN BY	CHECK BY	APPR. BY	REVISION	DATE
				

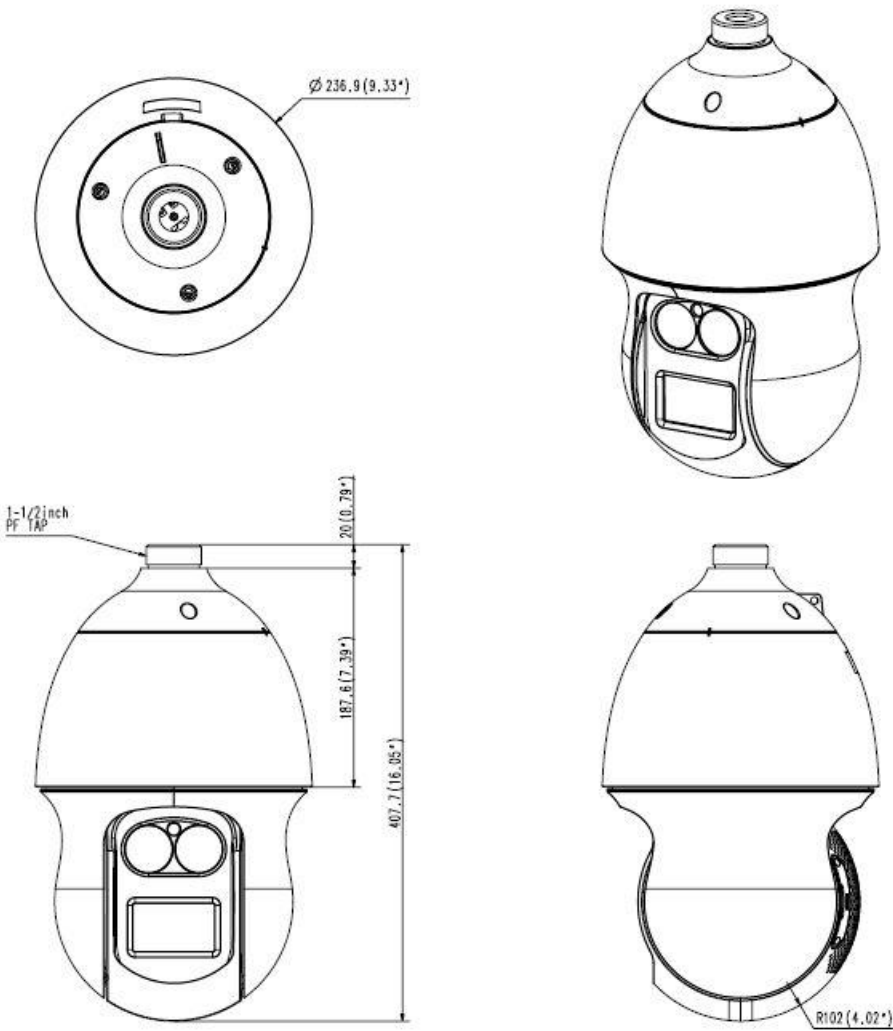
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CUSTOMER	M S P																	
PART NAME	SWITCHING TRANS	MODEL NO.																
PART NO.	SNP-6320RH-L32	DESCRIPTION	RM10 5+3P															
VARNISH Varnishes - Component <u>See General Information for Varnishes - Component</u> SE KYE CHEMICAL CO LTD E257443 360 GIDEON-RI TONGJIN-EUP KIMPO-SI, KYUNGGI-DO 415-862 REPUBLIC OF KOREA <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2" style="width: 25%;">Varnish Dsg</th> <th rowspan="2" style="width: 25%;">ANSI Magnet Wire Type</th> <th colspan="3" style="text-align: center;">Varnish Thermal Class C</th> </tr> <tr> <th style="width: 15%;">TP</th> <th style="width: 15%;">HC</th> <th style="width: 15%;">CE</th> </tr> </thead> <tbody> <tr> <td>SR-337(#)</td> <td>MW75</td> <td style="text-align: center;">130</td> <td style="text-align: center;">130</td> <td style="text-align: center;">—</td> </tr> </tbody> </table> # - May be followed by 1 or 2 suffix numeric and /or alpha characters to denote viscosity change accomplished via solvents due to production tolerance. Marking: Company name and varnish designation on shipping container. <u>Last Updated on 2006-06-28</u>						Varnish Dsg	ANSI Magnet Wire Type	Varnish Thermal Class C			TP	HC	CE	SR-337(#)	MW75	130	130	—
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PRODUCT OVERVIEW

Unit : mm (inch)



NETWORK CAMERA

XNP-6371RH

AC 24V~ 50/60Hz 4.2A

M/C: XNP-6371RH/KUS Fac. ID:D



[DATE] S/N: XXXXXXXXXXXXXXXX

MAC ADDRESS: XX-XX-XX-XX-XX-XX

CAN ICES-3(A)/NMB-3(A)

HANWHA TECHWIN CO., LTD. MADE IN KOREA



ITE
US LISTED
9T96 E158873



Project No. 4789186683
 Compliance
 Review
 Conducted by: _____

File E158873

Page 1

Printed Name

Signature

Date _____

Standard SCC Requirements and Guidance - Product Certification Body Accreditation Program Edition/ Revision Date 2016-04-06

Clause/Par. Reference and Construction Requirement	Comply			Comments/Measurements	Inst. ID No.
	Yes	No	N/A		
9.2.3 CBs shall include dual language safety labeling within their product certification requirements, if so required by the standard or by the authority having jurisdiction.					
The manufacturer has confirmed they have the ability to include English and French safety labeling exactly as specified in the product standard; or, if NOT specified in the product standard, the ability to include English and French safety labelling consisting of markings associated with the signal words DANGER, WARNING, and CAUTION when required.	X			The ability of the manufacturer to include these markings was verified by either (1) visual inspection of the markings on the actual product or (2) draft of labels that will be applied to the product or (3) written confirmation from the customer of the markings that will appear on the product. If the product standard provides the exact translation, the evidence must match the exact translation. If the product standard does NOT provide the exact translation, the evidence must simply include both the English and French text (no verification of translation is required).	N/A

Project No. 4789186683

File E158873

Page 2

Compliance

Review

Conducted by:

Date

Printed Name

Signature

Clause/Par. Reference and Construction Requirement	Comply			Comments/Measurements	Inst. ID No.
	Yes	No	N/A		
Manufacturer has a method to manage distribution of products, IF all products with the Canadian certification mark are NOT going to include the dual language.	X			Evaluation staff are to only verify that the manufacturer has a method to control distribution. Evaluation staff do not have to record the method of control nor are the evaluation staff expected to verify the effectiveness of the method of control. This requirement to verify that a method exists will be noted in the FUS Procedure. The UL Field Engineer will verify the method during surveillance. If the manufacturer is going to include the dual language on all products with the Canadian certification mark, then this item is N/A; no further action required.	N/A

Test Record

Test Record No. 1

1. Test result relate only to the items tested.

2. The manufacturer submitted representative production samples of NETWORK CAMERA, Model XNP-6371RH.

3. Only the test listed were considered necessary.

The following tests were conducted:

Test	Testing Location/Comments
End Product Reference Page	
General Guidelines	
Input: Single-Phase (1.6.2)	
SELV Reliability Test Including Hazardous Voltage Measurements (2.2.2, 2.2.3, 2.2.4, Part 22 6.1)	
Determination of Working Voltage; Working Voltage Measurement (2.10.2)	
Loading - Wall and Ceiling Mounted Equipment (4.2.10)	
Battery (4.3.8)	
Heating (4.5.1, 1.4.12, 1.4.13)	
Component Failure (5.3.1, 5.3.4, 5.3.7)	
Abnormal Operation (5.3.1 - 5.3.9)	

Test results are valid only for the tested equipment. These tests are considered representative of the products covered by this Test Report. The test methods and results of the above tests have been reviewed and found to be in accordance with the requirements in the Standard(s) referenced at the beginning of this Test Report.

The following supplements are provided as a part of this Test Record. NOTE: These supplements are only available to the Applicant via the CDA system.

Type	Supplement Id	Description
Attachment	2-01	Datasheet