THE LSC04065FW
IS NOT RECOMMENDED FOR NEW DESIGNS.
PLEASE USE THE DSC04A065FP.

A Product Line of Diodes Incorporated

LITE-ON SEMICONDUCTOR

LSC04065FW

SILICON CARBIDE SCHOTTKY DIODE

REVERSE VOLTAGE – 650 Volts
FORWARD CURRENT – 4 Amperes

FEATURES

- Positive temperature coefficient for save operation and easy of paralleling
- 175℃ maximum operating junction temperature
- Essentially no reverse or forward recovery
- Extremely fast switching not dependent on temperature
- Qualification is according to AEC-Q101 Rev_D
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please contact us or your local Diodes representative. https://www.diodes.com/quality/product-definitions/**

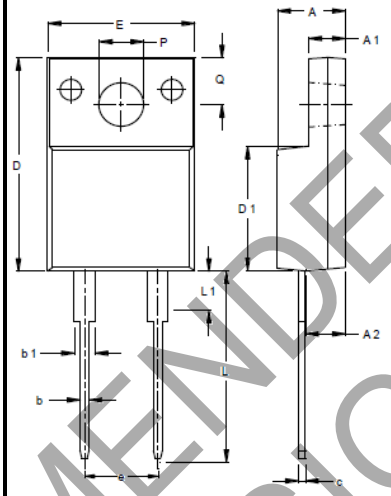
APPLICATION

- Switch mode power supplies
- Power factor correction
- Power factor correction modules

MECHANICAL DATA

- Package: JEDEC TO-220ACFP
- Package Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".
- Lead free finish, RoHS compliant
- Weight: 1.497 grams (Approximate)
- Marking code: LSC04065FW

ITO220AC (Type WX)



ITO220AC (Type WX)		
Dim	Min	Max
A	4.46	4.87
A1	2.48	2.80
A2	2.50	2.80
b	0.50	0.80
b1	1.15	1.70
c	0.45	0.70
D	14.95	15.95
D1	8.50	8.80
E	10.00	10.40
e	4.95	5.25
L	13.00	13.70
L1	3.30	3.90
Q	2.76	3.36
PØ	3.00	3.30
All Dimensions in mm		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER		SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	650	V
Maximum DC blocking voltage		V_{DC}	650	V
Maximum Average rectified output current	@T_C=115°C	$I_{(AV)}$	4	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.		I_{FSM}	28	A
Operating junction and Storage Temperature range		T_J, T_{STG}	-55 to +175	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS		SYMBOL	TYP	MAX	UNIT
Forward voltage (Note 4)	I_F=4A	T_J=25°C T_J=175°C	V_F	-- 1.94	1.70 2.25	V
Leakage current	V_R=650V	T_J=25°C T_J=175°C	I_R	-- 16.5	170 550	uA
Typical junction capacitance (Note 5)			C_J	125		pF

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	TYP	UNIT
Total Capacitive Charge	VR=400V, dI/dt= 250A/uS, I_F=4A	Qc	14	nC

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Notes 6, 7)	$RthJ_C$ $RthJ_L$	7 5	°C/W

Notes:

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. 300us pulse width, 2% duty cycle.
5. Measured at 1.0MHz and applied voltage of 1.0V DC.
6. Thermal resistance test performed in accordance with JESD-51.
7. The unit mounted on Aluminum fin-type Heatsink 24mm x 42 mm x 24mm.

RATING AND CHARACTERISTIC CURVES
LSC04065FW

FIG.1 FORWARD CURRENT DERATING CURVE

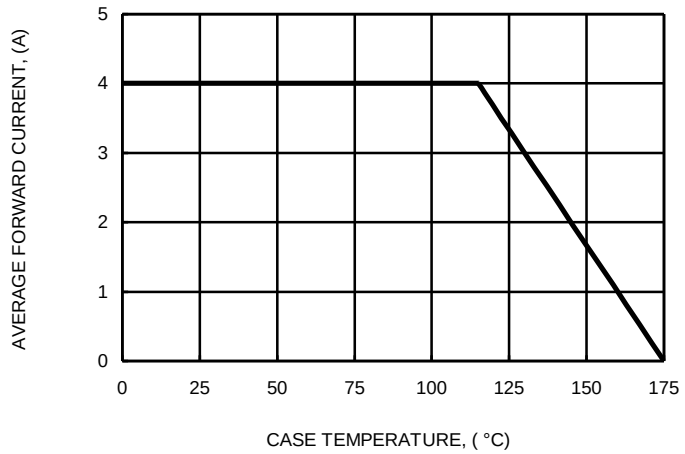


FIG.2 NON-REPETITIVE PEAK SURGE FORWARD CURRENT

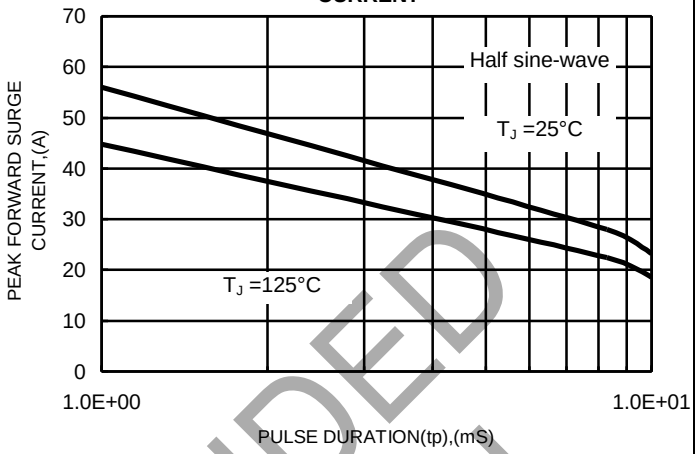


FIG.3 TYPICAL FORWARD CHARACTERISTICS

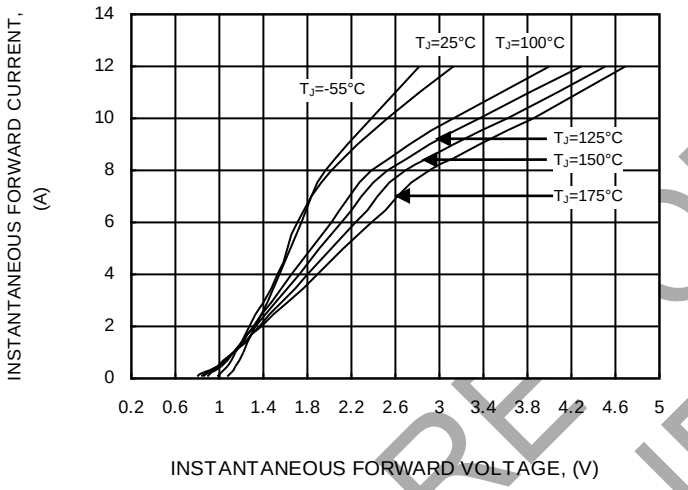


FIG.4 TYPICAL JUNCTION CAPACITANCE

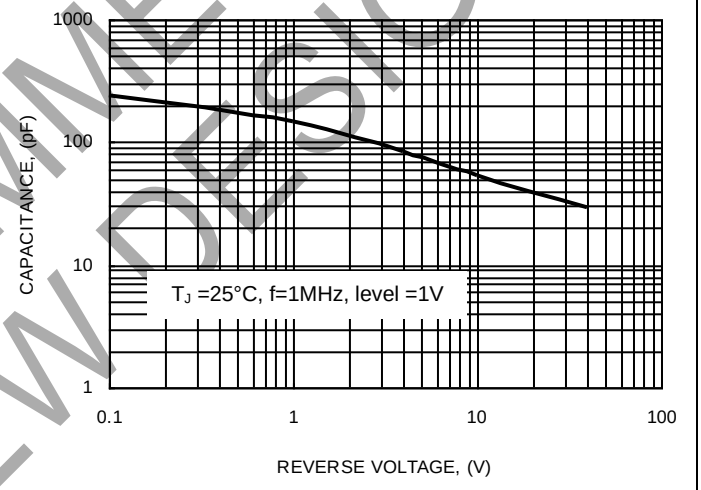


FIG.5 TYPICAL REVERSE CHARACTERISTICS

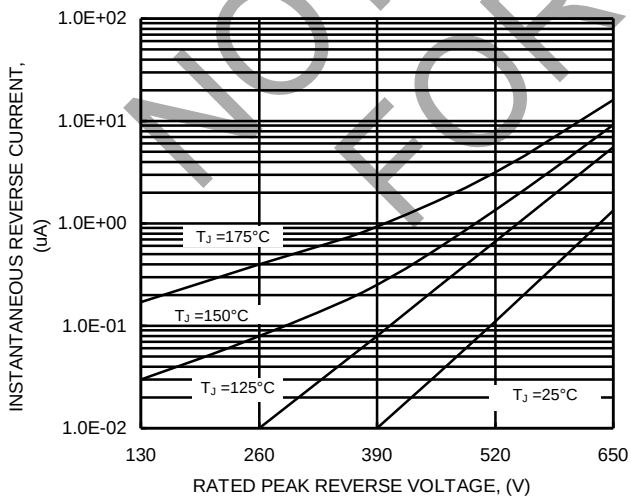
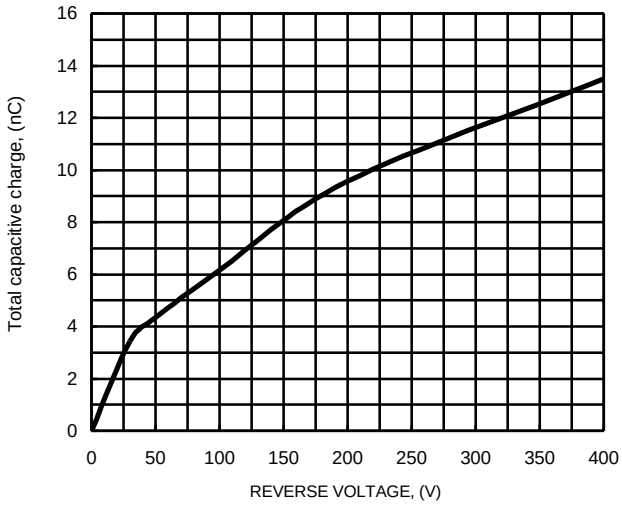


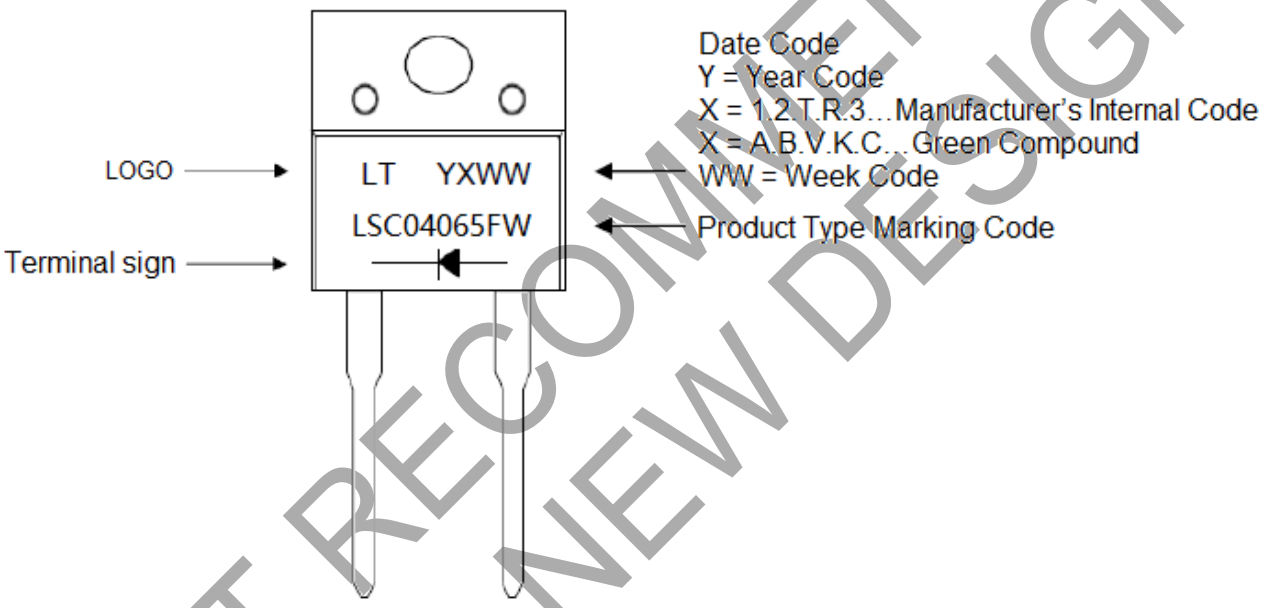
FIG.6 TYPICAL CAPACITIVE CHARGES



Ordering Information:

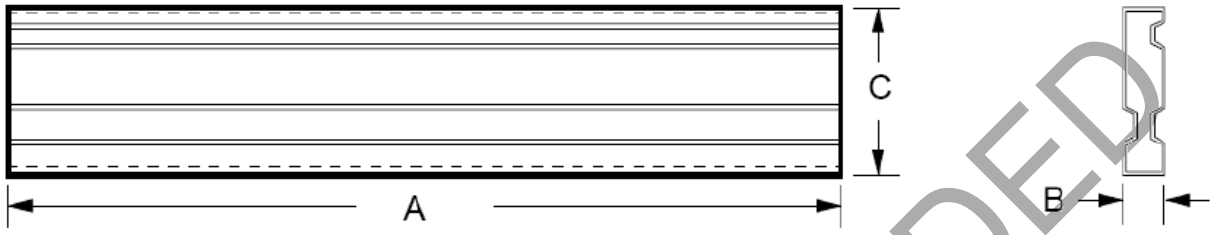
Orderable Part Number	Package	Packing	
		Qty.	Carrier
LSC04065FW	ITO220AC (Type WX)	50pcs	Tube

Marking Information:



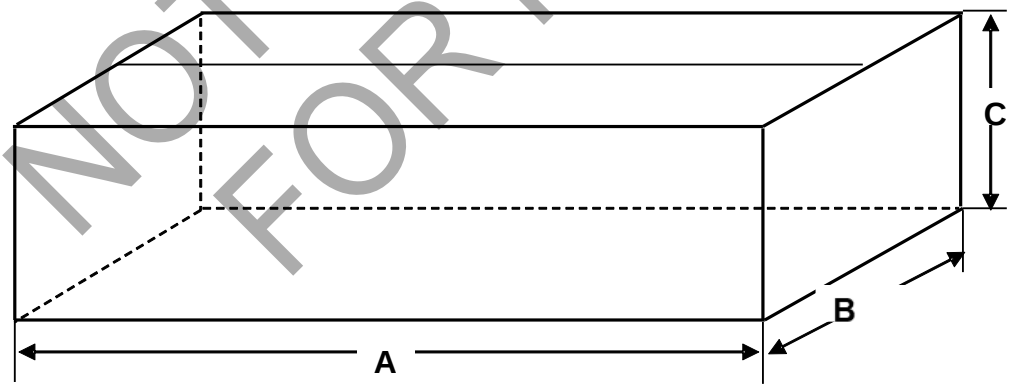
Packaging Information:

1. TUBE



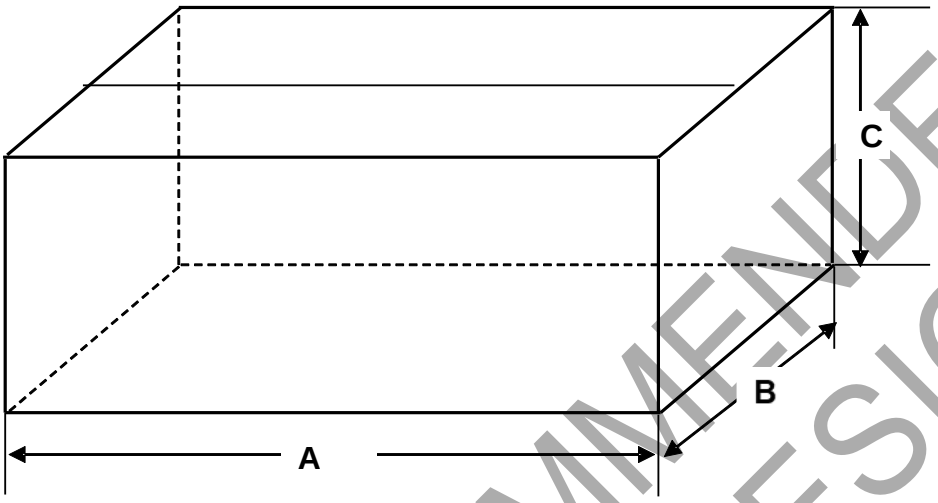
2. AIR BAG

3. INNERBOX



Packaging Information:

4. CARTON



Unit:mm

P/N	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	Q'ty/per	REMARK
TUBE	536	5.6	31.8	50	/
AIR BAG	800	550	/	/	/
INNERBOX	555	165	105	2000	40TUBE
CARTON	575	179	225	4K	2 INNER BOX

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