

AUDAX ELECTRONICS MCS1806GS-3-05 Linear Hall-Effect Current Sensor Instructions

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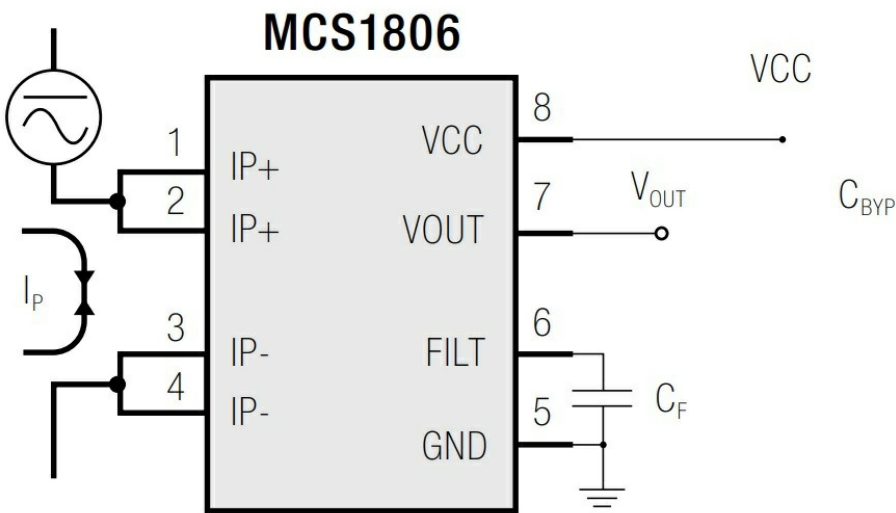
LINEAR HALL-EFFECT CURRENT SENSOR WITH ±2.5 % ACCURACY



The MCS1806 is a linear Hall-effect current sensor for AC or DC current sensing. The Hall array is differential, which cancels out any stray magnetic field. A primary conductor with a low resistance allows current to flow close to the IC, which contains high-accuracy Hall effect sensors. This current generates a magnetic field that is sensed at two different points by the integrated Hall-effect transducers.

The magnetic field difference between these two points is then converted into a voltage that is proportional to the applied current. A spinning current technique is used for a low stable offset. The galvanic isolation between the pins of the primary conductive path and the sensor leads allows the MCS1806 to replace optoisolators or other isolation devices.

The MCS1806 requires a minimal number of readily available, standard external components. The device’s small footprint saves board area and makes it well suited for space-constrained applications. The MCS1806 is available in an SOIC-8 package.



The following products are in production

PART NUMBER *	TYP. SUPPLY V OLTAGE (V)	OPTIMIZED PRI MARY CURRENT RAN GE (A)	TYP. SENSITIVI TY (SENS) (mV/ A)	TOP MARKING	MSL RATING

MCS1806GS-3-05	3.3	±5	264	MCS1806	1
MCS1806GS-3-10	3.3	±10	132		
MCS1806GS-3-20	3.3	±20	66		
MCS1806GS-3-30	3.3	±30	44		
MCS1806GS-3-40	3.3	±40	33		
MCS1806GS-3-40	3.3	±50	26.4		
MCS1806GS-5-05	5	±5	400		
MCS1806GS-5-10	5	±10	200		
MCS1806GS-5-20	5	±20	100		
MCS1806GS-5-30	5	±30	66		
MCS1806GS-5-40	5	±40	50		

MCS1806GS-5-50	5	±50	40		
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***For tape & reel, add suffix -Z (e. g. MCS1806GS-3-05-Z)**

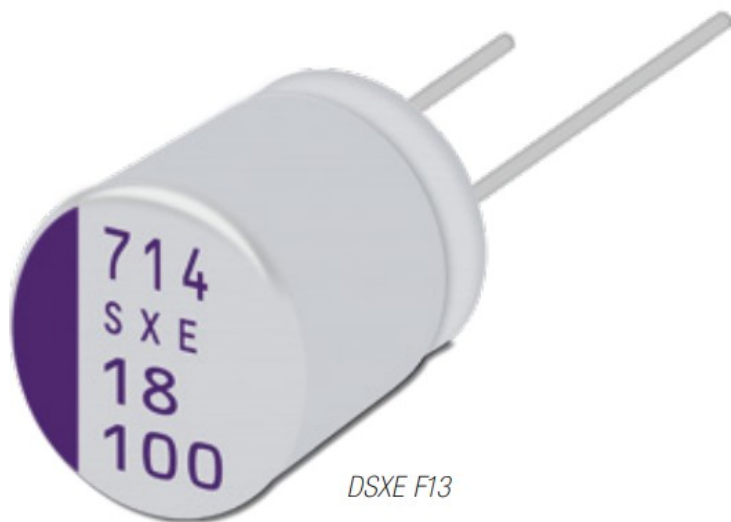
FEATURES & BENEFITS

- 3.3 V or 5 V single supply optional
- Immune to external magnetic fields by differential sensing
- 2.6 kVRMS minimum isolation voltage
- 500 VRMS maximum working voltage
- ±2.5 % total accuracy from TJ = 25 °C to 125 °C
- 0.9 mΩ internal conductor resistance
- 5 A to 50 A bidirectional range
- Adjustable bandwidth up to 100 kHz
- Ratiometric output from supply voltage
- Output proportional to AC or DC currents
- Factory-trimmed for accuracy
- No magnetic hysteresis
- Integrated shield suppressing capacitive
- Coupling from current conductor to die (up to 10 V/ns)
- Available in an SOIC-8 package
- All MPS parts are lead-free, halogen-free, and adhere to the RoHS directive

EXTENSION OF THE POPULAR PANASONIC OS-CON SXV/SXE/SVPE SERIES

Solid capacitors with conductive polymer offer highest ripple current and lowest ESR values in SMD as well in radial design with the industry's longest life time up to 20000 hr @ 105 °C.

Panasonic announced the extension of their popular polymer capacitors Os-Con SXV/SXE/SVPE series by 6 more part numbers. The ultra high voltage series "SXV"(SMD) and "SXE"(THT) are now enhanced by a 72 Vdc/82 µF version and offers one of the highest CV products of the series. The "SVPE" (SMD) series, that focuses mainly on low ESR and high capacitance offers now two new models with 2.5 Vdc/820 µF and 6.3 Vdc/390 µF. All new part numbers have been developed to follow the market demand and are ideal solutions for high current DC/DC converters for both input and output side.



New items

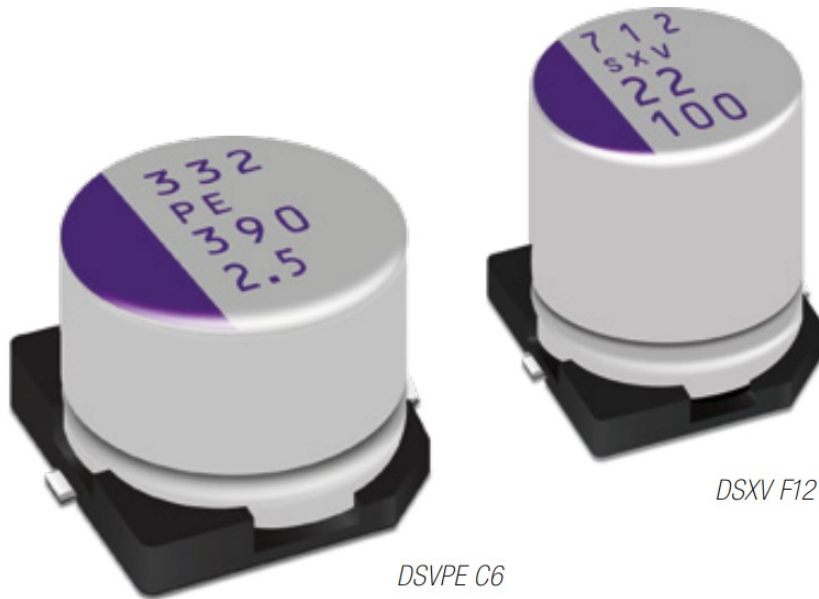
SERIES	SHAPE	TYPE	VOLTAGE Vdc	CAPACITANCE μF	ESR mOhm	RIPPLE CURRENT (105 °C) mA	ENDURANCE	SIZE CODE
SXV	SMD	72SXV82M	72	82	28	3100	125°C/1000 hr	F12 (10 x 12.6 mm)
SXE	THT	72SXE82M	72	82	28	3100	125°C/1000 hr	F13 (10 x 13 mm)
SVPE	SMD	2R5SVPE820M	2.5	820	10	3900	105°C/2000 hr	C6 (6,3 x 5,9 mm)
SVPE	SMD	6SVPE390M	6.3	390	10	3900	105°C/2000 hr	C6 (6,3 x 5,9 mm)

FEATURES

- Very low ESR
- Very high ripple current
- Very long life time
- Ultra high voltage (SXV/SXE series)
- Very low ESR and high capacitance (SVPE series)

APPLICATIONS

- DC/DC converter in industrial, consumer and 3G applications
- Server, 5G, base-station for DC/DC input
- Game, server for DC/DC output



TAILOR-MADE SOLID STATE LIGHTING SOLUTIONS

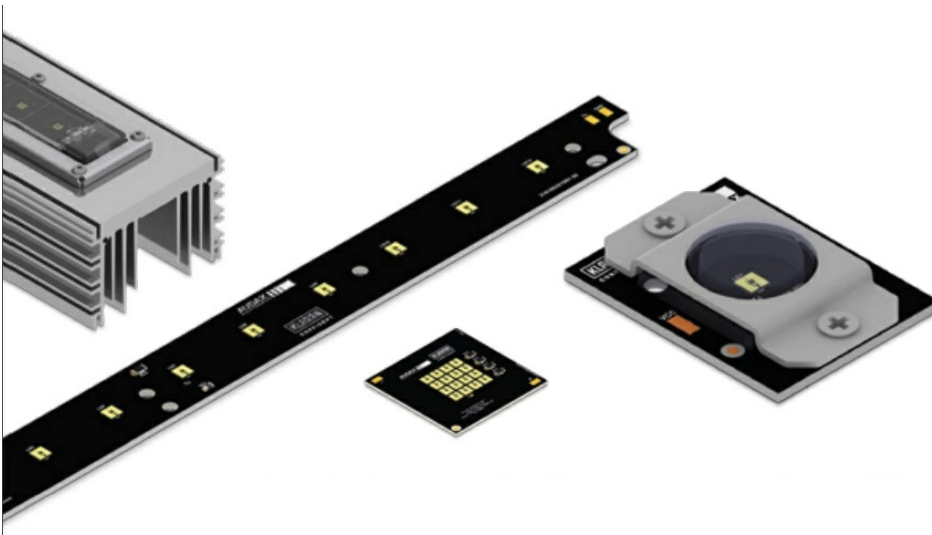
Audax Electronics is an original design manufacturer based in Brazil and enables its light engines with the latest technologies.

Using the latest SMD technologies, for a variety of indoor, outdoor, and horticultural applications, it also has a complete electronic manufacturing area to produce your project according to international standards. These projects can cover both electronics and optics, thermal management, and mechanical validation.

PART NUMBER	MODEL	RAD. POWER	POWER
80338000100	COB UVC 19 x 16 mm	70 mW	4 W
80338100100	COB UVC 24 x 19 mm	280 mW	16 W
80338200100	COB UVC 38 x 38 mm	630 mW	36 W
80338300100	COB UVC 38 x 38 mm	120 mW	64 W
80367200100	COB UVC 38 x 38 mm	750 mW	100 W
80405100100	VIOLETTA Development Kit	70 mW	4 W
80397300100	VIOLETTA UVC 40 x 30 mm	70 mW	4 W
80397400100	VIOLETTA UVC Ø86 mm	210 mW	12 W
80397500100	VIOLETTA UVC 80 x 80 mm	280 mW	16 W
80338400100	VIOLET UVC 281 x 19.2 mm + Alert Light	420 mW	33 W
80338500100	VIOLET UVC 281 x 19.2 mm + Alert Light	560 mW	38 W

UVC LIGHT ENGINES PORTFOLIO

With the advances of UVC sterilization LED technology, Audax Electronics has partnered with Crystal IS, manufacturer of Klaran UVC LEDs, to provide you with a high quality UVC LED solution for disinfection, launching its brand new portfolio of UVC light engines. Because of their small form factor, the UVC LEDs can be implemented into a wide range of applications. Audax Electronics offers a variety of solutions that are also compatible with LEDiL optics and Bender+Wirth holders.



FEATURES

- UV emission type C
- Wavelength:
- 260 – 270 nm
- Efficiency up to 2.1 %

APPLICATIONS

- HEPA filters
- Water purification
- Medical sterilization
- Infectious disease control

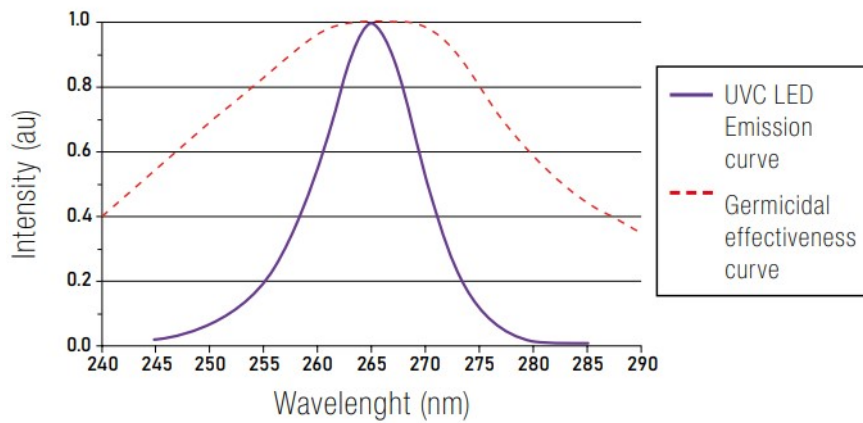
HOW DOES UVC RADIATION WORK

Although illuminance is measured relatively with the human eye perception, the same is not applicable when using ultraviolet radiation.

HOW DOES UVC RADIATION WORK

All radiation is a form of energy. A given ultraviolet (UVC) power source is ought to be measured in radiant power, considering the distribution of energy along the spectrum, measured with typical units of mW (milliwatts).

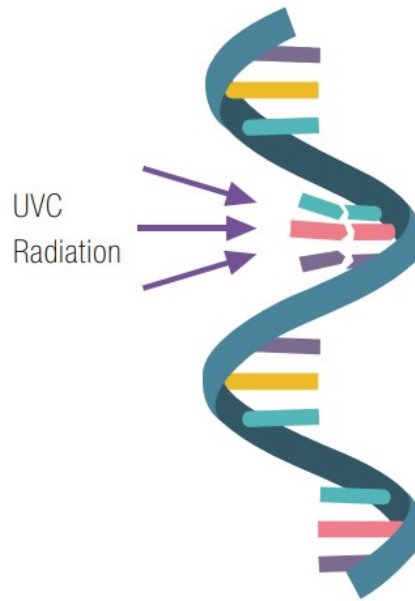
Spectral Power Distribution



RNA RIBBON
(before)



RNA RIBBON
(after)



VIOLETTA DEVELOPMENT KIT

It is widely accepted that it is not necessary to kill pathogens with UV light, but rather apply enough UV light to prevent the organism from replicating. It is also proven scientifically that the LED uniqueness of controlling light emission to a specific 265 nm wavelength peak can result in higher absorption by organisms. Therefore, disabling more effectively pathogens such as Adenovirus and SARS-CoV-2 (COVID-19).

The UV doses required to prevent replication are orders of magnitude lower than required to kill, making the cost of UV treatment to prevent infection commercially viable. Interested? Test out our Violetta development kit!



UVC light engine design is one of the many capabilities that Audax Electronics can offer. Check out our website for more information.

LOW-THD-LOUDSPEAKER P40CR30PC FROM VANSONIC ENTERPRISE CO. (VECO)

The well-known Taiwan-based acoustic parts manufacturer VECO recently introduced a new state-of-the-art speaker capsular system, mainly for use in applications such as highend headsets, phone/ doorphone handsets and alike.

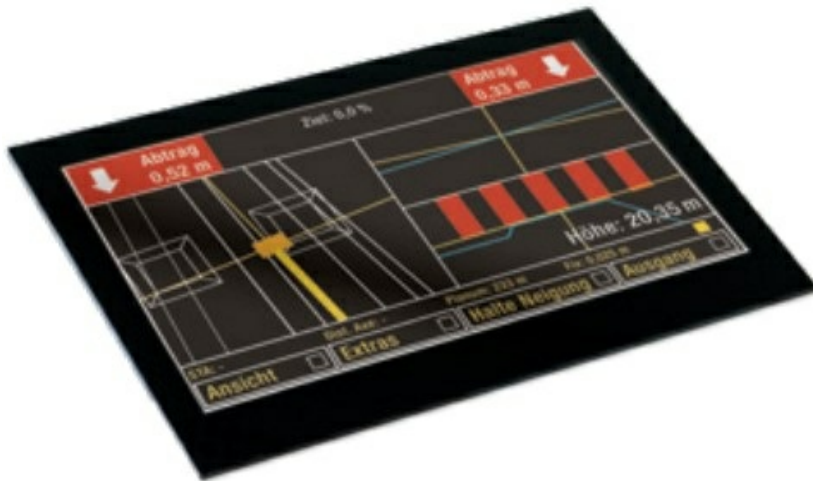
When being driven at 10 mW input power, the distortion level is still maximum 2 % in a frequency range from 100 Hz to 8 kHz, which mainly contributes to human audibility and therefore is most important for ensuring clarity of sound and finally producing an excellent audibility.

For try-out, first testing and evaluation purposes, a limited number of samples is already available from Endrich Headquarters. So if interesting for you, please contact our staff as mentioned below.

Low-THD-loudspeaker P40CR30PC

UNSER WEBINAR IM JULI

TFT-Display mit Touch



Das PicoCore CoM-Board



INVITATION TO EMBEDDED WORLD 2022 – FINALLY LIVE AGAIN IN NUREMBERG

Our IoT product highlights



Our IoT product highlights

At Endrich, as your electronics design-in distributor, we can understand your application holistically through our technical expertise and broad product portfolio. This enables a make-or-buy decision for you to shorten your development times.

We invite you to visit our stand at embedded world again this year, where everything revolves around the topic of IoT. Our main topics are “Intelligent Connected Sensors”, “Data Visualization Gateway” and “Endrich Cloud Services”. We will be presenting our latest products in these areas.

In the area of **Intelligent Connected Sensors**, we will be showing live demos of how the latest LPWA technology can be used to connect sensors to the IoT. Cat-NB1, Cat-NB2, Cat-M1 and Cat-M2, but also with Bluetooth BT5.1, data can be transmitted quickly and securely to the cloud.

The very high-performance Core i5 Touch PCs, i.MX8 embedded boards, the whitest and fastest e-paper displays are only a small selection of products in the Data Visualisation **Gateway area**.

With the Endrich Cloud Services, Endrich provides the embedded developer with a multi-layer cloud-based solution from infrastructure (IaaS) via platform (PaaS) to software service (SaaS).

We will be happy to provide you with a free ticket for your visit to the fair. Simply redeem your personal voucher codeew**22466856** under the following link: embedded-world.de/voucher

We take time for your individual needs! Therefore, let us arrange an appointment in advance. You can reach us at: embedded@endrich.com

We look forward to your visit! Your End rich Team

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Documents / Resources



[AUDAX ELECTRONICS MCS1806GS-3-05 Linear Hall-Effect Current Sensor](#) [pdf] Instructions

MCS1806GS-3-05 Linear Hall-Effect Current Sensor, MCS1806GS-3-05, Linear Hall-Effect Current Sensor, Current Sensor, Sensor

References

-  [embedded world | Visit](#)
-  [Distributor des Jahres - Elektroniknet](#)
-  [endrich Bauelemente Vertriebs GmbH](#)
-  [Events](#)