HI-SINCERITY

MICROELECTRONICS CORP.

HSMA5817 thru HSMA5819

1.0 AMP. SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

Features

- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability

Mechanical Data

Cases: SMA Molded Plastic
Epoxy: UL 94V-0 rate flame retardant
Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
Polarity: Color band denotes cathode end
High temperature soldering guaranteed: 250°C/10 seconds/.375"(9.5mm) lead lengths at 5 lbs., (2.3kg) tension, Weight:0.33gram

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Type Number	HSMA5817	HSMA5818	HSMA5819	Units
Maximum Recurrent Peak Reverse Voltage	20	30	40	V
Maximum RMS Voltage	14	21	28	V
Maximum DC Blocking voltage	20	30	40	V
Maximum Average Forward Rectified Current See Fig.1	1.0			A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load(JEDEC method)	40			A
Maximum Instantaneous Forward Voltage @1.0A	0.45	0.55	0.60	V
Maximum D.C. Reverse Current (Note 1) at Rated DC Blocking Voltage	0.5(@T_A=25°C)			mA
	10(@T_A=100°C)	5.0(@T_A=100°C)		mA
Typical Thermal Resistance (Note 2) $R_{\theta JA}$	88			°C/W
Operating Junction Temperature Range T_J	-65 to +125	-65 to +150		°C
Storage Temperature Range T_{STG}	-65 to +150			°C

Notes: 1.Pulse Test with PW=300 usec, 1% Duty Cycle
2. Measured on P.C. Board with 0.2x0.2"(5.0x5.0mm) Copper Pad Areas.

Characteristics Curve

FIG.1-FORWARD CURRENT DERATING CURVE

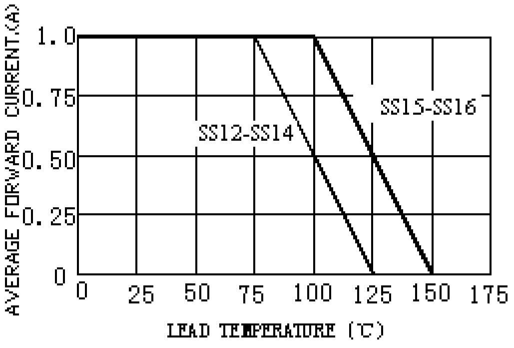


FIG.2-TYPICAL FORWARD CHARACTERISTICS

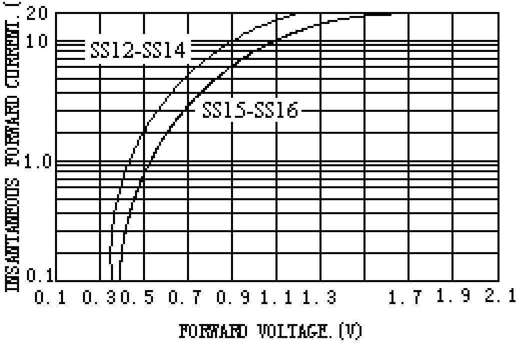


FIG.3-TYPICAL REVERSE CHARACTERISTICS

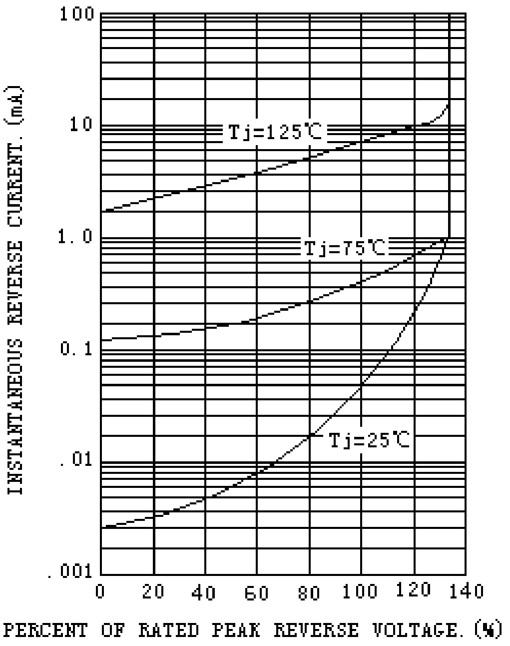


FIG.4-TYPICAL JUNCTION CAPACITANCE

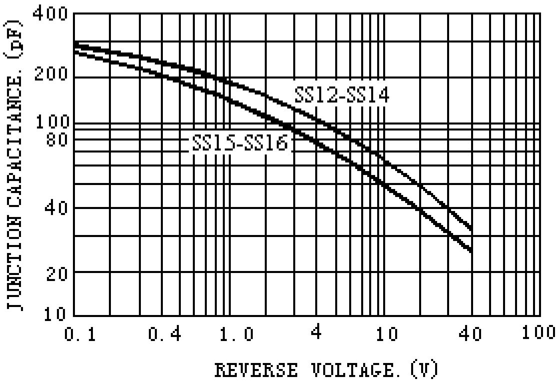
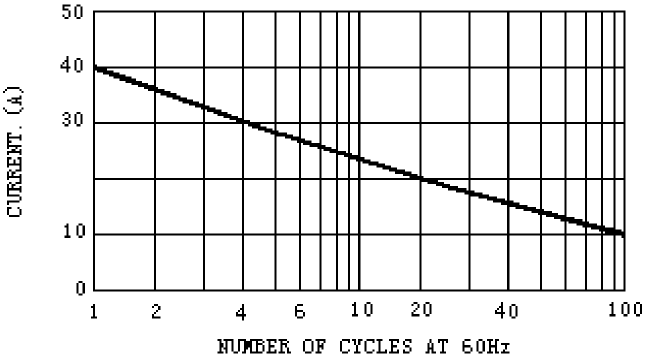
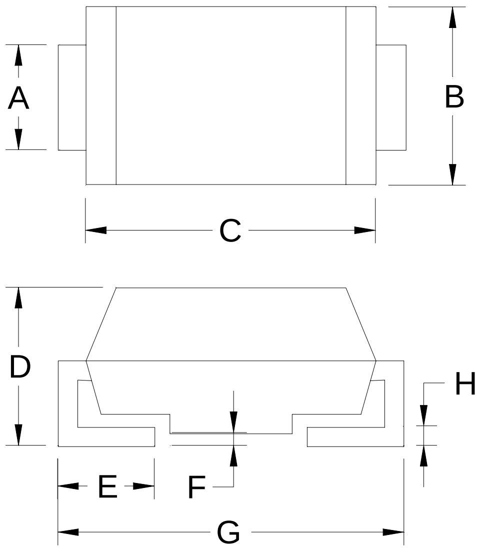


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



SMA/DO-214AC Dimension



*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.5000	0.0642	1.27	1.63	E	0.0299	0.0598	0.76	1.52
B	0.0901	0.1150	2.29	2.92	F	0.0039	0.0079	0.10	0.20
C	0.1575	0.1811	4.00	4.60	G	0.1890	0.2201	4.80	5.59
D	0.0783	0.1028	1.99	2.61	H	0.0059	0.0122	0.15	0.31

Notes : 1.Dimension and tolerance based on our Spec. dated Mar. 6,2000.
2.Controlling dimension : millimeters.
3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
4.If there is any question with packing specification or packing method, please contact your local HSMC sales office.

Important Notice:

- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of HSMC.
- HSMC reserves the right to make changes to its products without notice.
- ***HSMC semiconductor products are not warranted to be suitable for use in Life-Support Applications, or systems.***
- HSMC assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.

Head Office And Factory :

- **Head Office** (Hi-Sincerity Microelectronics Corp.) : 10F.,No. 61, Sec. 2, Chung-Shan N. Rd. Taipei Taiwan R.O.C.
  Tel : 886-2-25212056 Fax : 886-2-25632712, 25368454
- **Factory 1 :** No. 38, Kuang Fu S. Rd., Fu-Kou Hsin-Chu Industrial Park Hsin-Chu Taiwan. R.O.C
  Tel : 886-3-5983621~5 Fax : 886-3-5982931