HSMA400X Series

1.0AMP. SURFACE MOUNT RECTIFIERS

Features

- For surface mounted application
- Low forward voltage drop
- High current capability
- Easy pick and place
- High surge current capability
- Plastic material used carries Underwriters Laboratory Classification 94V-0
- High temperature soldering: 250°C/10 seconds at terminals

Mechanical Data

- Case: SMA/DO-214AC Molded Plastic.
- Terminals: Solder plated.
- Polarity: Indicated by cathode band.
- Packaging: 12mm tape per EIA STD RS-481.
- Weight: 0.064 gram.

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	HSMA 4001	HSMA 4002	HSMA 4003	HSMA 4004	HSMA 4005	HSMA 4006	HSMA 4007	Units
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @TL=110°C	1							A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load(JEDEC method)	30							A
Maximum Instantaneous Forward Voltage @ 1.0A	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	5(@Ta=25°C) 50(@Ta=125°C)							uA
Maximum Reverse Recovery Time (Note 1)	1.8							uS
Typical Junction Capacitance (Note 2)	12							pF
Operating Temperature Range Tj	-55 to +150							°C
Storage Temperature Range Tstg	-55 to +150							°C

Note1: Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A
Note2: Measured at 1 MHz and Applied VR=4.0Volts

Characteristics Curve

FIG. 1-MAXIMUM FORWARD CURRENT DERATING CURVE

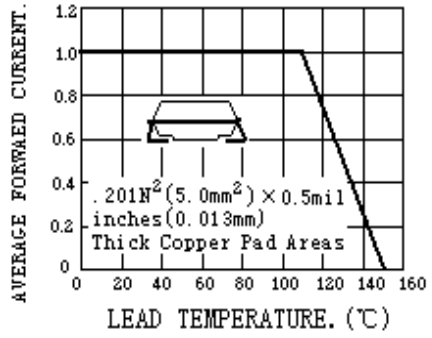


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

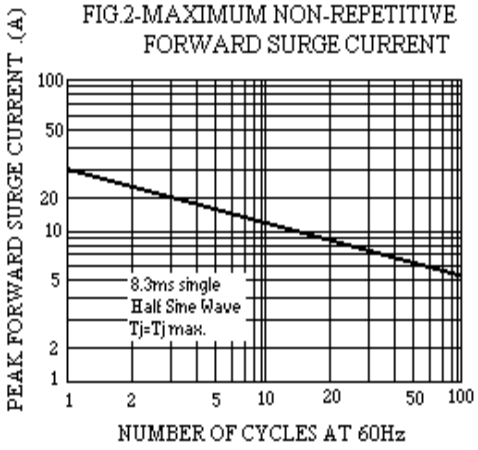


FIG. 3-TYPICAL FORWARD CHARACTERISTICS

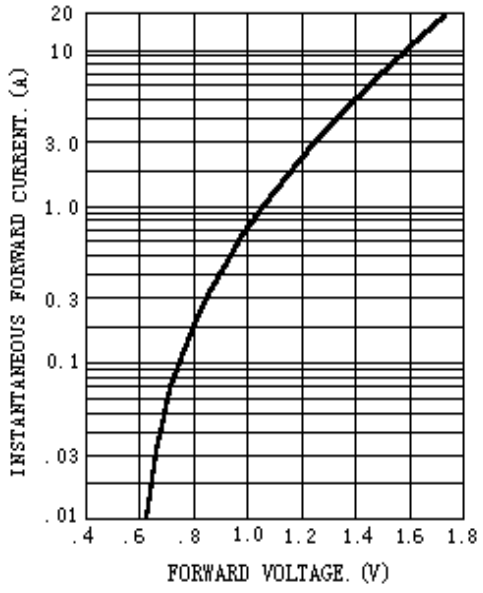


FIG. 6-TYPICAL REVERSE CHARACTERISTICS

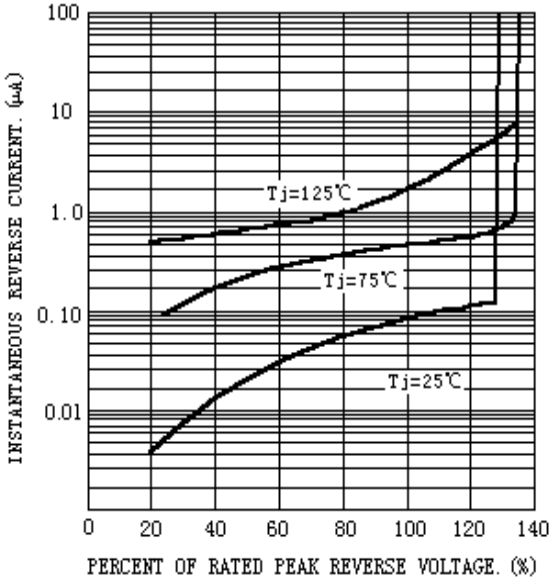
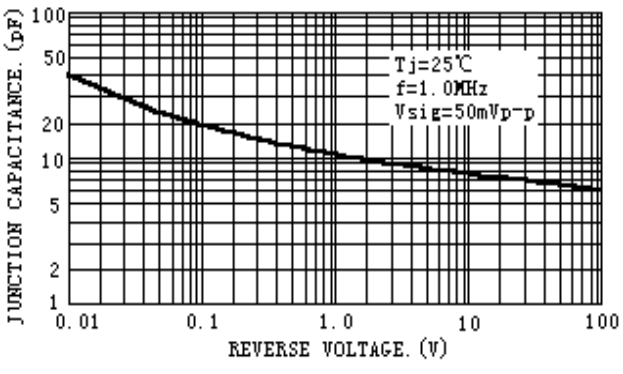
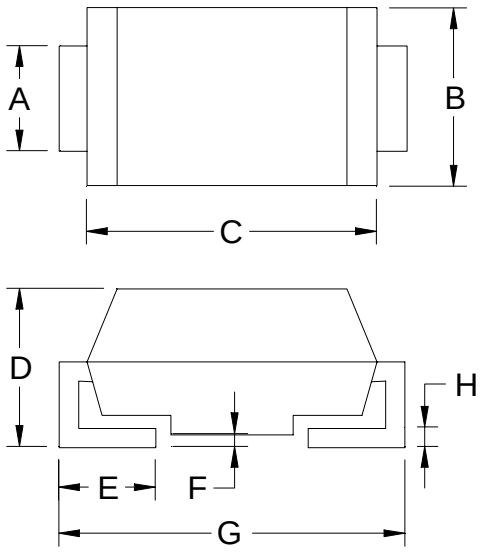


FIG. 5-TYPICAL JUNCTION CAPACITANCE



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. 6,1995.
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.

Material :

- Lead : 42 Alloy ; solder plating
- Mold Compound : Epoxy resin family, flammability solid burning class:UL94V-0

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
- **Factory 2 :** No. 17-1, Ta-Tung Rd., Fu-Kou Hsin-Chu Industrial Park Hsin-Chu Taiwan. R.O.C
  Tel : 886-3-5977061 Fax : 886-3-5979220