



# HS1A THRU HS1M

## 1.0 AMP. High Efficient Surface Mount Rectifiers



Voltage Range  
50 to 1000 Volts  
Current  
1.0 Ampere

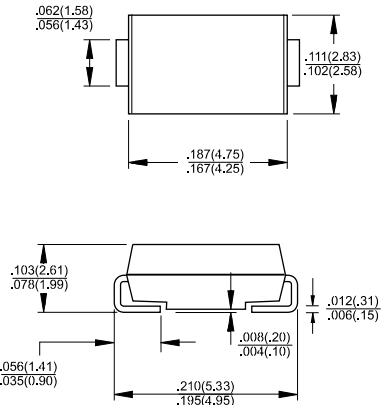
### SMA/DO-214AC

### Features

- ✧ Glass passivated junction chip.
- ✧ For surface mounted application
- ✧ Low forward voltage drop
- ✧ Low profile package
- ✧ Built-in stain relief, ideal for automatic placement
- ✧ Fast switching for high efficiency
- ✧ High temperature soldering:  
250°C/10 seconds at terminals
- ✧ Plastic material used carries Underwriters  
Laboratory Classification 94V-O

### Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Terminals: Solder plated
- ✧ Polarity: Indicated by cathode band
- ✧ Packing: 12mm tape per E1A STD RS-481
- ✧ Weight: 0.064 gram



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	HS1A	HS1B	HS1D	HS1F	HS1G	HS1J	HS1K	HS1M	Units
Maximum Recurrent Peak Reverse Voltage	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current See Fig.2	1.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	30								A
Maximum Instantaneous Forward Voltage @ 1.0A	1.0			1.3		1.7			V
Maximum DC Reverse Current @ T <sub>A</sub> =25°C at Rated DC Blocking Voltage @ T <sub>A</sub> =100°C	5.0				100				uA uA
Maximum Reverse Recovery Time ( Note 1 )	50					75			nS
Typical Junction Capacitance ( Note 2 )	20					15			pF
Operating Temperature Range T <sub>J</sub>	-55 to +150								°C
Storage Temperature Range T <sub>STG</sub>	-55 to +150								°C

Notes: 1. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

2. Measured at 1 MHz and Applied V<sub>R</sub>=4.0 Volts

## RATINGS AND CHARACTERISTIC CURVES (HS1A THRU HS1M)

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

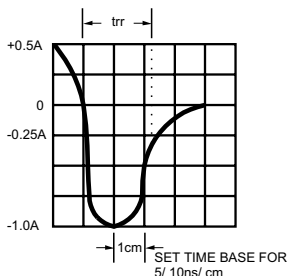
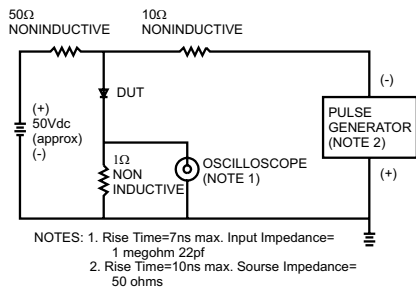


FIG.2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

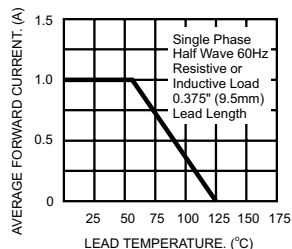


FIG.3- TYPICAL REVERSE CHARACTERISTICS

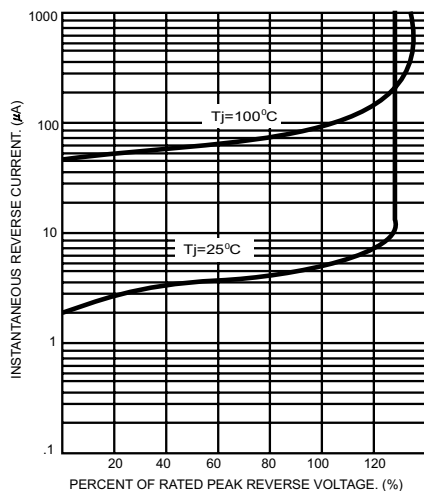


FIG.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

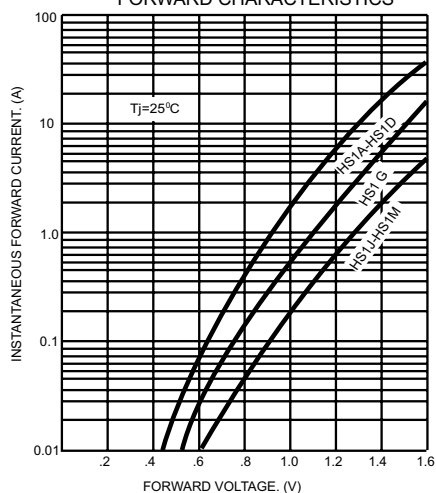


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

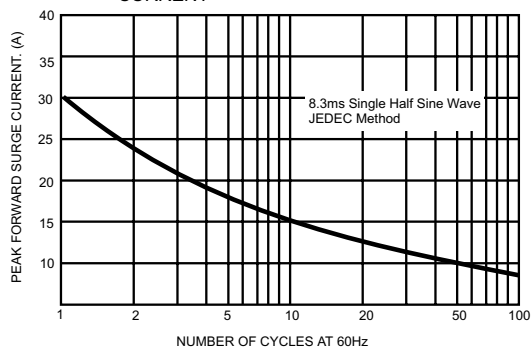


FIG.6- TYPICAL JUNCTION CAPACITANCE

