

HS1A thru HS1M

High Efficient Surface Mount Rectifier
 Reverse Voltage 50 to 1000V Forward Current 1.0 A

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-0



Package: DO-214AC (SMA)

Mechanical Data

- Cases: Molded plastic
- Terminals: Solder plated
- Polarity: Indicated by cathode band
- Weight: 0.002 ounce, 0.064 gram

Maximum Ratings & Electrical Characteristics

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

Parameter	Symbol	HS1A	HS1B	HS1D	HS1F	HS1G	HS1J	HS1K	HS1M	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current See Fig.2	$I_{(AV)}$	1.0								A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30.0								A
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.0				1.3	1.7			V
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ TA =25°C	5.0								uA
	@ TA =100°C	100								
Maximum Reverse Recovery Time ¹	t_{rr}	50					75			nS
Typical Junction Capacitance ²	C_J	20					15			pF
Operating Junction Temperature Range	T_J	-55 to +150								°C
Storage Temperature Range	T_{STG}	-55 to +150								°C

Notes: 1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

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Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

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

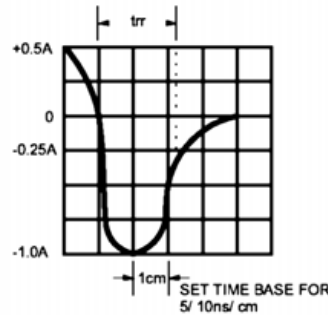
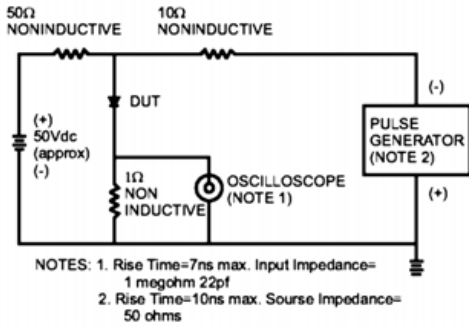


FIG.2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

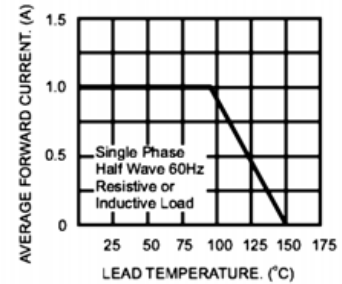


FIG.3- TYPICAL REVERSE CHARACTERISTICS

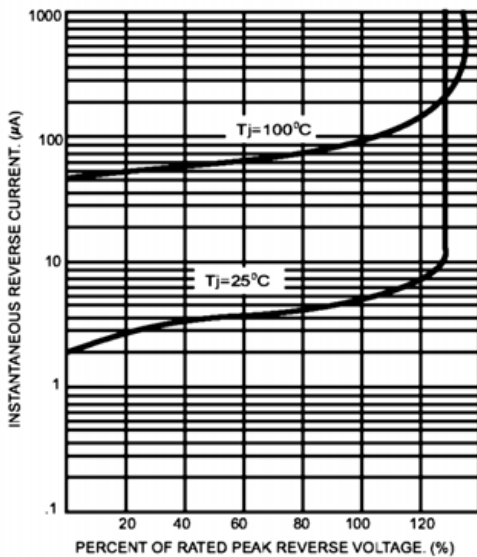


FIG.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

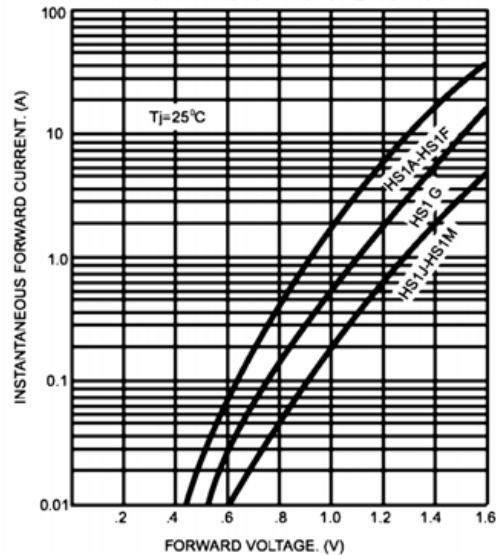


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

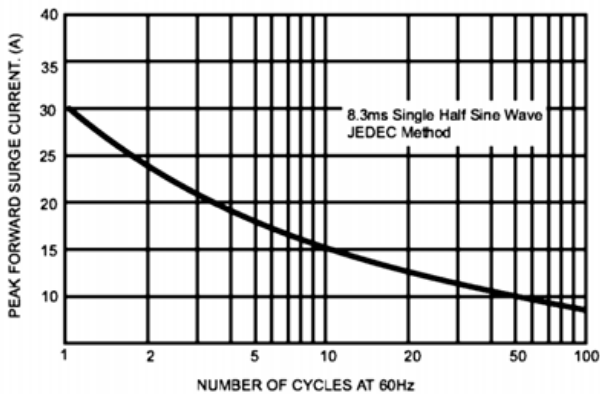
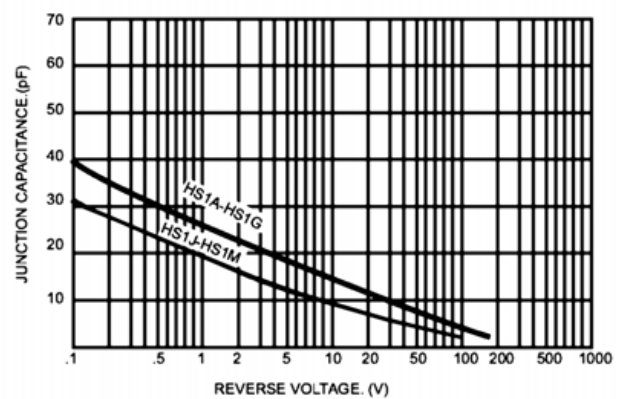


FIG.6- TYPICAL JUNCTION CAPACITANCE

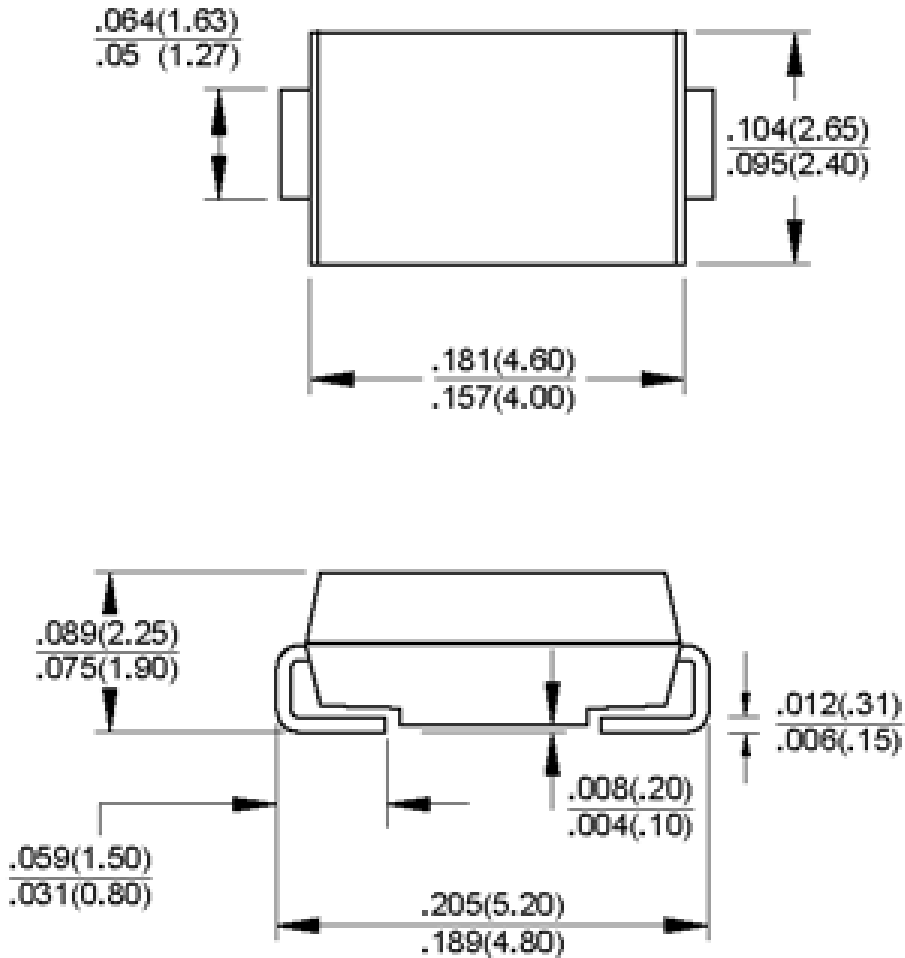


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Package Outline Dimensions

DO-214AC (SMA)



Dimensions in inches and (millimeters)