HS1A thru HS1M

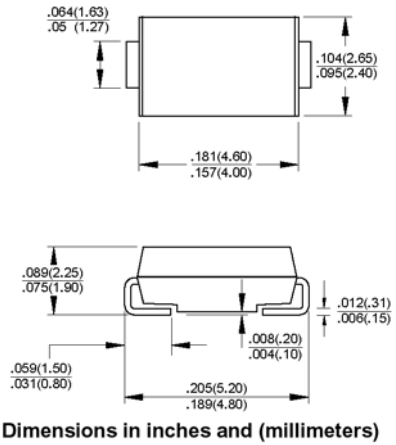
High Efficient Surface Mount Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 1.0 Ampere

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



DO-214AC (SMA)



Dimensions in inches and (millimeters)

Mechanical Data

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

Maximum Ratings and 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	Symbols	HS1A	HS1B	HS1D	HS1F	HS1G	HS1J	HS1K	HS1M	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	600	800	1000	Volts
Maximum average forward rectified current See Fig.2	$I_{(AV)}$	1.0								Amp
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0								Amps
Maximum instantaneous forward voltage @ 1.0A	V_F	1.0				1.3	1.7			Volts
Maximum DC reverse current @ T_A=25°C at rated DC blocking voltage @ T_A=100°C	I_R	5.0 100								uA uA
Maximum reverse recovery time (Note 1)	t_{rr}	50					75			nS
Typical junction capacitance (Note 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.

RATINGS AND CHARACTERISTIC CURVES

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

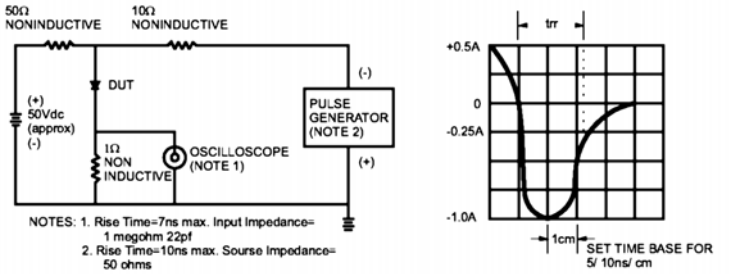


FIG.2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

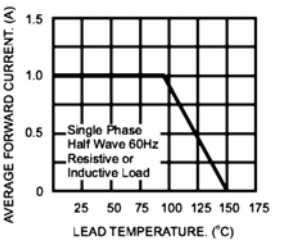


FIG.3- TYPICAL REVERSE CHARACTERISTICS

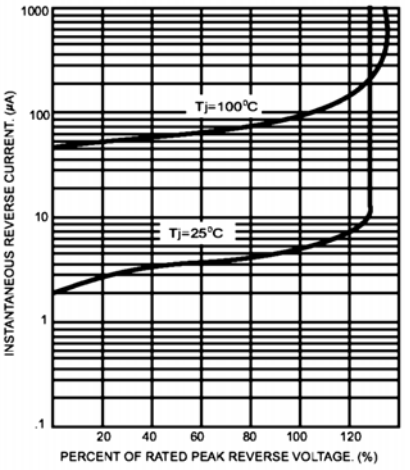


FIG.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

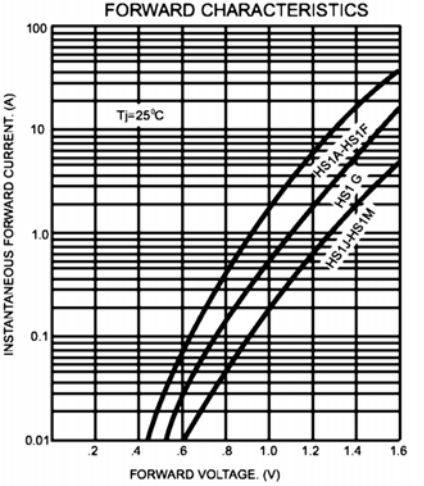


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

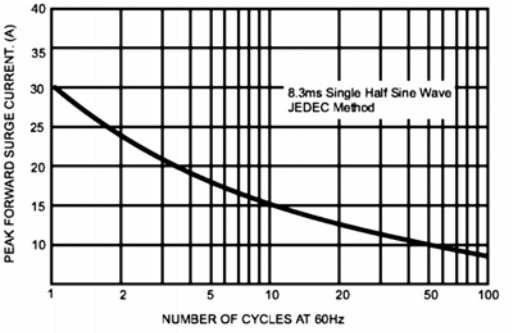


FIG.6- TYPICAL JUNCTION CAPACITANCE

