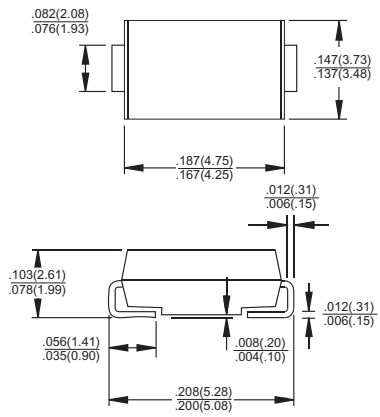
HS2A THRU HS2M

2.0 AMPS. High Efficient Surface Mount Rectifiers

Voltage Range
50 to 1000 Volts
Current
2.0 Amperes

SMB/DO-214AA



Dimensions in inches and (millimeters)

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: 260℃/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: 0.093 gram

Maximum Ratings and Electrical Characteristics

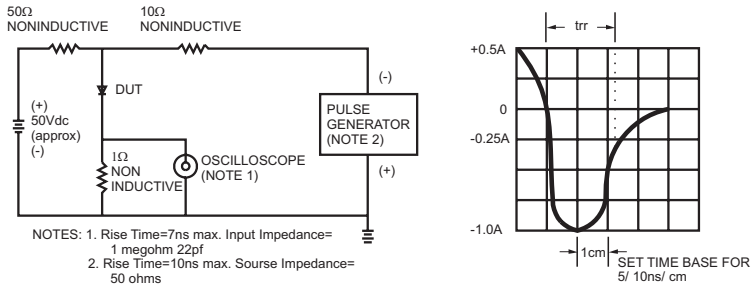
Rating at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number	Symbol	HS 2A	HS 2B	HS 2D	HS 2F	HS 2G	HS 2J	HS 2K	HS 2M	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	400	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	$I_{(AV)}$	2.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	50								A
Maximum Instantaneous Forward Voltage @ 2.0A	V_F	1.0				1.3	1.7			V
Maximum DC Reverse Current @T_A =25℃ at Rated DC Blocking Voltage @ T_A=100℃	I_R	5.0 100								uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	50					75			nS
Typical Junction Capacitance (Note 2)	Cj	50					30			pF
Maximum Thermal Resistance (Note 3)	$R\theta_{JA}$	80								℃/W
Operating Temperature Range	T_J	-55 to +150								℃
Storage Temperature Range	T_{STG}	-55 to +150								℃

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 V_R=4.0 Volts
3. Mounted on P.C.B. with 0.4"x0.4" (10 x 10 mm) Copper Pad Areas.

RATINGS AND CHARACTERISTIC CURVES (HS2A THRU HS2M)

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



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf
2. Rise Time=10ns max. Sourse Impedance= 50 ohms

FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

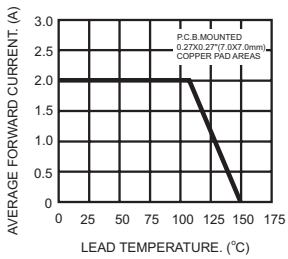


FIG.3- TYPICAL REVERSE CHARACTERISTICS

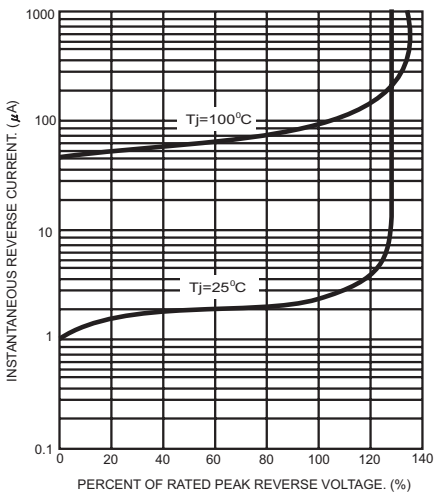


FIG.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

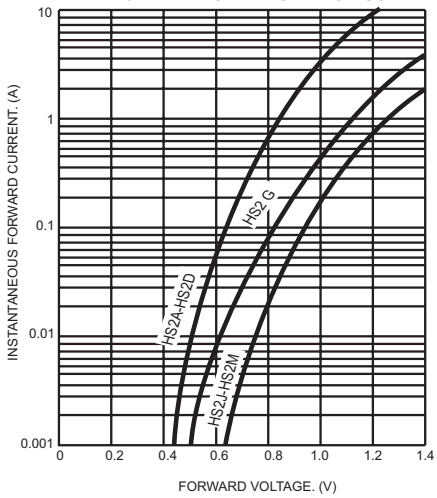


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

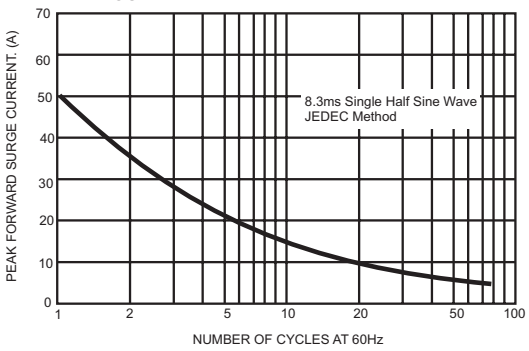


FIG.6- TYPICAL JUNCTION CAPACITANCE