



# HS3A THRU HS3M

## 3.0 AMPS. High Efficient Surface Mount Rectifiers



Voltage Range  
50 to 1000 Volts  
Current  
3.0 Amperes

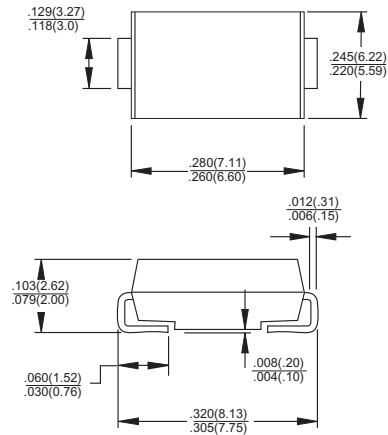
### Features

- ✧ 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°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: 16mm tape per E1A STD RS-481
- ✧ Weight: 0.21 gram

### SMC/DO-214AB



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	Symbol	HS 3A	HS 3B	HS 3D	HS 3F	HS 3G	HS 3J	HS 3K	HS 3M	Units	
Maximum Recurrent 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	$I_{(AV)}$	3.0								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	150								A	
Maximum Instantaneous Forward Voltage @ 3.0A	$V_F$	1.0			1.3		1.7			V	
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	10.0 200								$\mu\text{A}$ $\mu\text{A}$	
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	50					75				nS
Typical Junction Capacitance ( Note 2 )	$C_j$	80					50				pF
Maximum Thermal Resistance ( Note 3 )	$R_{\theta JA}$	60								$^\circ\text{C}/\text{W}$	
Operating Temperature Range	$T_J$	-55 to +150								$^\circ\text{C}$	
Storage Temperature Range	$T_{STG}$	-55 to +150								$^\circ\text{C}$	

Notes: 1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

2. Measured at 1 MHz and Applied  $V_R=4.0$  Volts

3. Mounted on P.C.B. with 0.6"x0.6" ( 16 x 16 mm ) Copper Pad Areas.

## RATINGS AND CHARACTERISTIC CURVES (HS3A THRU HS3M)

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

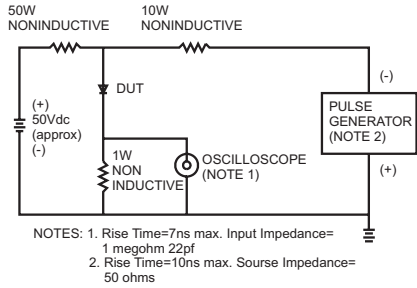


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

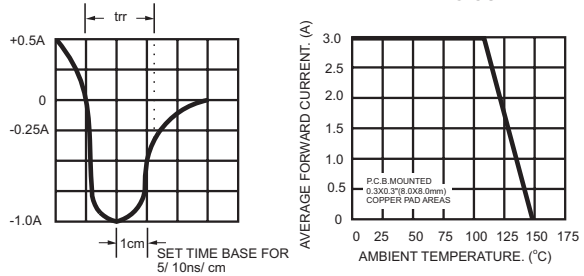


FIG.3- TYPICAL REVERSE CHARACTERISTICS

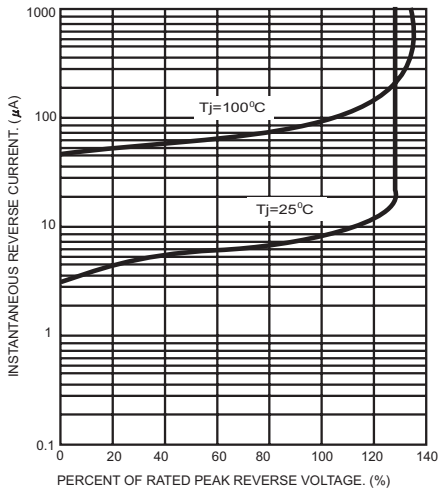


FIG.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

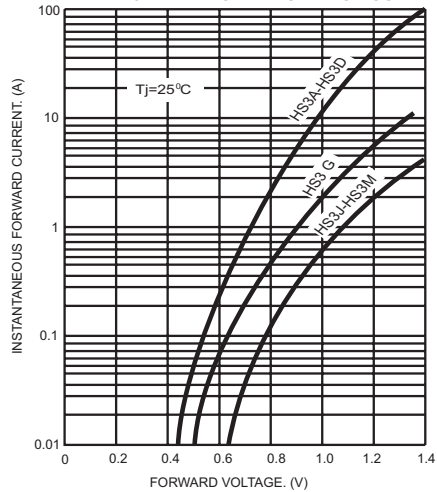


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

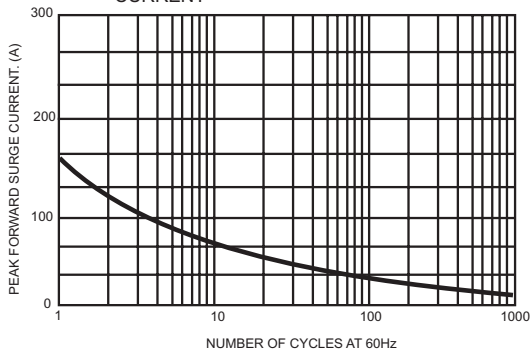


FIG.6- TYPICAL JUNCTION CAPACITANCE

