



# HS2A thru HS2M

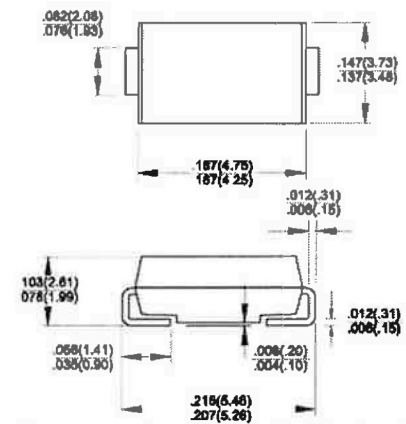
High Efficient Surface Mount Rectifiers  
Reverse Voltage 50 to 1000 Volts Forward Current 1.5 Amperes

## 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:  
250°C/10 seconds at terminals
- ◆ Plastic material used carries Underwriters Laboratory Classification 94V-0



DO-214AA (SMB)



Dimensions in inches and (millimeters)

## Mechanical Data

- ◆ Cases: Molded plastic
- ◆ Terminals: Solder plated
- ◆ Polarity: Indicated by cathode band
- ◆ Weight: 0.003 ounce, 0.093 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	HS2A	HS2B	HS2D	HS2F	HS2G	HS2J	HS2K	HS2M	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	$I_{AV}$	1.5								Amps	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	50.0								Amps	
Maximum instantaneous forward voltage @ 1.5A	$V_F$	1.0			1.3		1.7			Volts	
Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	$I_R$	5.0				100				$\mu\text{A}$	
Maximum reverse recovery time (Note 1)	$t_{rr}$	50					75				nS
Typical junction capacitance (Note 2)	$C_j$	50					30				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:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$   
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

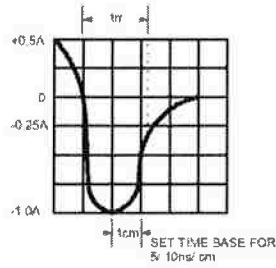
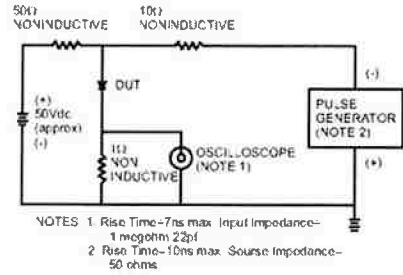


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

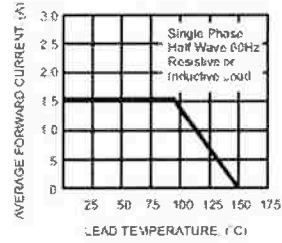


FIG.3- TYPICAL REVERSE CHARACTERISTICS

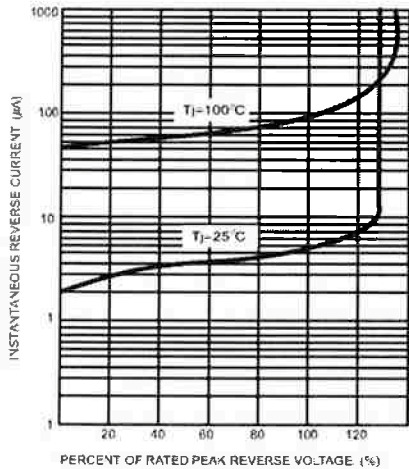


FIG.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

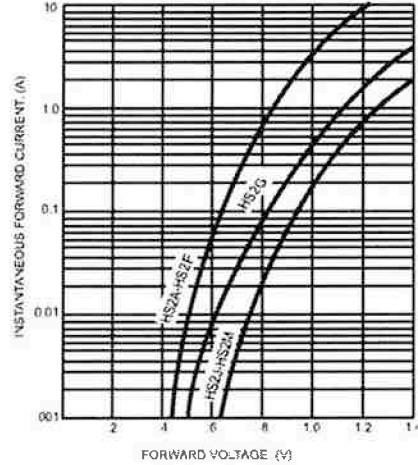


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

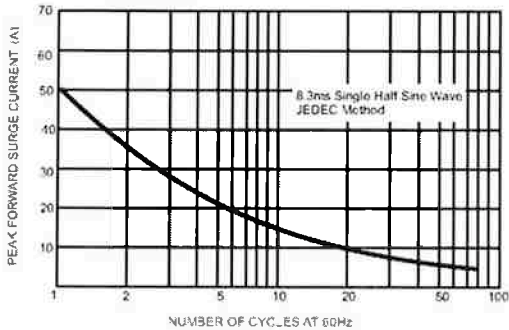


FIG.6- TYPICAL JUNCTION CAPACITANCE

