



HS3A thru HS3M

High Efficient Surface Mount Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 3.0 Amperes

Features

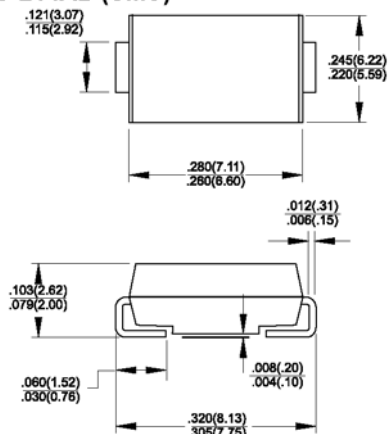
- ◆ Glass passivated junction chip.
- ◆ For surface mounted application
- ◆ Low forward voltage drop
- ◆ Low profile package
- ◆ Built-in stain relief, ideal for automatic placement
- ◆ Fast switching for high efficiency
- ◆ High temperature soldering:
250°C/10 seconds at terminals
- ◆ Plastic material used carries Underwriters Laboratory
Classification 94V-O

Mechanical Data

- ◆ Cases: Molded plastic
- ◆ Terminals: Solder plated
- ◆ Polarity: Indicated by cathode band
- ◆ Weight: 0.009 ounce, 0.21 gram



DO-214AB (SMC)



Dimensions in inches and (millimeters)

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	HS3A	HS3B	HS3D	HS3F	HS3G	HS3J	HS3K	HS3M	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}	3.0								Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	150.0								Amps
Maximum instantaneous forward voltage @ 3.0A	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	10.0 200								uA uA
Maximum reverse recovery time (Note 1)	t _{tr}	50					75			nS
Typical junction capacitance (Note 2)	C _j	80					50			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

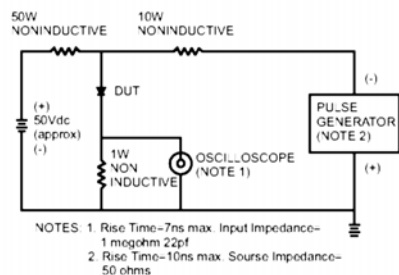


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

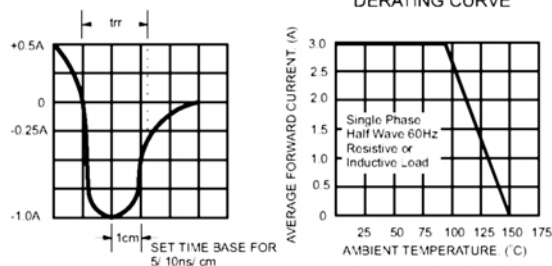


FIG.3- TYPICAL REVERSE CHARACTERISTICS

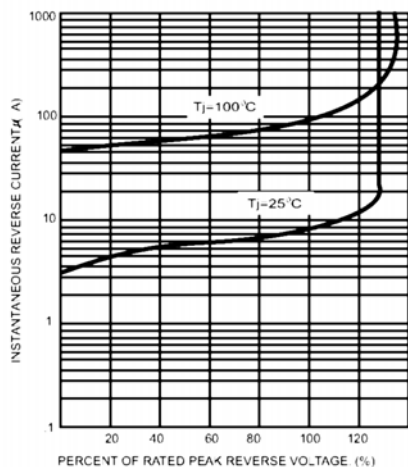


FIG.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

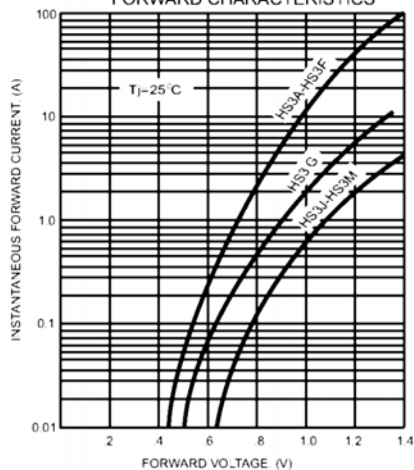


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

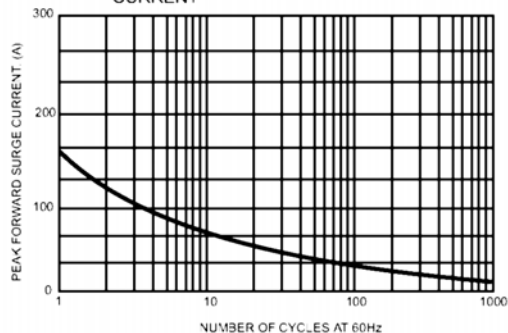


FIG.6- TYPICAL JUNCTION CAPACITANCE

