

SMC/DO-214AB

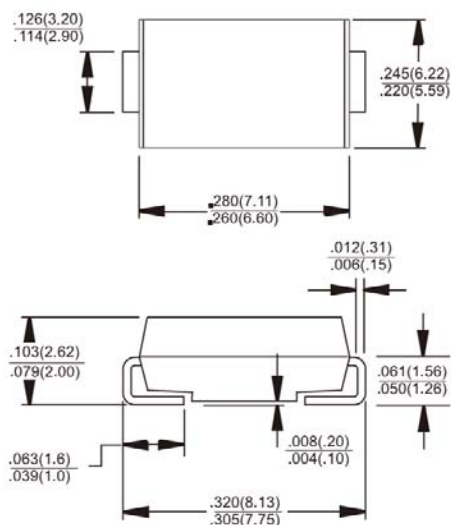
RoHS
COMPLIANCE

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-0
- ✧ Green compound with suffix "G" on packing
code & prefix "G" on datecode

Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Terminal: Pure tin plated, lead free
- ✧ Polarity: Indicated by cathode band
- ✧ Packing: 16mm tape per EIA STD RS-481
- ✧ Weight: 0.21 grams


Dimensions in inches and (millimeters)
Marking Diagram


HS3X = Specific Device Code
G = Green Compound
Y = Year
M = Work Month

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	I _{F(AV)}	3								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 (Note 1) @ 3A	V _F	1.0				1.3	1.7			V
Maximum DC Reverse Current at @ T _A =25 °C Rated DC Blocking Voltage @ T _A =125 °C	I _R	10 250								uA uA
Maximum Reverse Recovery Time (Note 2)	T _{rr}	50					75			nS
Typical Junction Capacitance (Note 3)	C _j	80					50			pF
Maximum Thermal Resistance	R _{θJA}	60								°C/W
Operating Temperature Range	T _J	- 55 to + 150								°C
Storage Temperature Range	T _{STG}	- 55 to + 150								°C

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Note 3: Measured at 1 MHz and Applied $V_R=4.0$ Volts

RATINGS AND CHARACTERISTIC CURVES (HS3A THRU HS3M)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

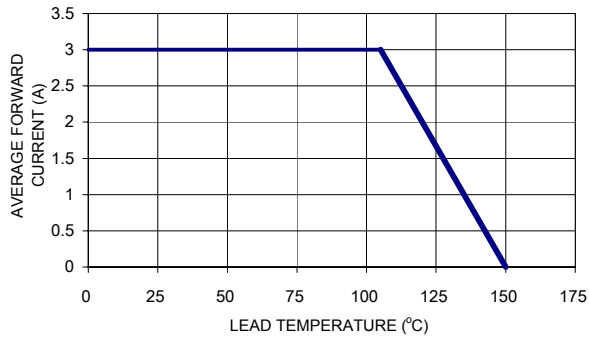


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

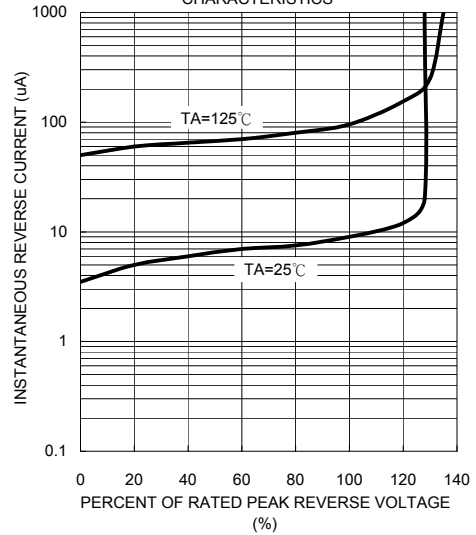


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

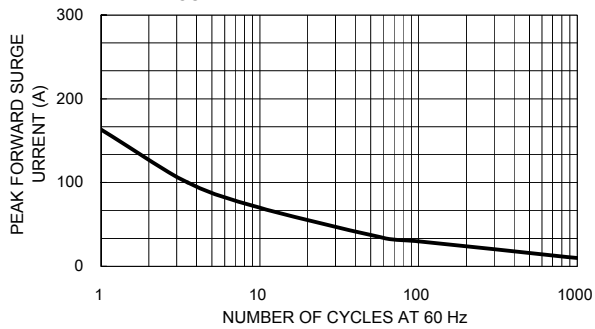


FIG. 4- TYPICAL JUNCTION CAPACITANCE

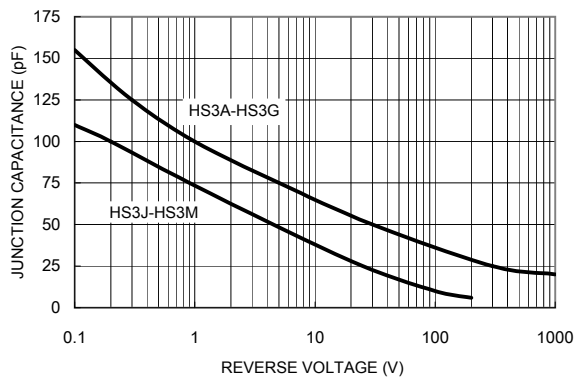


FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

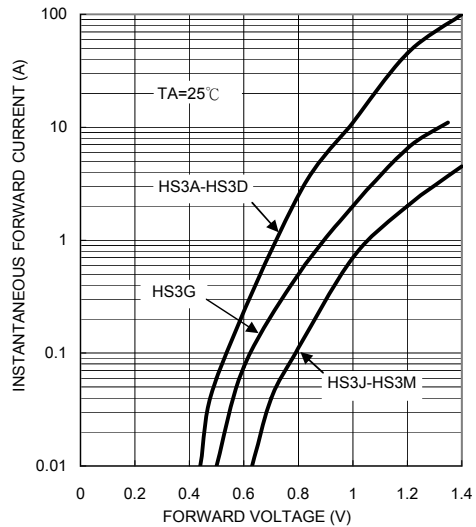


FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

