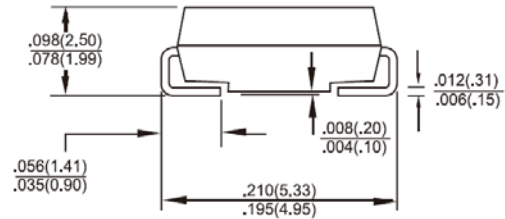
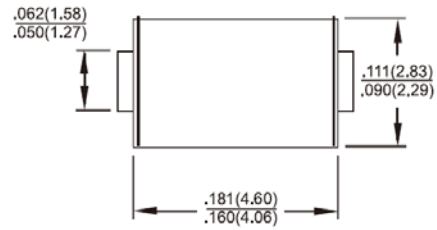


**SMA/DO-214AC**

**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: 12mm tape per EIA STD RS-481
- ✧ Weight: 0.064 grams

**Dimensions in inches and (millimeters)**
**Marking Diagram**


- HS1X = 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 1A	HS 1B	HS 1D	HS 1F	HS 1G	HS 1J	HS 1K	HS 1M	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. 1	$I_{F(AV)}$	1								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	30								A	
Maximum Instantaneous Forward Voltage (Note 1) @ 1 A	$V_F$	1.0			1.3		1.7			V	
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A=25\text{ }^\circ\text{C}$ @ $T_A=100\text{ }^\circ\text{C}$ @ $T_A=125\text{ }^\circ\text{C}$	$I_R$	5				50		150			$\mu\text{A}$
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	50				75				nS	
Typical Junction Capacitance (Note 3)	$C_j$	20				15				pF	
Typical Thermal Resistance	$R_{\theta JA}$	70								$^\circ\text{C/W}$	
Operating Temperature Range	$T_J$	- 55 to + 150								$^\circ\text{C}$	
Storage Temperature Range	$T_{STG}$	- 55 to + 150								$^\circ\text{C}$	

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 Reverse Voltage of 4.0Volts.

## RATINGS AND CHARACTERISTIC CURVES (HS1A THRU HS1M)

FIG. 1- MAXIMUM AVERAGE FORWARD CURRENT DERATING

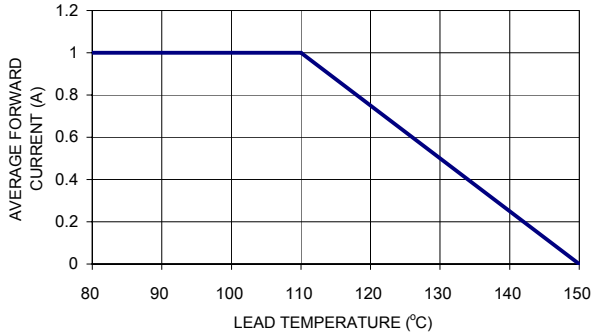


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

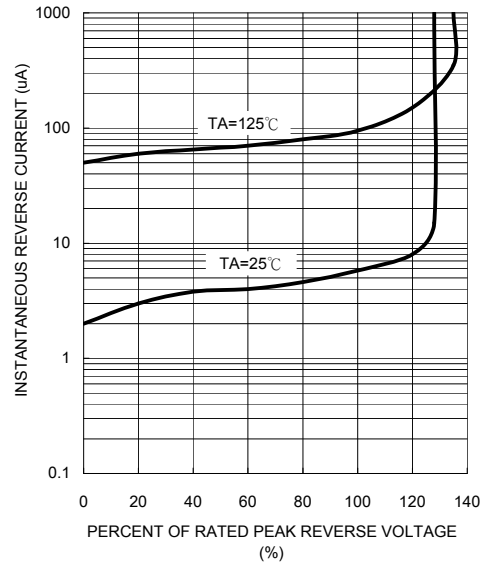


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

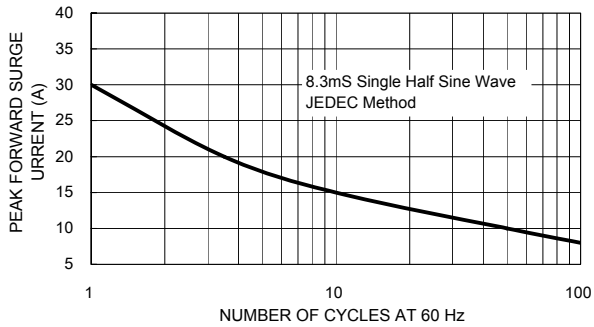


FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

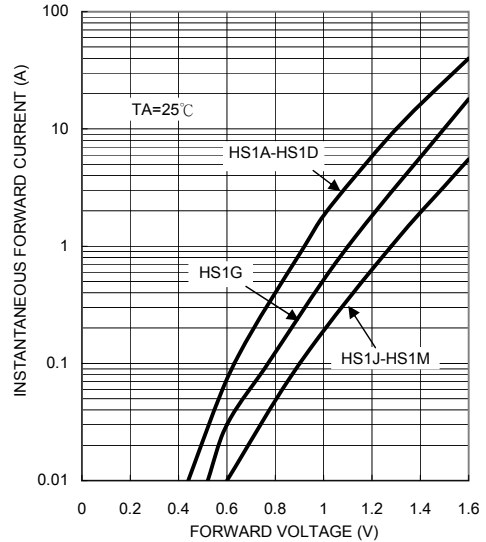


FIG. 4- TYPICAL JUNCTION CAPACITANCE

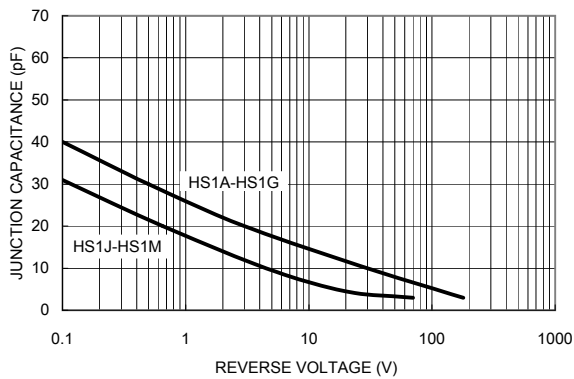


FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

