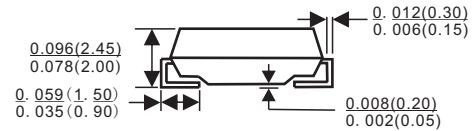
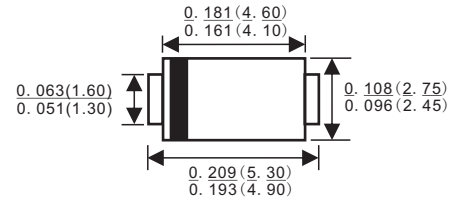




### SMA/DO-214AC

#### 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 94V0



#### Mechanical Data

- ✦ Cases: Molded plastic
- ✦ Terminals: Pure tin plated, lead free
- ✦ Polarity: Indicated by cathode band
- ✦ Packing: 12mm tape
- ✦ Weight: 0.064 gram

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 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	$I_{(AV)}$	1.0								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 @ 1.0A	$V_F$	1.0			1.3		1.7			V	
Maximum DC Reverse Current @ $T_A=25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125\text{ }^\circ\text{C}$	$I_R$	5.0				150					$\mu\text{A}$ $\mu\text{A}$
Maximum Reverse Recovery Time ( Note 1)	$T_{rr}$	50				75					nS
Typical Junction Capacitance ( Note 2 )	$C_j$	20				15					pF
Maximum Thermal Resistance (Note 3)	$R_{\theta JA}$	70									$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-55 to +150									$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150									$^\circ\text{C}$

- Notes:
1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $IRR=0.25\text{A}$
  2. Measured at 1 MHz and Applied  $V_R=4.0\text{ Volts}$ .
  3. Mounted on P.C.Board with 0.2" x 0.2" (5mm x 5mm) Copper Pad Area.

### RATINGS AND CHARACTERISTIC CURVES (HS1A THRU HS1M)

FIG.1- MAXIMUM AVERAGE FORWARD CURRENT DERATING

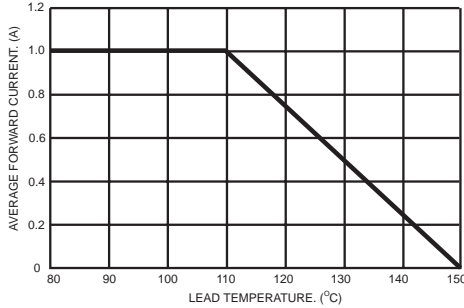


FIG.2- TYPICAL REVERSE CHARACTERISTICS

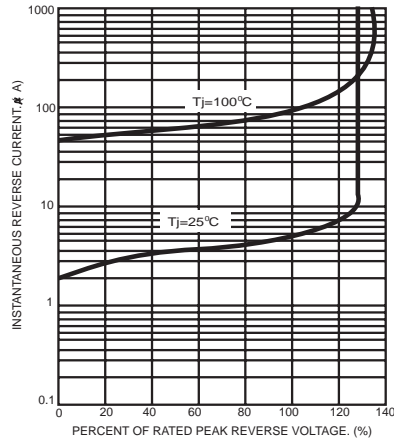


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

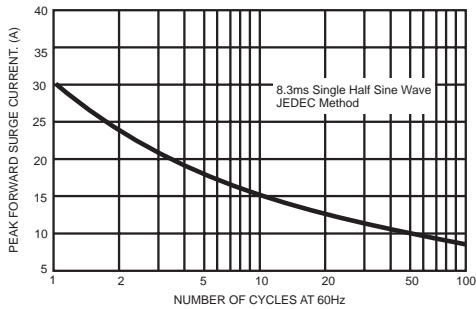


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

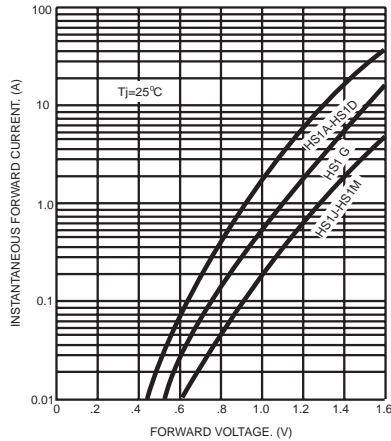


FIG.4- TYPICAL JUNCTION CAPACITANCE

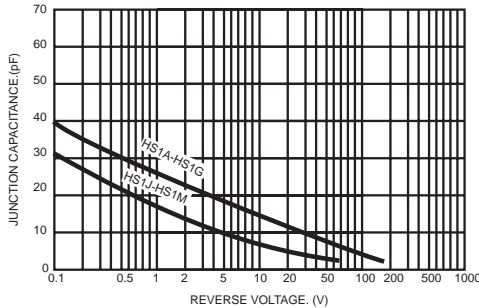
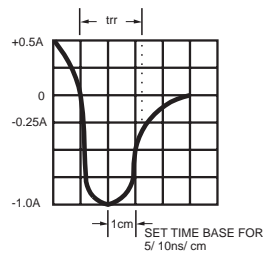
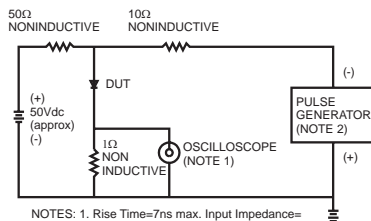


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance=1 megohm 22pf  
2. Rise Time=10ns max. Source Impedance=50 ohms

PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMA	5000/REEL	80000	36X30.6X31	12.00	11.00