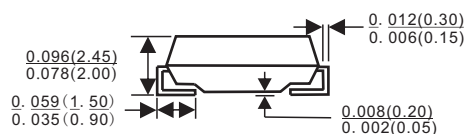
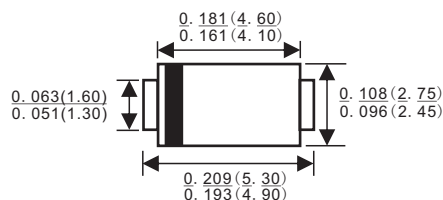




Features

- ✦ Glass passivated junction chip
- ✦ For surface mounted application
- ✦ Low profile package
- ✦ Built-in strain relief
- ✦ Ideal for automated placement
- ✦ Easy pick and place
- ✦ Ultrafast recovery time for high efficiency
- ✦ Low forward voltage, low power loss
- ✦ High temperature soldering guaranteed: 260°C/10 seconds on terminals
- ✦ Plastic material used carries Underwriters Laboratory Classification 94V0

SMA/DO-214AC



Dimensions in inches and(millimeters)

Mechanical Data

- ✦ Cases: Molded plastic
- ✦ Polarity: Indicated by cathode band
- ✦ Weight: 0.064 gram

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%

Parameter	Symbol	US1AA	US1BA	US1DA	US1GA	US1JA	US1KA	US1MA	UNIITS
Marking code		US1A	US1B	US1D	US1G	US1J	US1K	US1M	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ $T_L=110^\circ C$	$I_{(AV)}$	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 @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=125^\circ C$	I_R				5.0				uA uA
Maximum Reverse Recovery Time (Note 1)	T_{rr}		50				75		nS
Typical Junction Capacitance (Note 2)	C_j		15				10		pF
Maximum Thermal Resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$				75 27				$^\circ C/W$
Operating Temperature Range	T_J	-55 to +150							$^\circ C$
Storage Temperature Range	T_{STG}	-55 to + 150							$^\circ C$

- Notes:
1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
 2. Measured at 1 MHz and Applied $V_R=4.0$ Volts
 3. P.C.B. Mounted on 0.2 x 0.2" (5.0 x 5.0mm) Copper Pad Area.



RATINGS AND CHARACTERISTIC CURVES (US1A THRU US1M)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

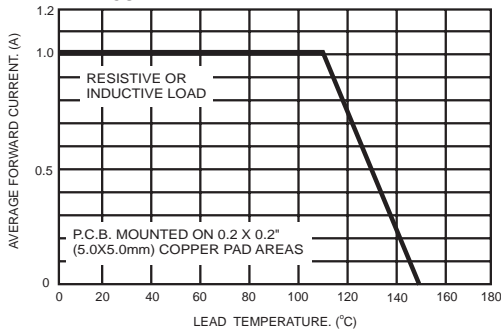


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

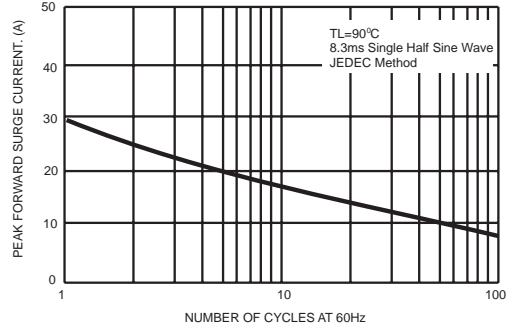


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

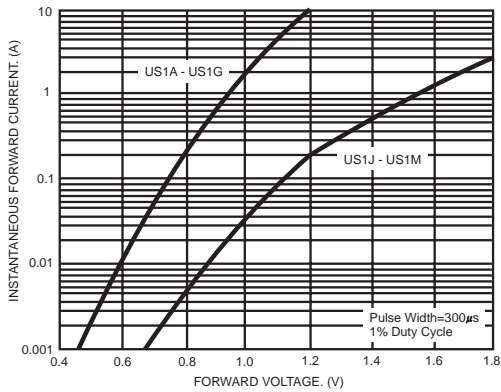


FIG.4- TYPICAL REVERSE CHARACTERISTICS

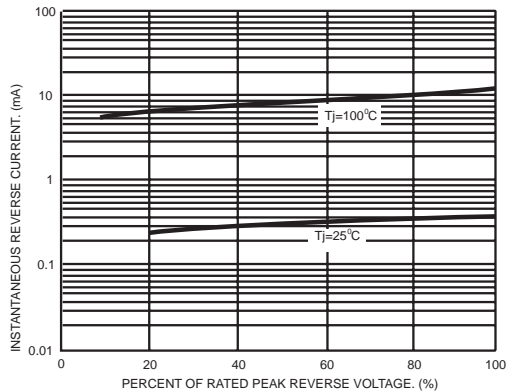


FIG.5- TYPICAL JUNCTION CAPACITANCE

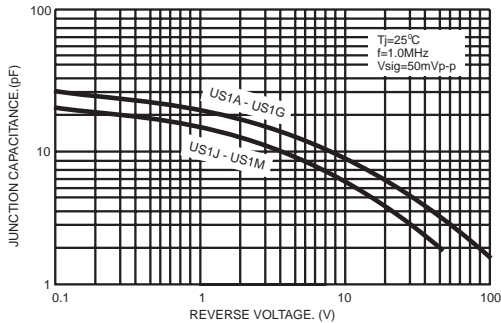


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE

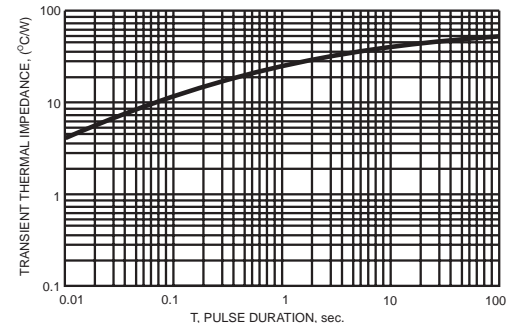
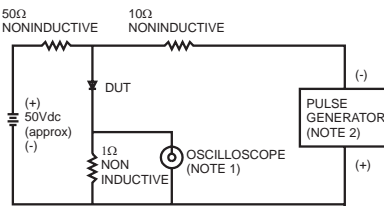
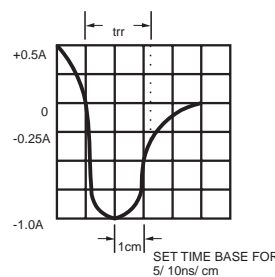


FIG.7- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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