

Features

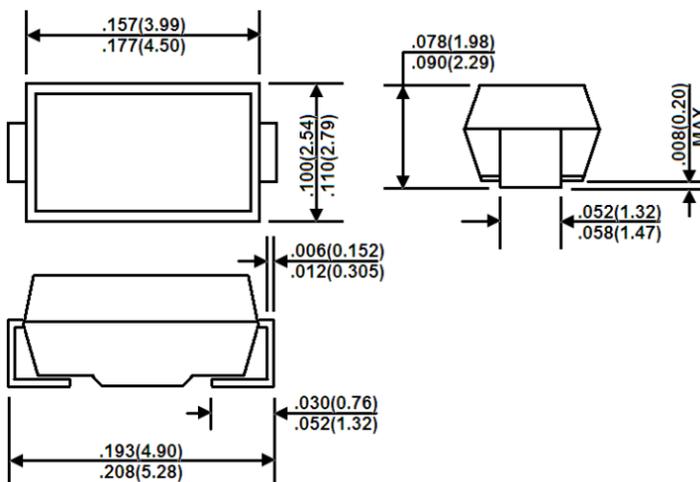
- * For surface mounted application
- * Extremely Low Thermal Resistance
- * Easy Pick and Place
- * High Temp Soldering: 260°C For 10seconds at Terminals
- * Superfast Recovery Times for High Efficiency



RoHS
COMPLIANT

Package Outline Dimensions in inches (millimeters)

SMA:



Mechanical Data

- * Case: DO-214AC Molded plastic
- * Terminals: Solder plated
- * Polarity: Indicated by cathode band
- * Standard packaging:
12mm tape(EIA STD RS-481)

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	Symbols	US1A	US1B	US1D	US1G	US1J	US1K	US1M	Unit
Maximum Repetitive 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 D.C Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current, 8.3ms single half sine-wave	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1.0A(Note1)	V_F	1.0				1.7			V
Maximum D.C Reverse Current @ $T_J=25^\circ\text{C}$ at Rated D.C Blocking Voltage @ $T_J=125^\circ\text{C}$	I_R					5.0 150			μA
Maximum Reverse Recovery Time(Note2)	T_{rr}	50				75			nS
Typical Junction Capacitance(Note3)	C_J	15				10			pF
Typical thermal resistance	$R_{\theta JL}$ $R_{\theta JA}$					27 75			$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	T_J/T_{STG}	-55 to +150							$^\circ\text{C}$

Note: 1、 Pulse test: $t_p=300\mu\text{s}$, 1% duty cycle 2、 Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$.

3、 Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Ratings and Characteristic Curves

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

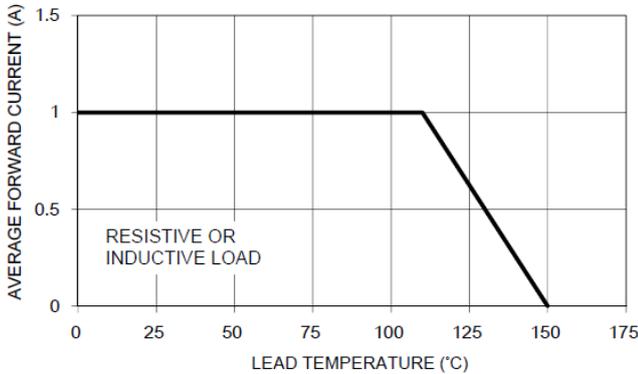


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

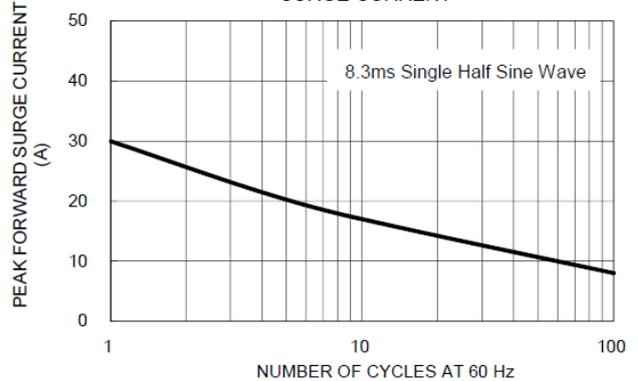


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

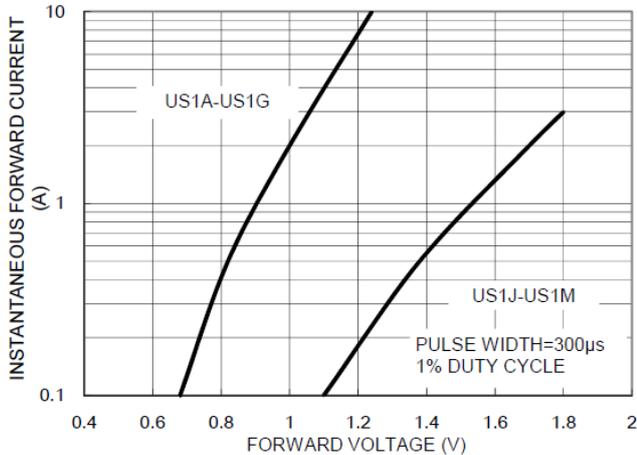


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

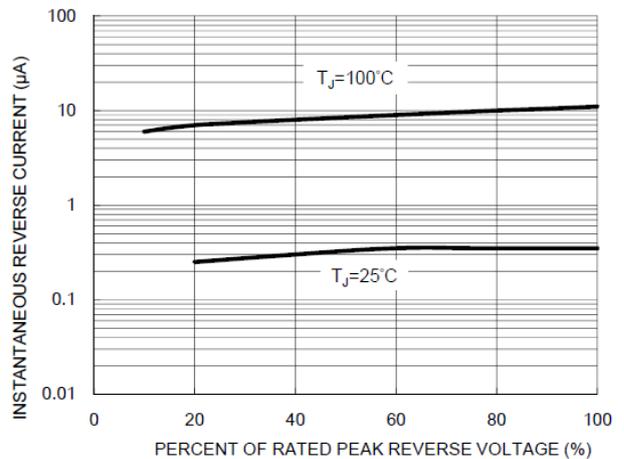


FIG. 5 TYPICAL JUNCTION CAPACITANCE

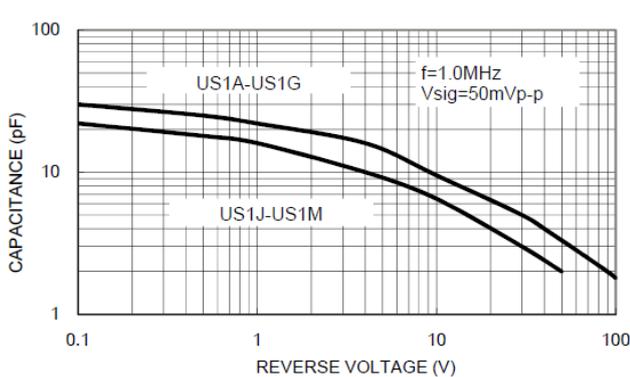


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE

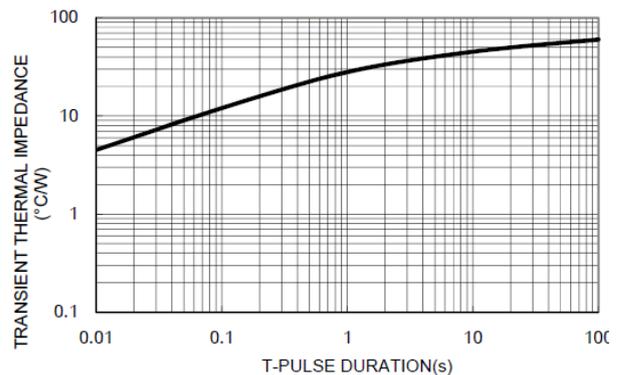
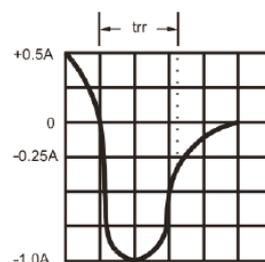
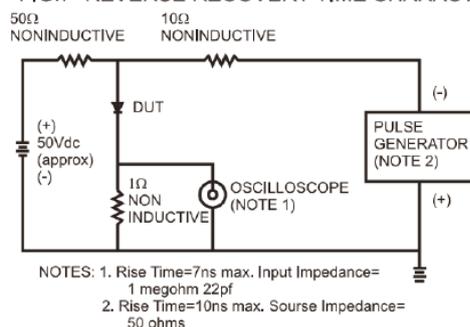


FIG.7- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





US1A THRU US1M

1.0 Amp. Surface Mount Glass Passivated Ultra Fast Rectifiers

Ordering Information

Part No.	Package	Packing
US1A~US1M	SMA	5K/Reel
US1A~US1M	SMA	6K/Reel
US1A~US1M	SMA	7.5K/Reel