

SURFACE MOUNT ULTRA FAST RECTIFIERS	REVERSE VOLTAGE - 50 to 1000 Volts FORWARD CURRENT - 2.0 Amperes
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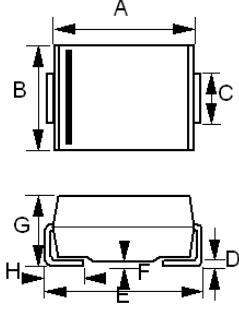
FEATURES

- Glass passivated chip
- Ultra fast switching for high efficiency
- For surface mounted applications
- Low forward voltage drop and Hi current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

MECHANICAL DATA

- Case: Molded plastic
- Polarity: Indicated by cathode band
- Weight: 0.002 ounces, 0.064 grams

SMB



SMB		
DIM.	MIN.	MAX.
A	4.06	4.57
B	3.30	3.94
C	1.96	2.21
D	0.15	0.31
E	5.21	5.59
F	0.05	0.20
G	2.01	2.40
H	0.76	1.52

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	US2A	US2B	US2D	US2G	US2J	US2K	US2M	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 DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ $T_L=95^\circ C$	I_{AV}	2.0							A
Peak Forward Surge 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	50							A
Maximum Forward Voltage at 2.0A DC	V_F	1.0		1.3		1.7			V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_j=25^\circ C$ @ $T_j=100^\circ C$	I_R	5 100							μA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	50				75			ns
Typical Junction Capacitance (Note 1)	C_j	30							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	22							$^\circ C/W$
Operating Junction Temperature Range	T_j	-55 to +150							$^\circ C$
Storage Temperature Range	T_{STG}	-55 to +150							$^\circ C$

Note : (1) Reverse Recovery Test Condition : $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$.
 (2) Measured at 1MHz and applied reverse voltage of 4.0VDC.
 (3) Thermal Resistance junction to Ambient, Lead and Case

**RATING AND CHARACTERISTIC CURVES
US2A thru US2M**



FIG.1- FORWARD CURRENT DERATING CURVE

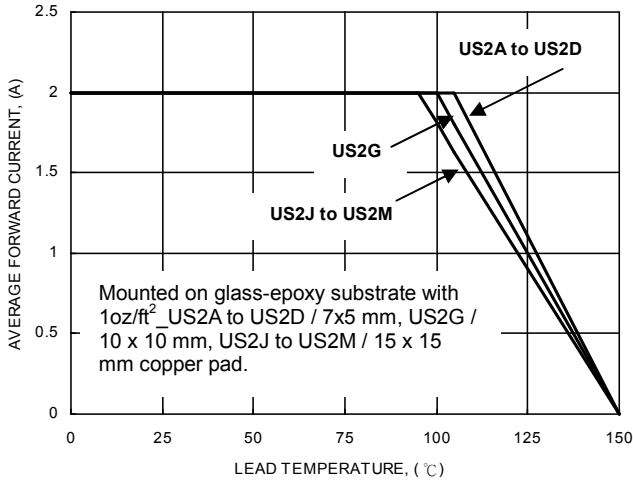


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

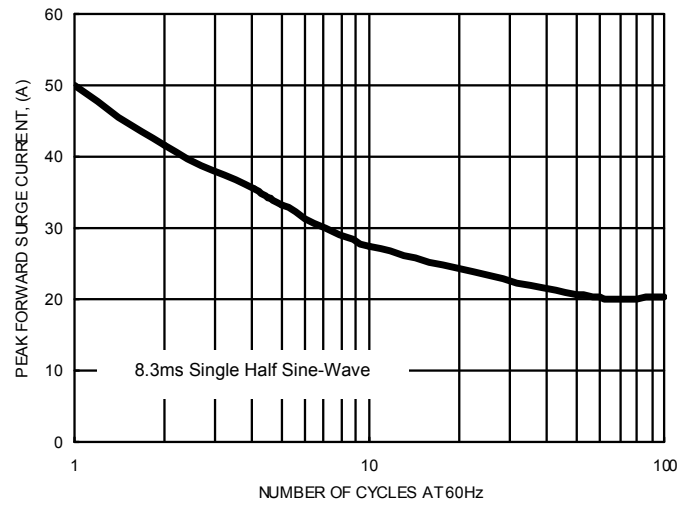


FIG.3- TYPICAL JUNCTION CAPACITANCE

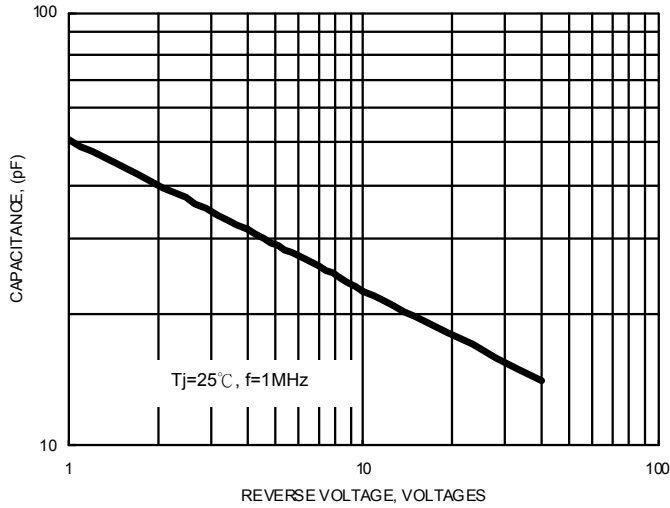


FIG.4- TYPICAL FORWARD CHARACTERISTICS

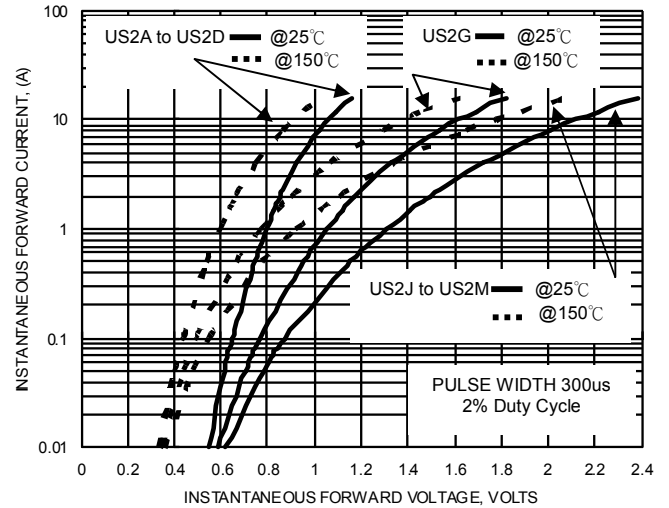
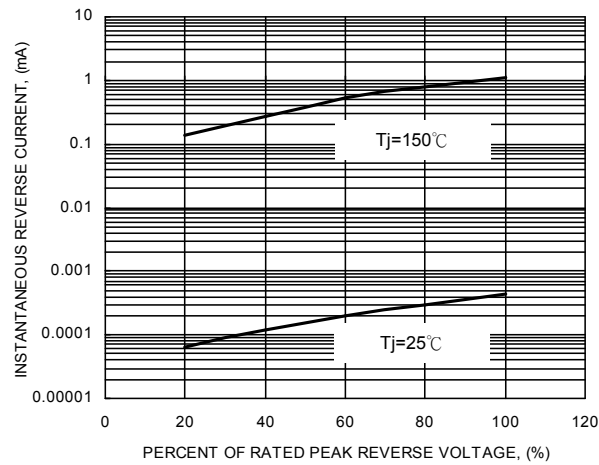


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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