LITE-ON SEMICONDUCTORS

US2A thru US2M

SURFACE MOUNT ULTRA FAST RECTIFIERS

REVERSE VOLTAGE – 50 to 1000 Volts
FORWARD CURRENT – 2.0 Amperes

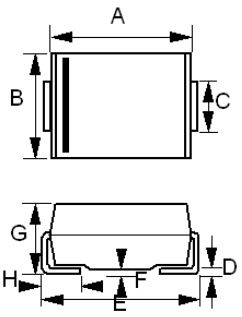
FEATURES

- 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

MECHANICAL DATA

- Case: Molded plastic
- Case Material: Molding compound, UL Flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free".
- 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 @TL=95°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 @Tj=25°C at Rated DC Blocking Voltage @Tj=100°C	I_R	5 100							uA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	50				75			ns
Typical Junction Capacitance (Note 1)	Cj	30							pF
Typical Thermal Resistance (Note 2)	$R_{\Theta JL}$	22							°C/W
Operating Junction Temperature Range	Tj	-55 to +150							°C
Storage Temperature Range	T_{STG}	-55 to +150							°C

REV.2, Aug-2014, KSFB01

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

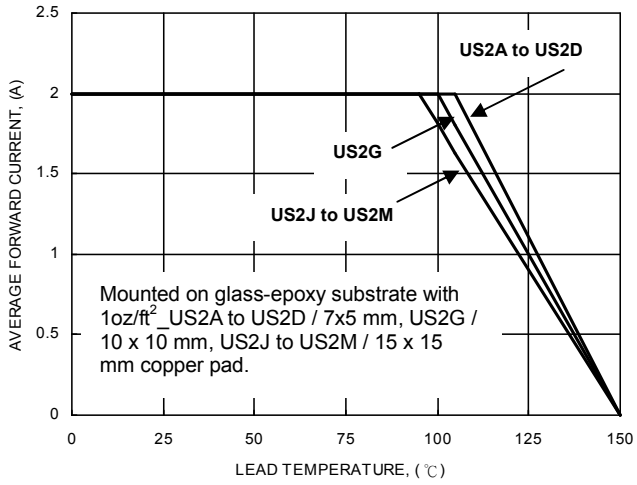


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

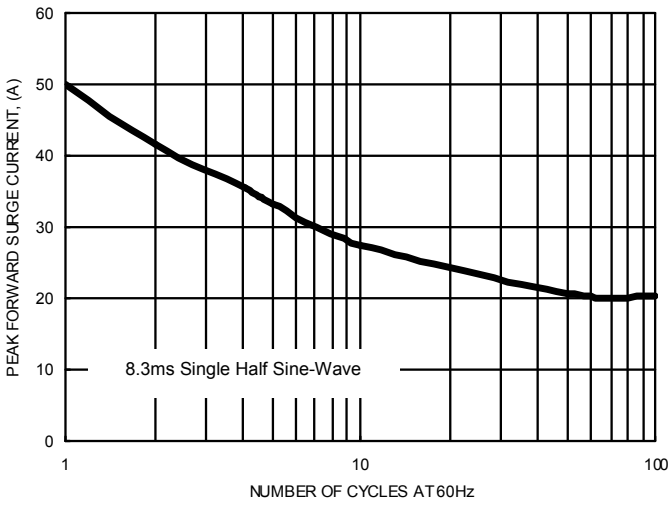


FIG.3- TYPICAL JUNCTION CAPACITANCE

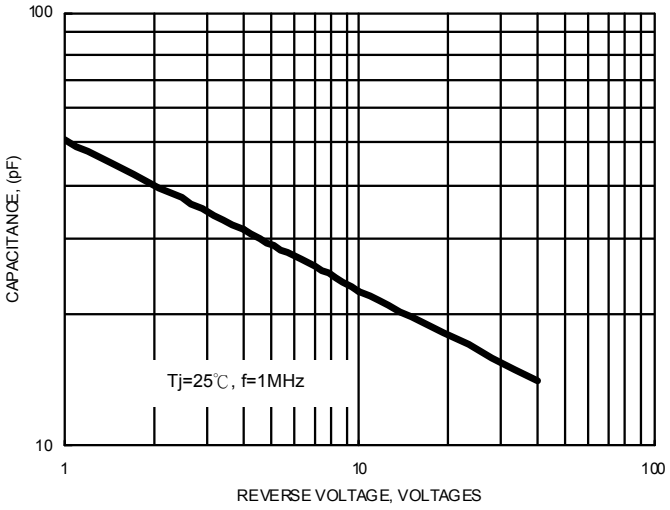


FIG.4- TYPICAL FORWARD CHARACTERISTICS

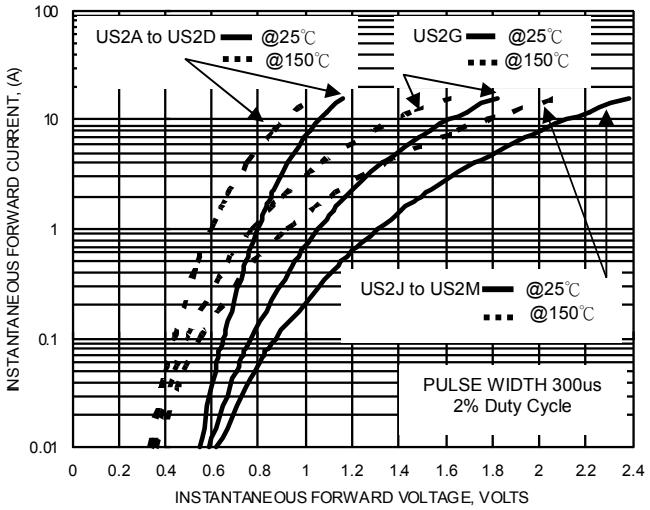
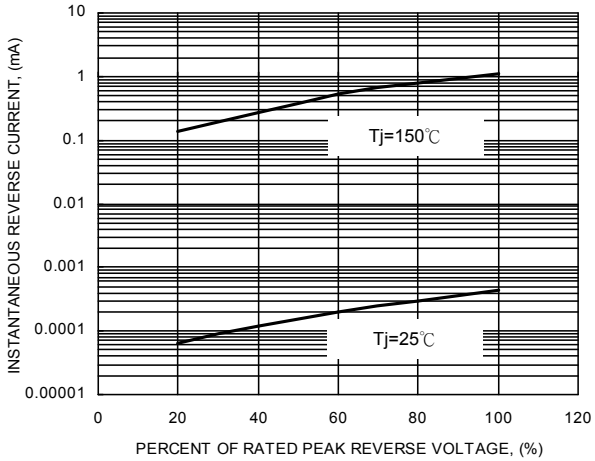


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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