

**SURFACE MOUNT  
GLASS PASSIVATED RECTIFIERS**

**REVERSE VOLTAGE –50 to 1000 Volts  
FORWARD CURRENT – 1.5 Amperes**

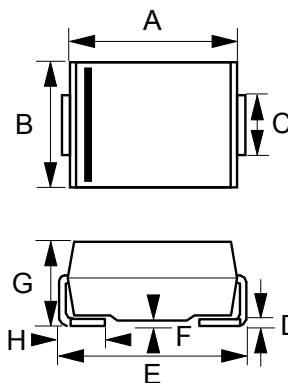
**FEATURES**

- Glass passivated chip
- For surface mounted applications
- Low reverse leakage current
- Low forward voltage drop
- High current capability

**MECHANICAL DATA**

- Case: Molded plastic
- Case Material molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) “Halogen-free”.
- Polarity: Color band denotes cathode
- Weight : 0.003 ounces, 0.093 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	2.50
H	0.76	1.52
All dimension in millimeter		

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

**ABSOLUTE RATINGS**

PARAMETER	SYMBOL	S2A	S2B	S2D	S2G	S2J	S2K	S2M	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current @ $T_L=100^\circ\text{C}$	$I_{(AV)}$	1.5							A
Peak forward surge current single half sine-wave superimposed on rated load. (JEDEC METHOD)	$I_{FSM}$	50 100							A
	@ 8.3ms @ 1ms								
$I^2t$ rating for fusing ( $1\text{ms} \leq t \leq 8.3\text{ms}$ )	$I^2t$	10.4							A <sup>2</sup> S
Typical junction capacitance (Note1)	$C_J$	20							pF
Operation and storage temperature range	$T_J, T_{STG}$	-55 to +150							°C

**STATIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITIONS	SYMBOL	MAX.	UNIT
Forward voltage	$I_F=1.5\text{A}$ $T_J=25^\circ\text{C}$	$V_F$	1.15	V
Leakage current	$V_R$ rated $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	$I_R$	5.0 125	uA

**THERMAL CHARACTERISTICS**

PARAMETER	SYMBOL	TYP.	UNIT
Typical thermal resistance (Note2)	$R_{thJL}$	20	°C/W

**DYNAMIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITIONS	SYMBOL	TYP.	UNIT
Reverse recovery time	$I_F=0.5\text{A}$ , $I_{rr}=0.25\text{A}$ , $I_R=1.0\text{A}$	$T_{RR}$	1500	ns

**Note :**

- (1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- (2) Thermal resistance junction to lead.

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RATING AND CHARACTERISTIC CURVES  
S2A thru S2M



FIG.1- FORWARD CURRENT DERATING CURVE

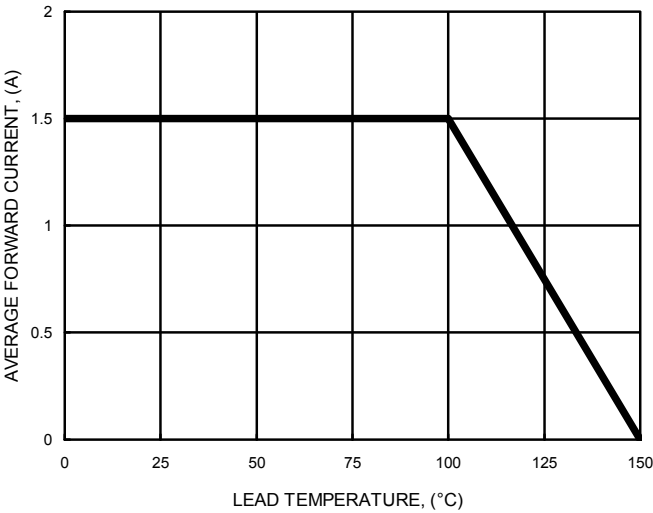


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

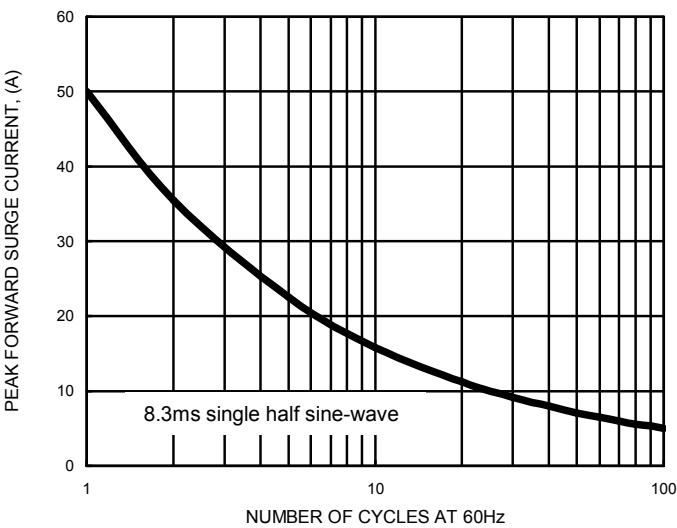


FIG.3- TYPICAL FOWRD CHARACTERISTICS

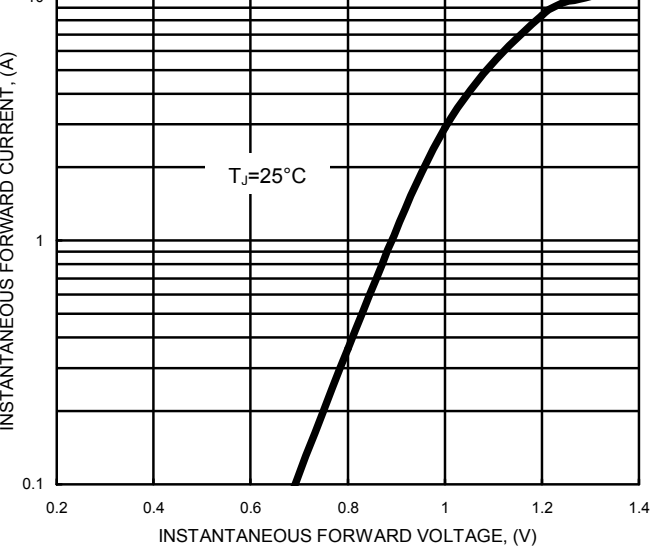
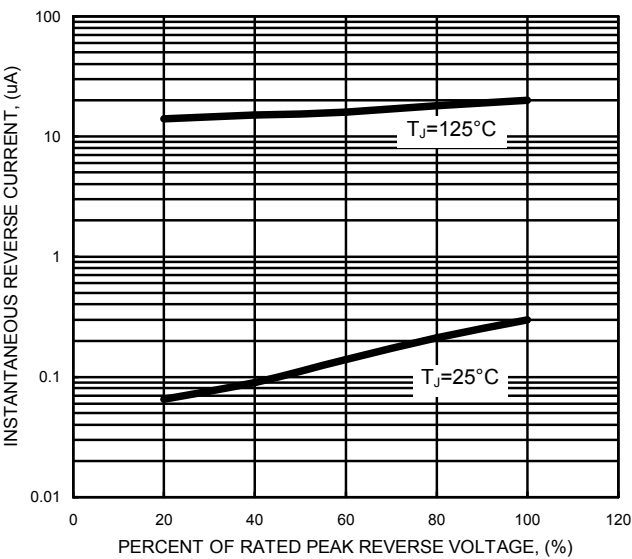


FIG.4- TYPICAL REVERSE CHARACTERISTICS



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