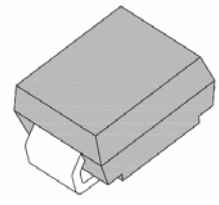
1.0A Sintered Glass Passivated Ultra Fast Recovery Rectifier

Features



SMB

- Sintered glass passivated (SGP) rectifier chip
- Ultra fast reverse recovery time
- Low forward voltage, high current capability
- Low leakage current, high surge current capability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- 175° C operation junction temperature
- RoHS Compliance

Mechanical Data

Case:	JEDEC DO-214AA (SMB) molded plastic over passivated chip
Epoxy:	Plastic package has UL flammability classification 94V-0
Terminals:	Tin plated, solderable per MIL-STD-750, Method 2026
Polarity:	Color band denotes cathode end
Weight:	0.003 ounces, 0.093 gram

Maximum Ratings and Electrical Characteristics *(T_A=25ºC unless noted otherwise)*

Symbol	Description	MURS140	MURS160	Unit	Conditions
V_{RRM}	Maximum Repetitive Peak Reverse Voltage	400	600	V	
V_{RMS}	Maximum RMS Voltage	280	420	V	
V_{DC}	Maximum DC Blocking Voltage	400	600	V	
$I_{F(AV)}$	Maximum Average Forward Rectified Current	1.0		A	T_L=150° C
I_{FSM}	Peak Forward Surge Current	35		A	8.3ms single half sine-wave superimposed on rated load (JEDEC Method)
V_F	Maximum Instantaneous Forward Voltage	1.25		V	I_F=1.0A, T_j=25° C

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MURS140 – MURS160

Symbol	Description	MURS140	MURS160	Unit	Conditions
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage	5		µA	T_j=25° C
		50			T_j=125° C
		100			T_j=150° C
T_{rr}	Maximum Reverse Recovery Time	50		nS	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
T_{fr}	Maximum Forward Recovery Time	50		nS	I_F=1.0A, di/dt=100A/µS, recovery to 1.0V
C_J	Typical Junction Capacitance	25		pF	V_R=4V, f=1MHz
R_{thJL}	Typical Thermal Resistance	13		°C / W	Note
T_J, T_{STG}	Operating Junction and Storage Temperature Range	-65 to +175		° C	

Note: Thermal resistance from junction to ambient and from junction to lead P.C.B mounted on 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas..

Typical Characteristics Curves

Fig.1-Forward Current Derating Curve

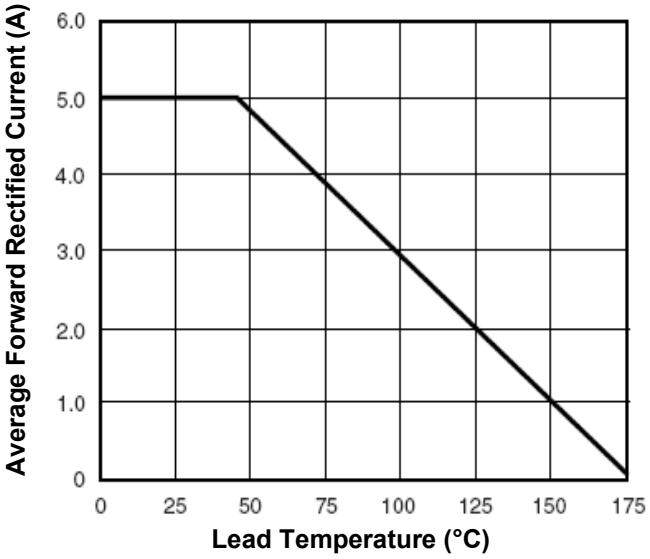


Fig.2-Max. Non-Repetitive Peak Forward Surge Current

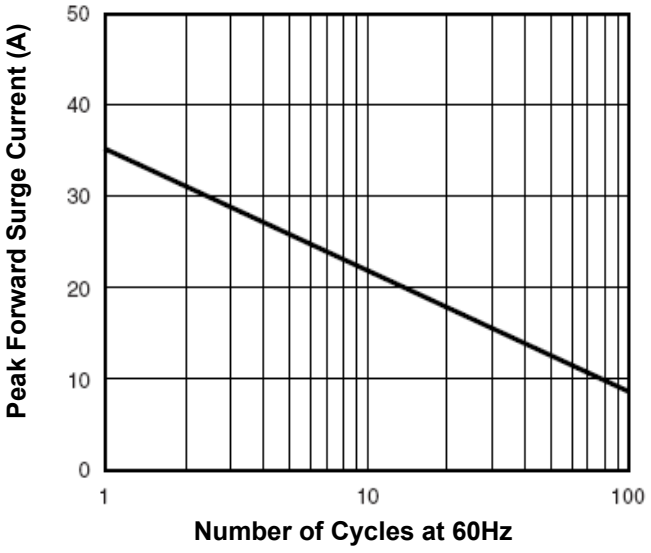


Fig.3- Typical Instantaneous Forward Characteristics

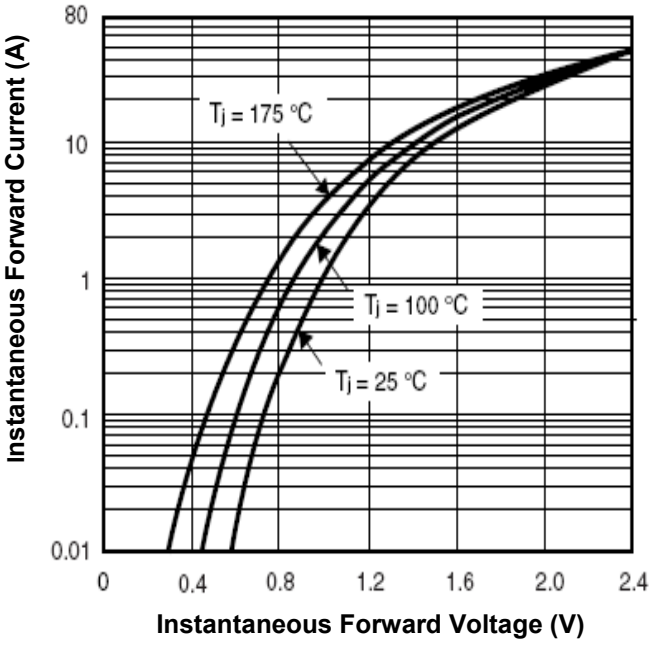


Fig.4-Typical Reverse Characteristics

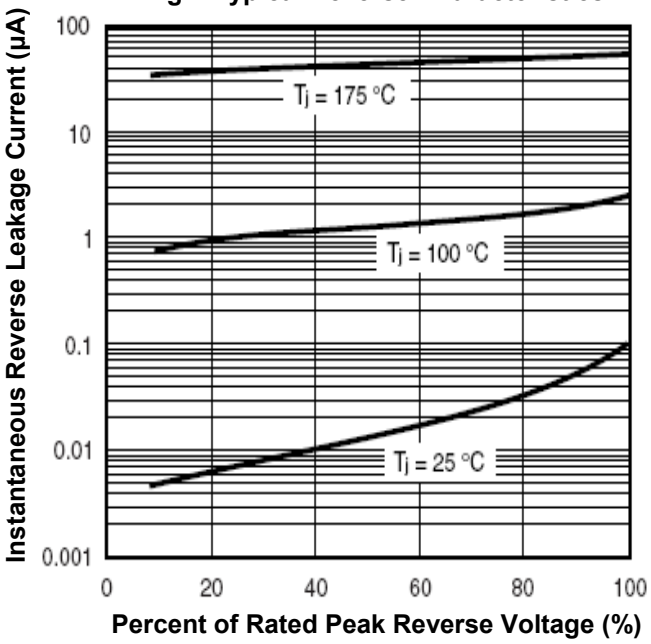
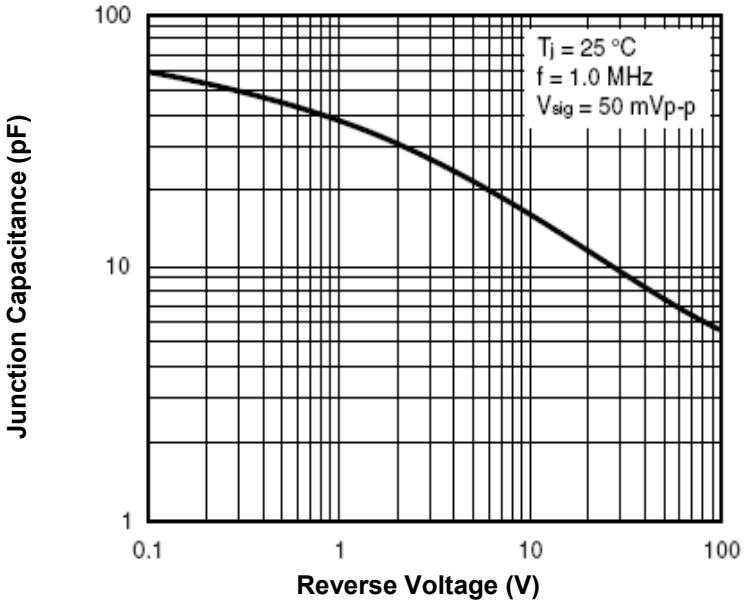
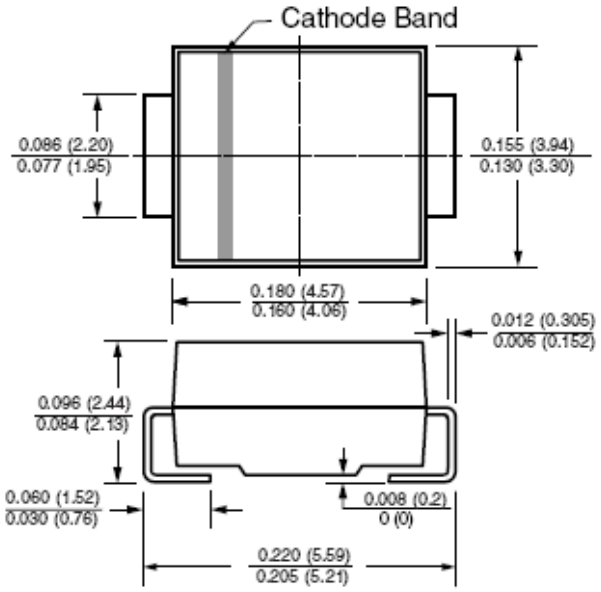


Fig.5- Typical Junction Capacitance

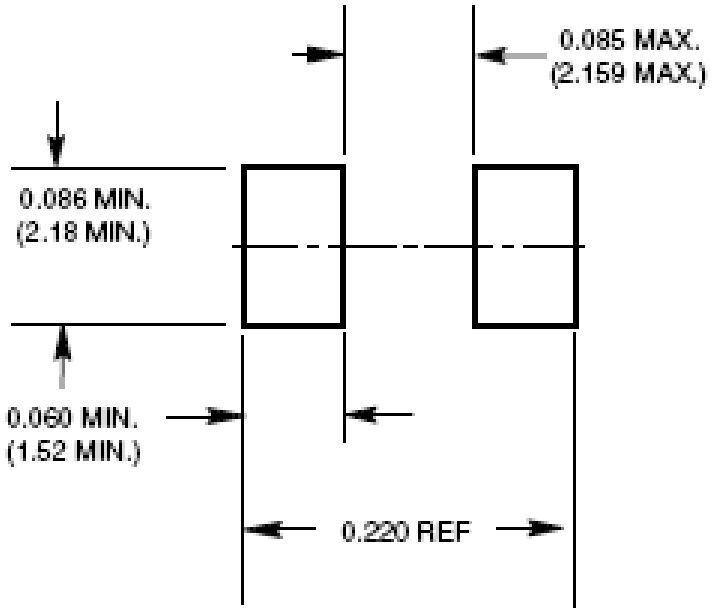


Dimensions in inches (mm)



SMB

Mounting Pad Layout in mm (inch)



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