

1.0A Sintered Glass Passivated Ultra Fast Recovery Rectifier (SGP[®])

Features

- Sintered glass passivated (SGP[®]) rectifier chip
- Glass passivated cavity-free junction
- Ideal for surface mount automotive applications
- Superfast recovery time for high efficiency
- Built-in strain relief
- Easy pick and place
- High temperature soldering guaranteed: 260°C/10 seconds, at terminals
- RoHS Compliance



SMB



Mechanical Data

Case:	JEDEC 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 ($T_A=25^\circ\text{C}$ unless noted otherwise)

Symbol	Description	MURS120	MURS140	MURS160	Unit	Conditions
	Marking Code	U1D	U1G	U1J		
V_{RRM}	Maximum Repetitive Peak Reverse Voltage	200	400	600	V	
V_{RMS}	Maximum RMS Voltage	140	280	420	V	
V_{DC}	Maximum DC Blocking Voltage	200	400	600	V	
I_{F(AV)}	Maximum Average Forward Rectified Current	1.0			A	TL=150° C, SEE FIG.1
I_{FSM}	Peak Forward Surge Current	40	35		A	8.3ms single half sine-wave superimposed on rated load (JEDEC Method)

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Symbol	Description	MURS120	MURS140	MURS160	Unit	Conditions
V_F	Maximum Instantaneous Forward Voltage	0.875	1.10	1.20	V	IF=1.0A
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage	2	5		μA	TA=25° C
		50	100			TA=150° C
T_{rr}	Maximum Reverse Recovery Time	35	50		nS	IF=0.5A, IR=1.0A, Irr=0.25A
C_J	Typical Junction Capacitance	15			pF	VR=4V, f=1MHz
R_{thJL}	Typical Thermal Resistance, Junction to Lead	13			°C / W	
T_J, T_{STG}	Operating Junction and Storage Temperature Range	-65 to +175			°C	

Typical Characteristics Curves

Fig.1-Forward Current Derating Curve

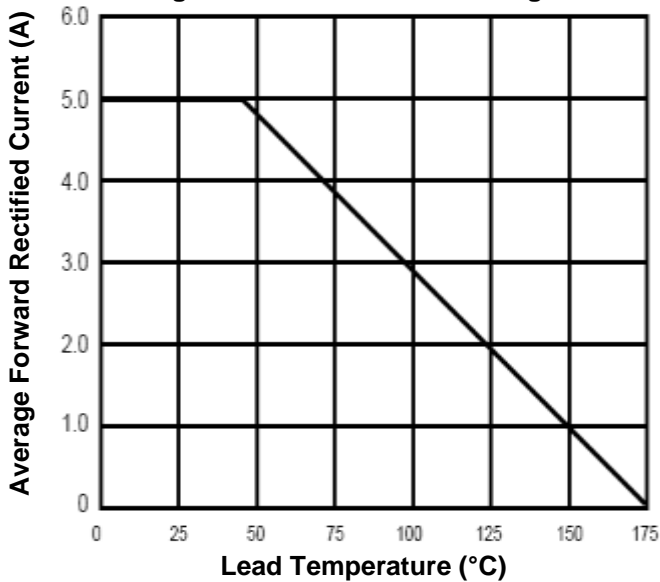
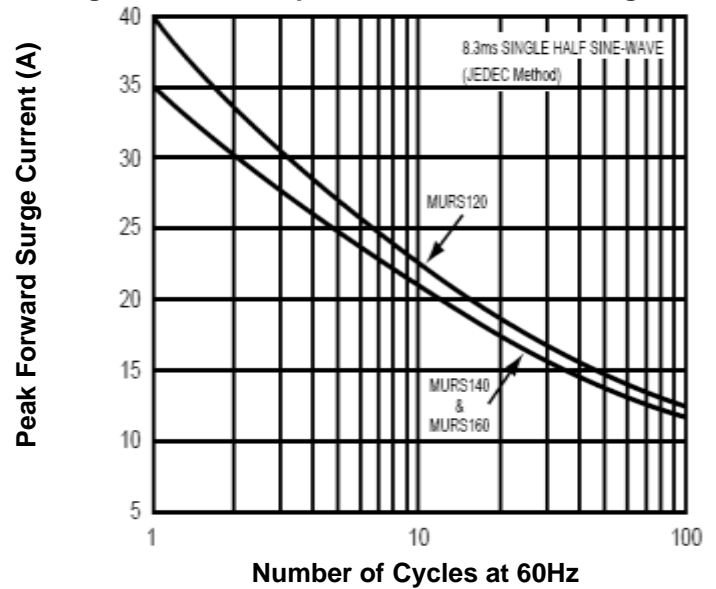


Fig.2-Max. Non-Repetitive Peak Forward Surge Current



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Fig.3- Typical Instantaneous Forward Characteristics

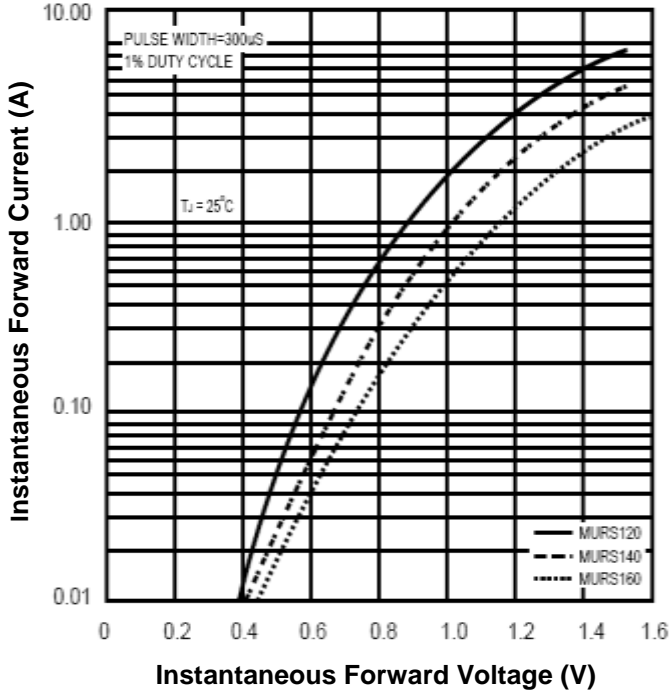


Fig.4-Typical Reverse Characteristics

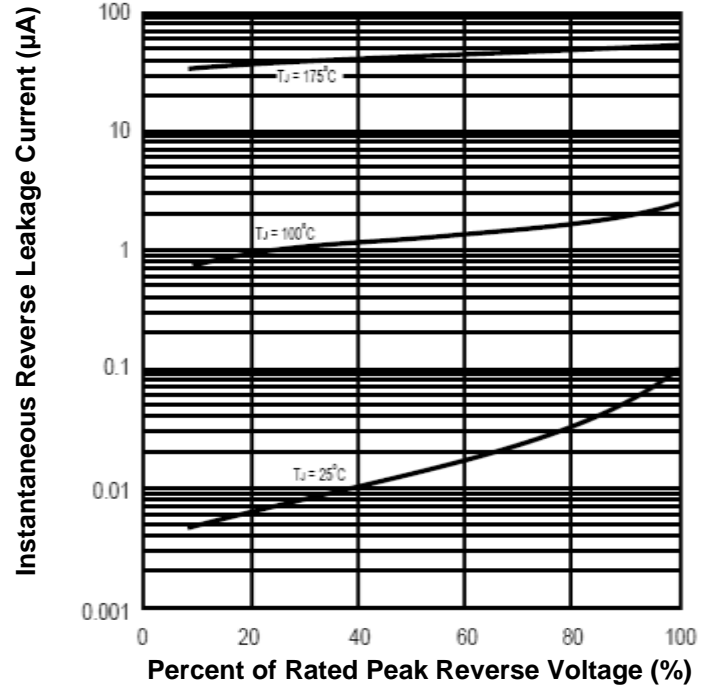
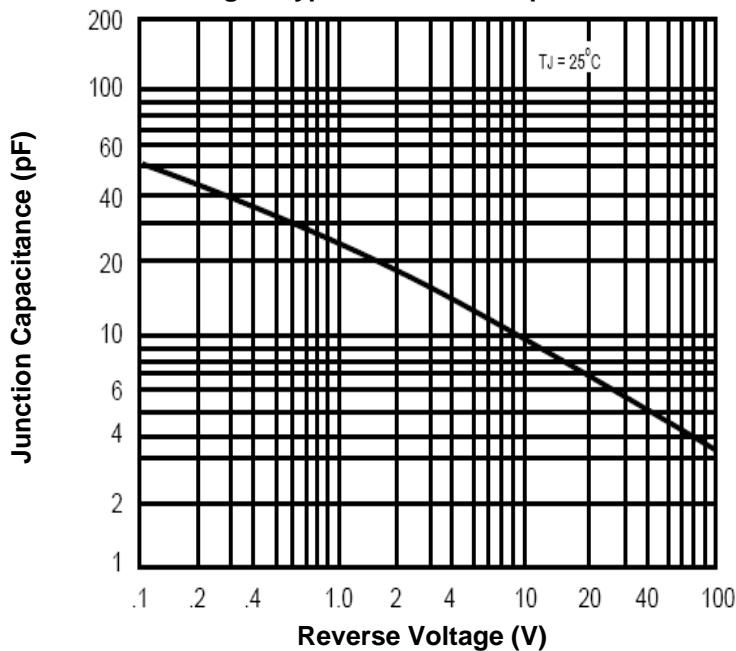


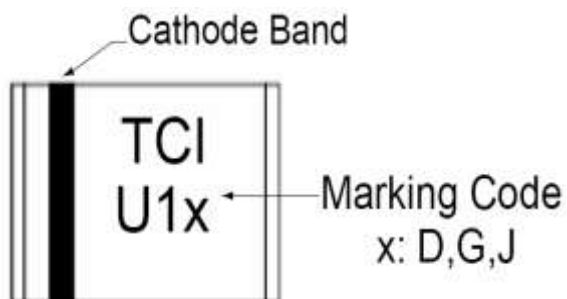
Fig.5- Typical Junction Capacitance



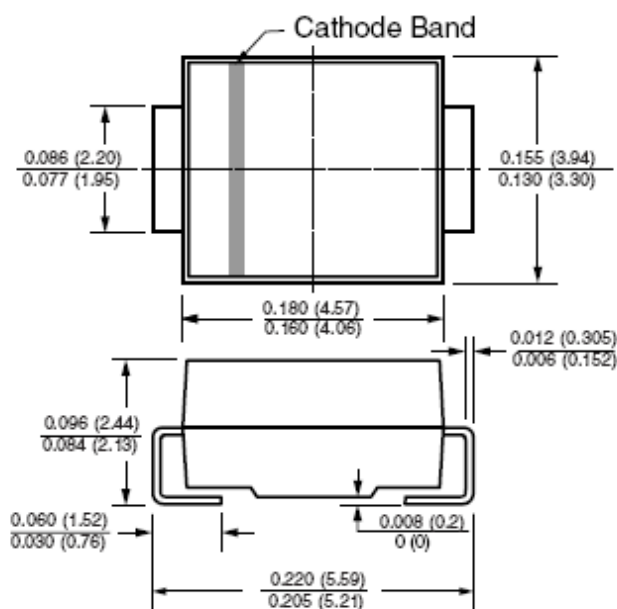
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Marking Information:



Dimensions in inch (mm)

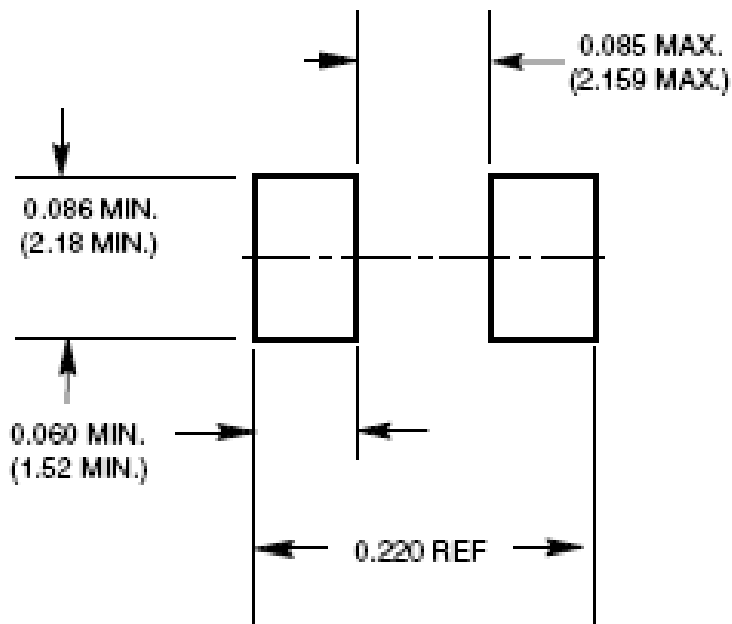


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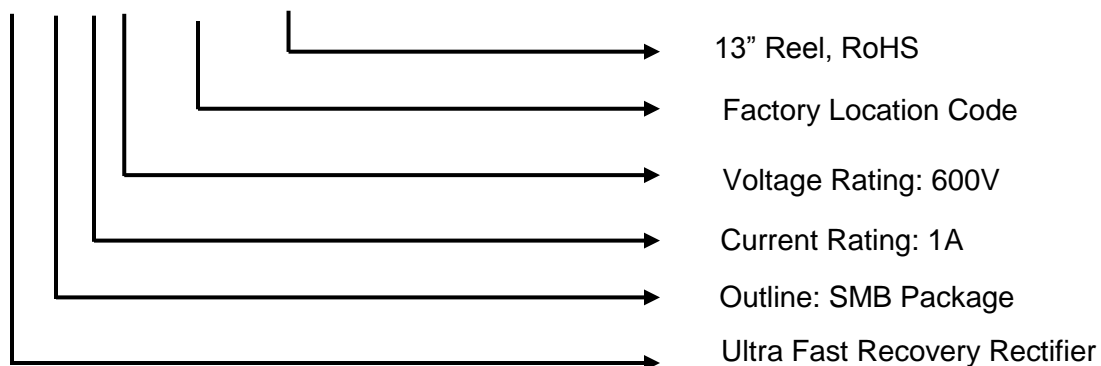
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Soldering Pad in inch (mm)



Ordering Information

MUR S 1 60 -XX-TR30



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