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

Features



SMB

- 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

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=25ºC 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	T_L=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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MURS120 – MURS160

Symbol	Description	MURS120	MURS140	MURS160	Unit	Conditions
V_F	Maximum Instantaneous Forward Voltage	0.875	1.10	1.20	V	I_F=1.0A
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage	2	5		μA	T_A=25° C
		50	100			T_A=150° C
T_{rr}	Maximum Reverse Recovery Time	35	50		nS	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
C_J	Typical Junction Capacitance	15			pF	V_R=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

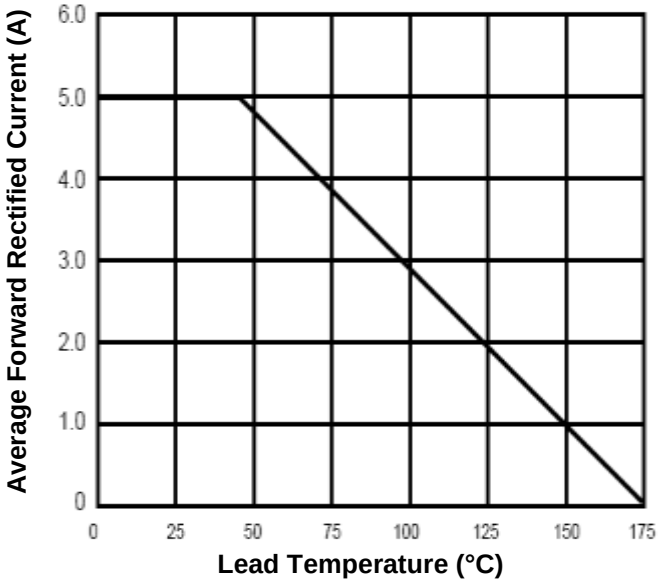


Fig.2-Max. Non-Repetitive Peak Forward Surge Current

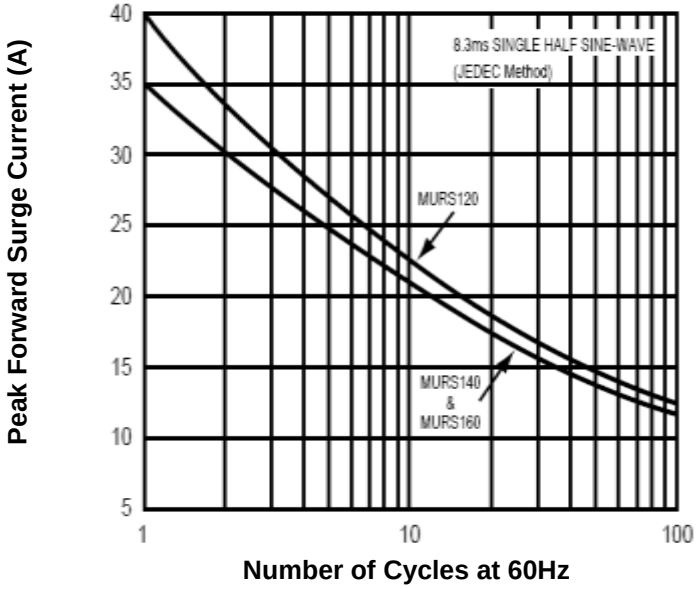


Fig.3- Typical Instantaneous Forward Characteristics

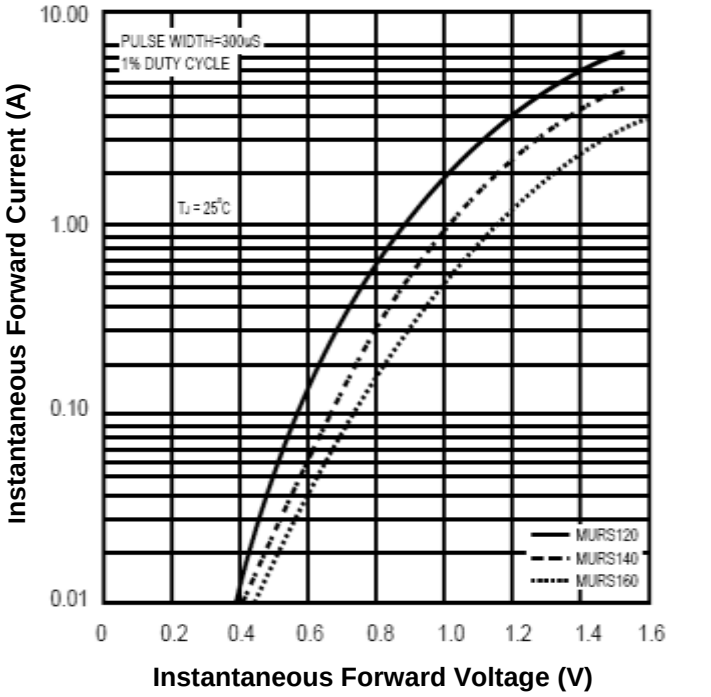


Fig.4-Typical Reverse Characteristics

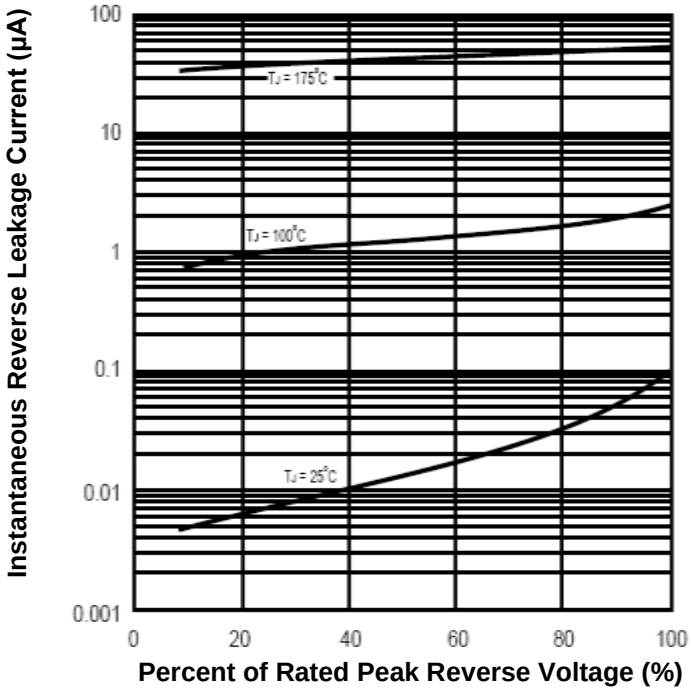
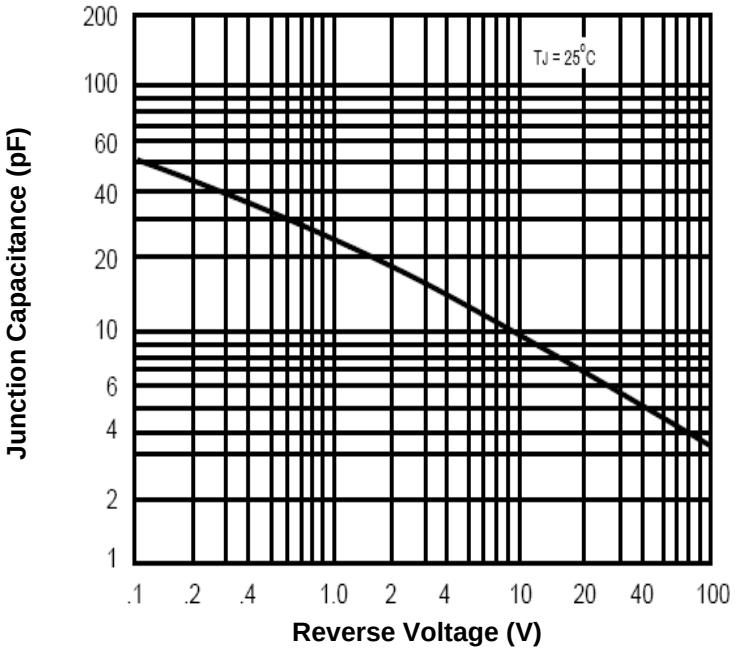
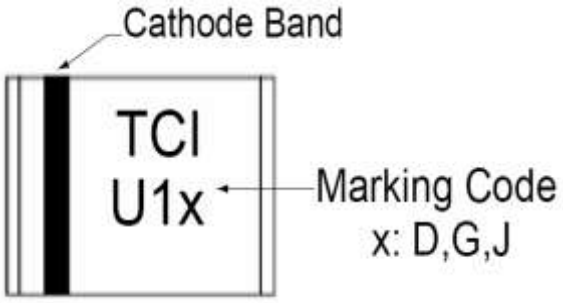


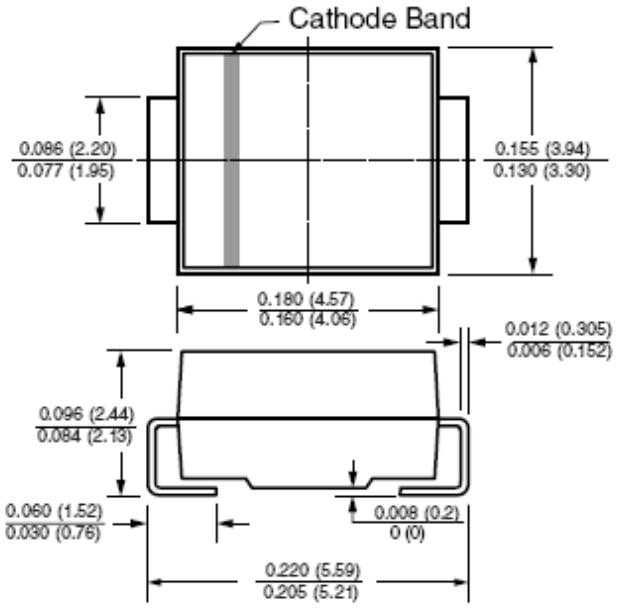
Fig.5- Typical Junction Capacitance



Marking Information:

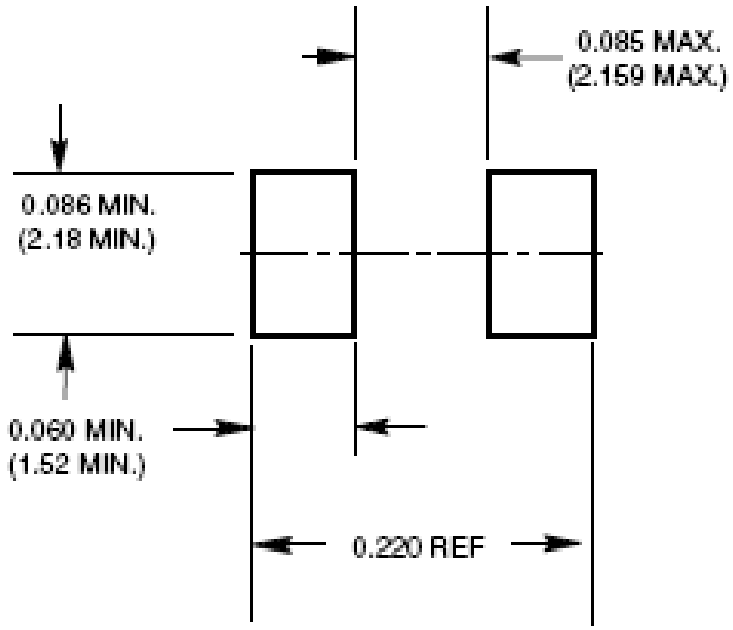


Dimensions in inch (mm)

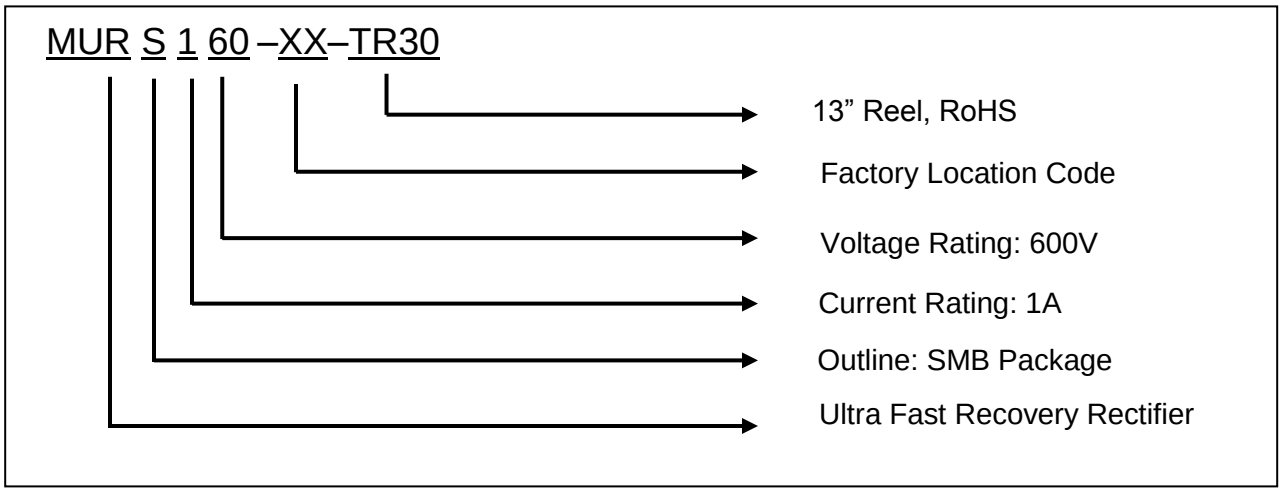


SMB

Soldering Pad in inch (mm)



Ordering Information



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