Glass Passivated
Superfast Rectifier

RoHS Compliant

Features:

- Glass passivated die construction
- Superfast 35nS and 50nS recovery time
- Low forward voltage drop
- Low reverse leakage current
- Soft recovery characteristics
- Epoxy meets UL 94V-0 classification
- Ideally suited for use in high frequency SMPS, Inverters and as free wheeling diodes

Mechanical Data:

Case	: TO-220A, Molded Plastic
Terminals	: Pure tin plated, lead free solderable Per MIL-STD-202, method 208
Polarity	: As marked on the body
Weight	: 1.9 grams(approx)
Mounting Position	: Any
Mounting Torque	: 0.6 N.m Max.
Reverse Voltage	: 400 to 600 Volts
Forward Current	: 16 Amperes

Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristics	Symbol	MUR1640	MUR1660	Unit
Max. Recurrent Peak Reverse Voltage	V_{RRM}	400	600	V
Max. RMS Voltage	V_{RMS}	280	420	
Max. DC Blocking Voltage	V_{DC}	400	600	
Max. Average Forward Rectified Current	$I_{F(AV)}$	16		A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	250		
Max. Forward Voltage at 16A per leg	V_F	1.3	1.5	V
Max. DC Reverse Current at T_J = 25°C Rated DC Blocking Voltage at T_J = 125°C	I_R	10 500		mA
Max. Reverse Recovery Time (Note 1)	T_{RR}	50		nS
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	73		°C/W
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.2		
Typical Junction Capacitance (Note 2)	C_J	145		pF
Operating Temperature Range	T_J	-65 to +175		°C
Storage Temperature Range	T_{STG}			

Notes:

1. Measured with I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A
2. Measured at 1.0 MHZ and applied reverse voltage of 4.0V D.C.
3. The typical data above is for reference only

Ratings and Characteristic Curves

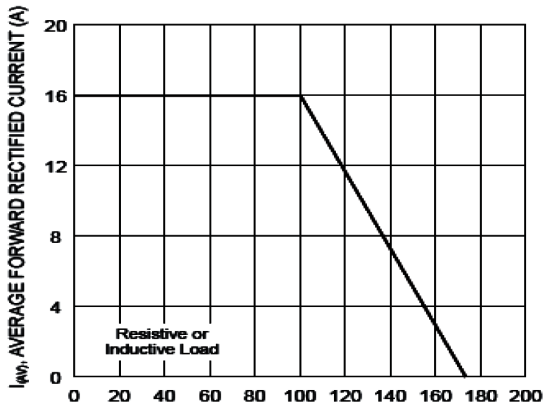

Fig. 1 Forward Current Derating Curve

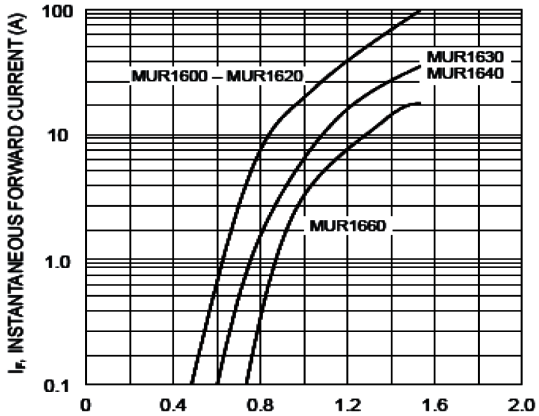

Fig. 2 Typical Forward Characteristics

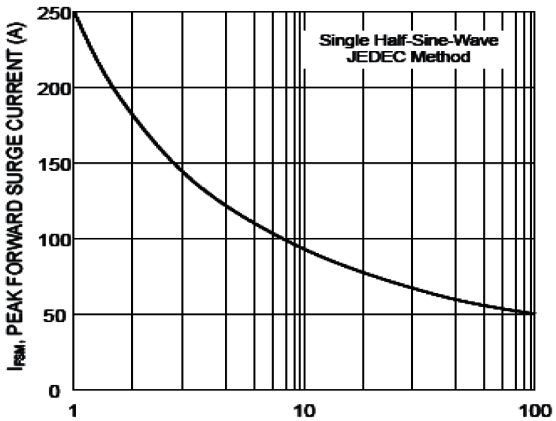

Fig. 3 Forward Surge Current Derating Curve

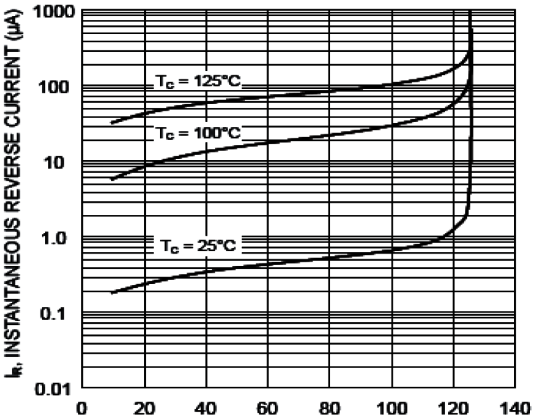

Fig. 4 Typical Reverse Characteristics

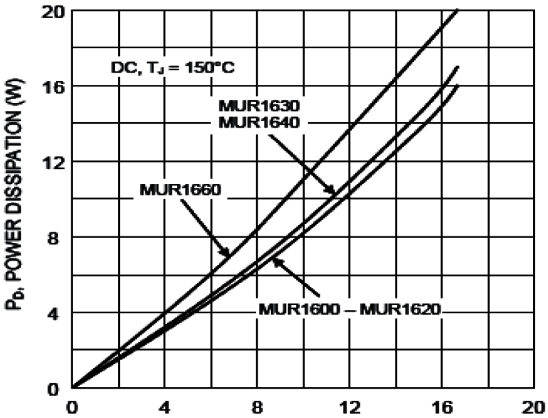

Fig. 5 Forward Power Dissipation

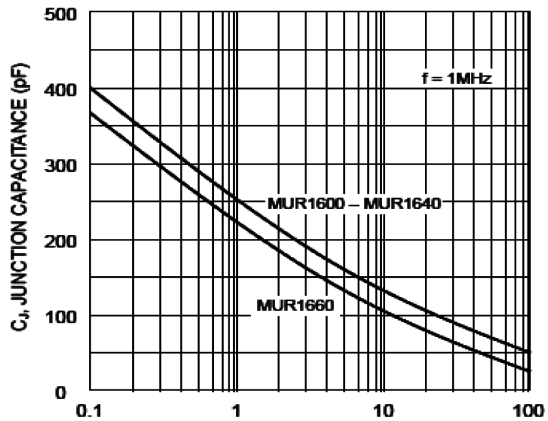

Fig. 6 Typical Junction Capacitance

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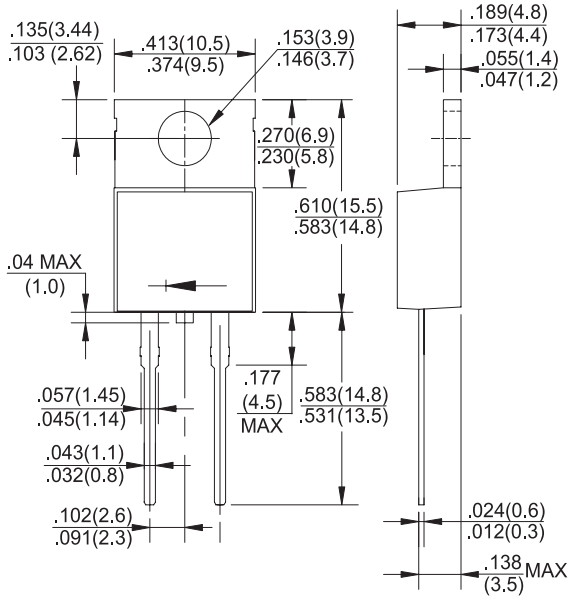
Dimensions:

TO-220AC



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Glass Passivated Superfast Rectifiers	MUR1640
	MUR1660