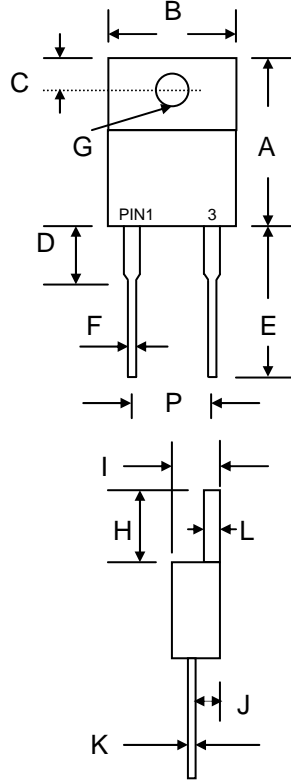


Features

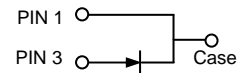
- Glass Passivated Die Construction
- Superfast 35nS and 50nS Recovery Time
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- Soft Recovery Characteristics
- Epoxy Meets UL 94V-0 Classification
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes

Mechanical Data

- Case: TO-220A, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 1.9 grams (approx.)
- Mounting Position: Any
- Mounting Torque: 0.6 N.m Max.
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



TO-220A		
Dim	Min	Max
A	13.90	15.90
B	9.80	10.70
C	2.54	3.43
D	3.56	4.56
E	12.70	14.73
F	0.51	0.96
G	3.55 Ø	4.09 Ø
H	5.75	6.85
I	4.16	5.00
J	2.03	2.92
K	0.30	0.65
L	1.14	1.40
P	4.83	5.33
All Dimensions in mm		



Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	MUR 1600	MUR 1610	MUR 1615	MUR 1620	MUR 1630	MUR 1640	MUR 1660	Unit	
Peak Repetitive Reverse Voltage	V _{RRM}								V	
Working Peak Reverse Voltage	V _{RWM}	50	100	150	200	300	400	600		
DC Blocking Voltage	V _R									
RMS Reverse Voltage	V _{R(RMS)}	35	70	105	140	210	280	420	V	
Average Rectified Output Current @T _C = 100°C	I _O	16							A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	250							A	
Forward Voltage @I _F = 16A	V _{FM}	0.975			1.3		1.5		V	
Peak Reverse Current @T _C = 25°C At Rated DC Blocking Voltage @T _C = 100°C	I _{RM}	10				500				µA
Reverse Recovery Time (Note 1)	t _{rr}	35			50				nS	
Typical Junction Capacitance (Note 2)	C _J	175						145	pF	
Thermal Resistance Junction to Ambient	R _{JA}	73							°C/W	
Thermal Resistance Junction to Case	R _{JC}	1.2								
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175							°C	

Note: 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.

MUR1600 – MUR1660

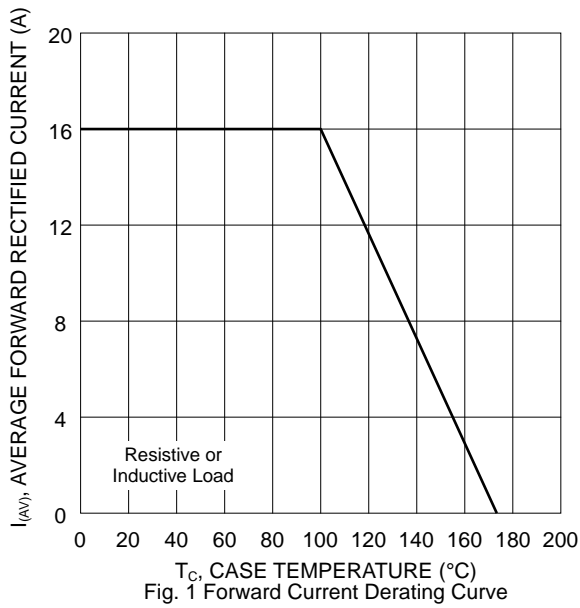


Fig. 1 Forward Current Derating Curve

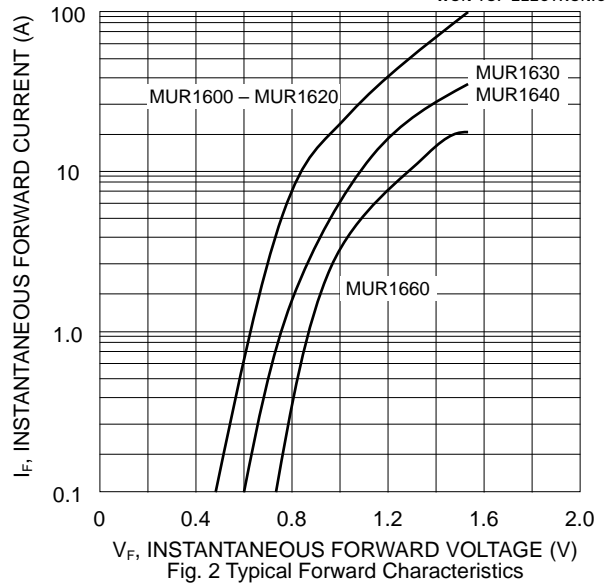


Fig. 2 Typical Forward Characteristics

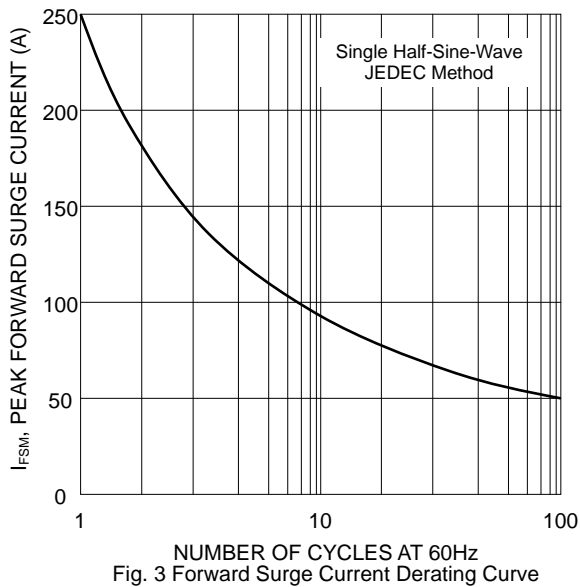


Fig. 3 Forward Surge Current Derating Curve

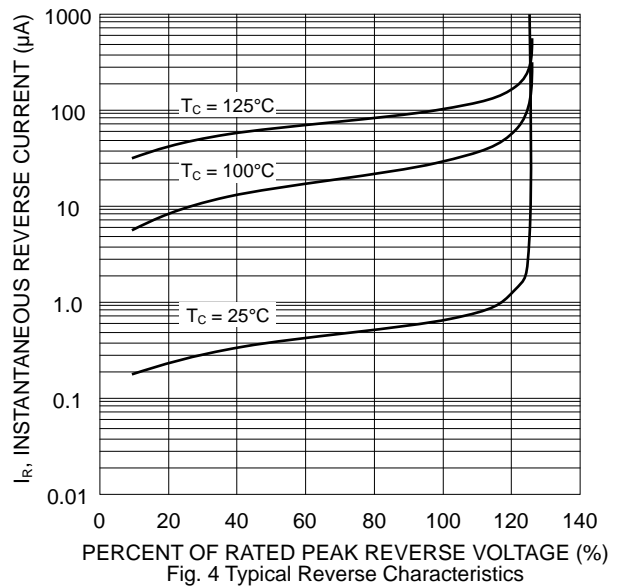


Fig. 4 Typical Reverse Characteristics

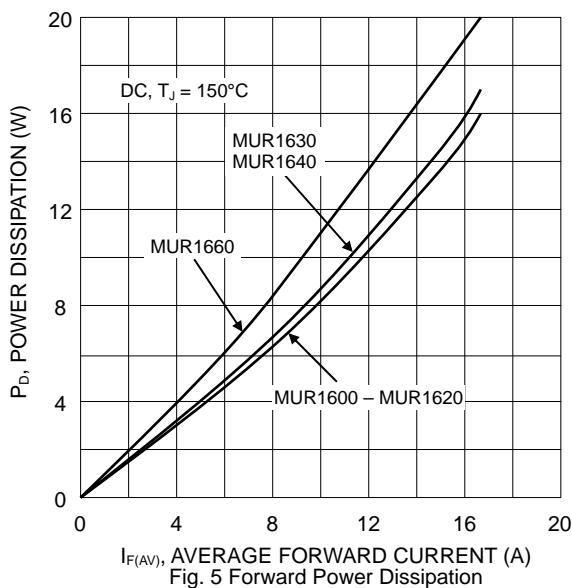


Fig. 5 Forward Power Dissipation

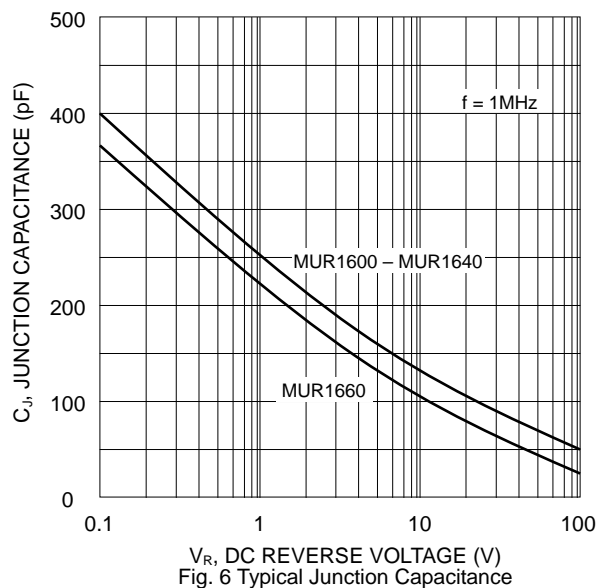
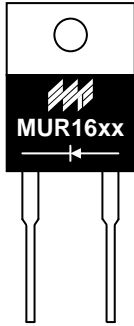


Fig. 6 Typical Junction Capacitance

MARKING INFORMATION



MUR16xx = Device Number
xx = 00, 10, 15, 20, 30, 40 or 60
Polarity = As Marked on Body

PACKAGING INFORMATION

BULK

Tube Size L x W x H (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
525 x 31 x 6	50	555 x 145 x 95	2,000	572 x 306 x 218	8,000	19.0

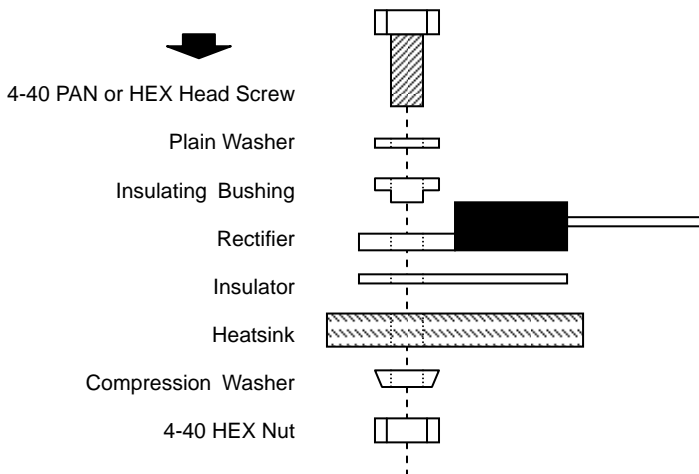
Note: 1. Anti-static tube, water clear color.

RECOMMENDED SCREW MOUNTING ARRANGEMENT

Recommended isolated mounting when screw is at heatsink potential. 4-40 hardware is used.

Screw should not be tightened with any type of air-forced torque or equipment that may cause high impact on device package. The insulating bushing inside the mounting hole will insure the screw threads do not contact the metal base.

The interface should apply a layer of thermal grease or a highly conductive thermal pad for better heat dissipation.



4-40 PAN or HEX Head Screw
Plain Washer
Insulating Bushing
Rectifier
Insulator
Heatsink
Compression Washer
4-40 HEX Nut

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
MUR1600	TO-220A	50 Units/Tube
MUR1610	TO-220A	50 Units/Tube
MUR1615	TO-220A	50 Units/Tube
MUR1620	TO-220A	50 Units/Tube
MUR1630	TO-220A	50 Units/Tube
MUR1640	TO-220A	50 Units/Tube
MUR1660	TO-220A	50 Units/Tube

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, MUR1600-LF.**

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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