

MUR10xx Series



Super Fast Recovery Rectifiers

Reverse Voltage: 200 to 800 Volts

Forward Current: 10.0 Ampere

RoHS Device

Halogen Free

Features

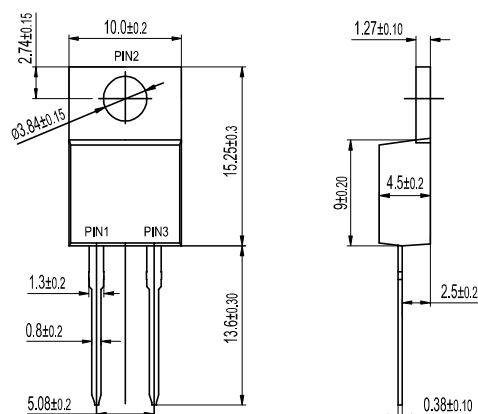
- Glass passivated chip junctions
- Super fast recovery time for switching mode application
- High Forward Surge Capability
- Low Reverse Current
- Lead free in compliance with EU RoHS 2011/65/EU directive

Mechanical data

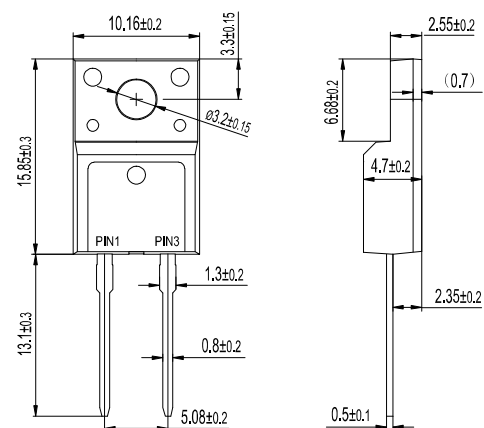
- Circuit figure: Single positive
- Leads: Solderable per mil-std-202, Method 208
- Polarity: as marked
- Mounting torque: 5 in-lbs maximum
- Terminals: Puretin plated
- Weight: TO-220AC 1.80 grams
ITO-220AC 1.65 grams
TO-262AC 1.45 grams
TO-263(D²PAK) 1.35 grams

Package outline

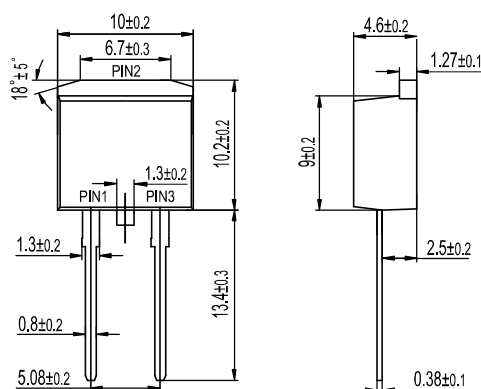
Dimensions in millimeters



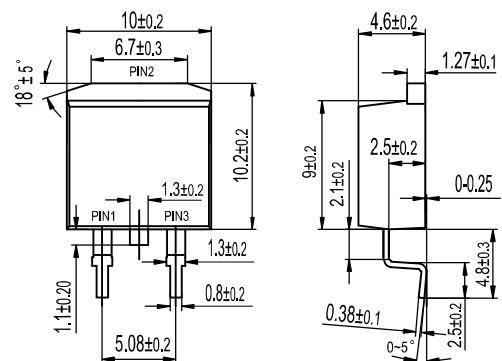
TO-220AC
MUR10XX



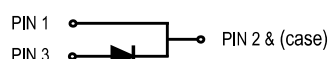
ITO-220AC
MUR10XXF



TO-262AC
MUR10XXW



TO-263(D²PAK)
MUR10XXB



Company reserves the right to improve product design, functions and reliability without notice.

Rev:1.0

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load derate current by 20%.

Parameter	Symbols	MUR 1020 1020F 1020W 1020B	MUR 1030 1030F 1030W 1030	MUR 1040 1040F 1040W 1040B	MUR 1060 1060F 1060W 1060B	MUR 1070 1070F	MUR 1080 1080F	Units
Maximum repetitive peak reverse voltage	V _{RRM}	200	300	400	600	700	800	V
Maximum RMS voltage	V _{RMS}	140	210	280	420	490	560	V
Maximum DC blocking voltage	V _{DC}	200	300	400	600	700	800	V
Maximum average forward rectified current	I _{F(AV)}	10						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	150						A
Max. forward voltage at 10A	V _F	1.0	1.3	1.7	2.8			V
Maximum DC reverse current at rated DC blocking voltage	I _R	5 250						μA
Typical thermal resistance TO-220AC ITO-220AC TO-262AC TO-263(D ² PAK)	R _{θJC}	2.5 4.0 2.5 2.5						°C/W
Maximum reverse recovery time (Note 1)	t _{rr}	35						ns
Operating junction temperature range	T _J	-55 ~ +150						°C
Storage temperature range	T _{stg}	-55 ~ +150						°C

Notes: 1. Test conditions I_F = 0.5A, I_R = 1A, I_{rr} = 0.25A.

2. Thermal resistance from junction to case.

Rating and Characteristic Curves

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

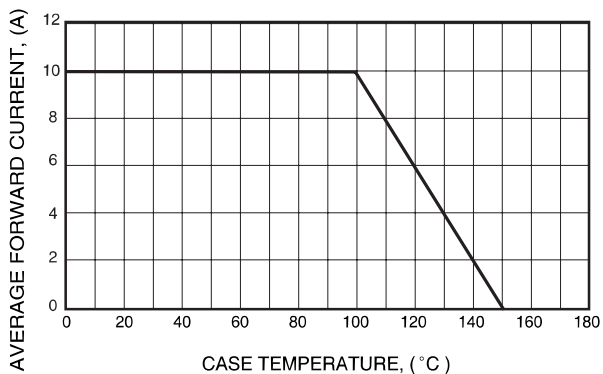


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

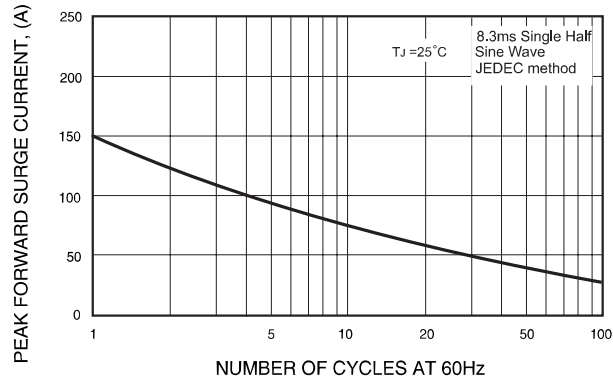


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

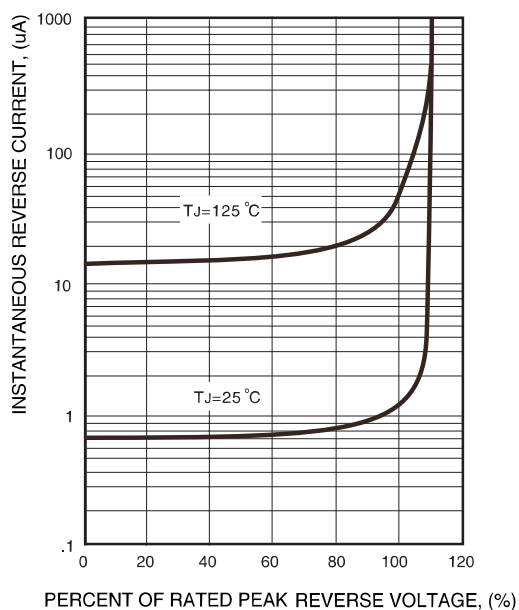


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

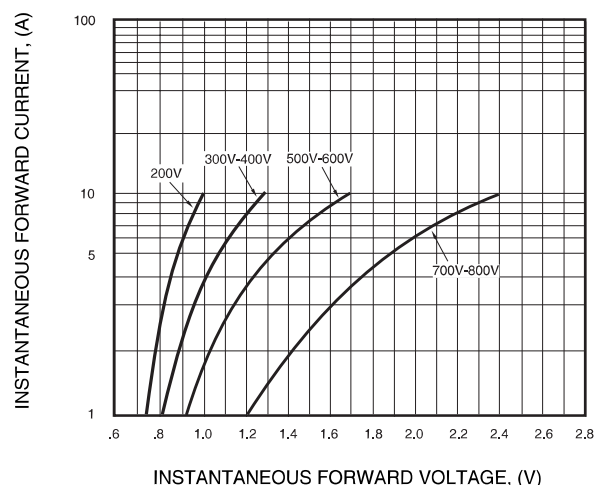
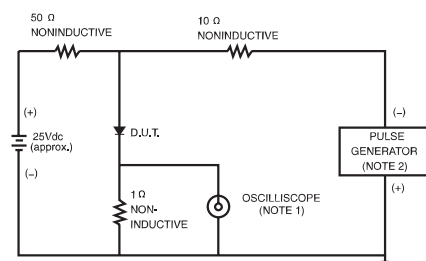
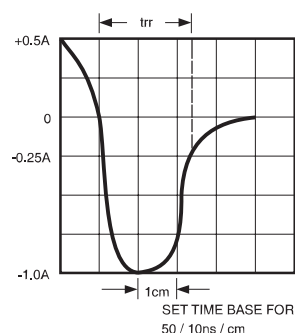


FIG.6- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS

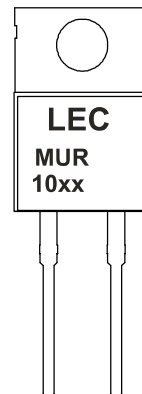


NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.



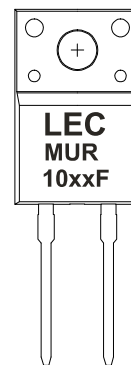
Standard Packaging

Case Type	TUBE PACK	
	TUBE (pcs)	BOX (pcs)
TO-220AC	50	1,000



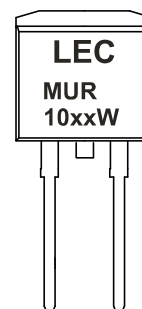
Standard Packaging

Case Type	TUBE PACK	
	TUBE (pcs)	BOX (pcs)
ITO-220AC	50	1,000



Standard Packaging

Case Type	TUBE PACK	
	TUBE (pcs)	BOX (pcs)
TO-262AC	50	1,000



Standard Packaging

Case Type	TUBE PACK		REEL PACK	
	TUBE (pcs)	BOX (pcs)	REEL (pcs)	Reel Size (inch)
TO-263	50	1,000	800	13

