



MUR20 series Super Fast Rectifiers

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: Common Cathode
- Leads: Solderable per mil-std-202, Method 208
- Polarity: as marked
- Mounting torque: 5 in-lbs maximum
- Terminals: Puretin plated
- Weight: TO-220AB 1.85 grams
ITO-220AB 1.70 grams
TO-262AB 1.45 grams
TO-263(D²PAK) 1.35 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (TA=25°C)

RATINGS	SYMBOL	MUR/A 2010 2010F 2010W 2010D	MUR/A 2020 2020F 2020W 2020D	MUR/A 2030 2030F 2030W 2030D	MUR/A 2040 2040F 2040W 2040D	MUR/A 2050 2050F 2050W 2050D	MUR/A 2060 2060F 2060W 2060D	UNIT
Maximum repetitive reverse voltage	VRRM	100	200	300	400	500	600	V
Maximum RMS voltage	VRMS	70	140	210	280	350	420	V
Maximum DC blocking voltage	VDC	100	200	300	400	500	600	V
Maximum average forward current	I _{AV}	20						A
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load	I _{FSM}	300						A
Typical thermal resistance per diode(Note 1) TO-220AB ITO-220AB TO-262AB TO-263(D ² PAK)	R _{θ-JC}	2.5 4.0 2.5 2.5						°C/W
Operating junction temperature range	T _J	-55 to +150						°C
Storage temperature range	T _{STG}	-55 to +150						°C
CHARACTERISTICS	SYMBOL	MUR/A 2010 2010F 2010W 2010D	MUR/A 2020 2020F 2020W 2020D	MUR/A 2030 2030F 2030W 2030D	MUR/A 2040 2040F 2040W 2040D	MUR/A 2050 2050F 2050W 2050D	MUR/A 2060 2060F 2060W 2060D	UNIT
Typical forward voltage per leg at 10A	V _F	1.00		1.30		1.70		V
Maximum average reverse current at rated DC blocking voltage T _J =25°C T _J =125°C	I _R	5 250						μA
Typical reverse recovery time(Note 2)	T _{RR}	35						nS

Notes: 1. Thermal resistance from junction to case.
2. Test conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.

Rating and Characteristic Curves ($T_A = 25^{\circ}\text{C}$ Unless otherwise noted)

MUR20 series

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

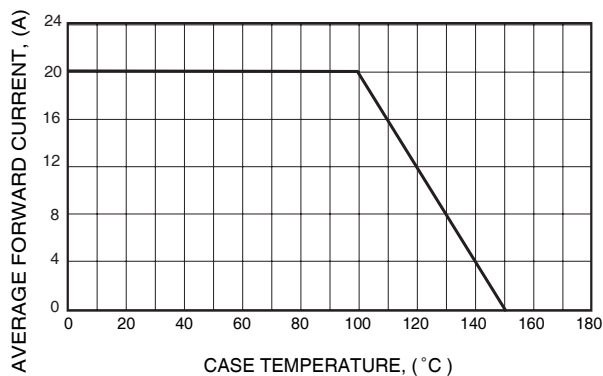


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

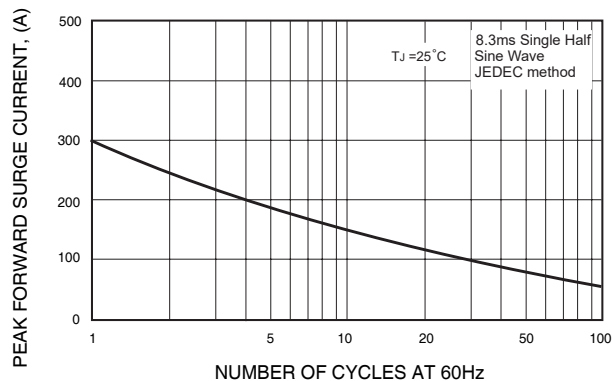


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

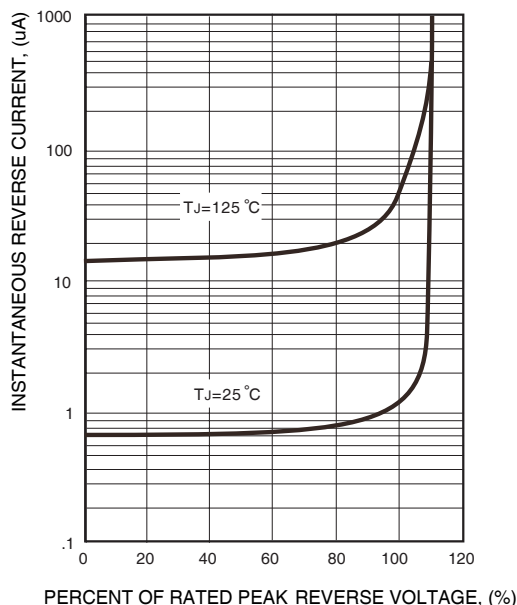


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

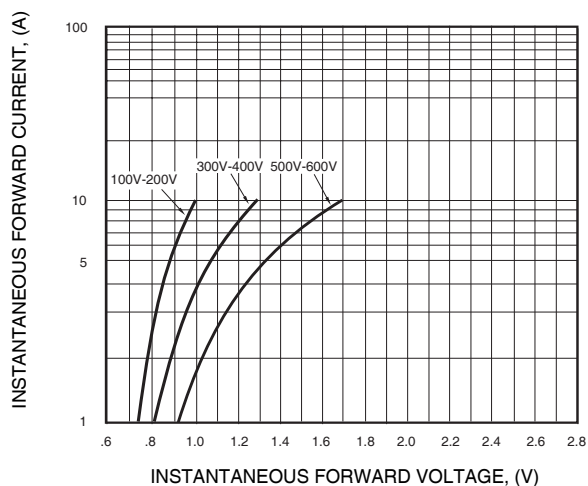
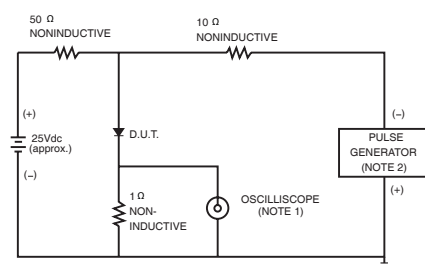
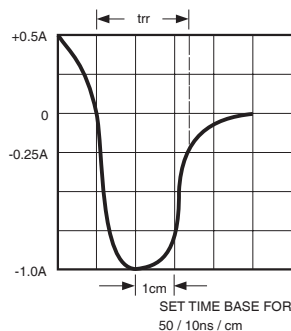


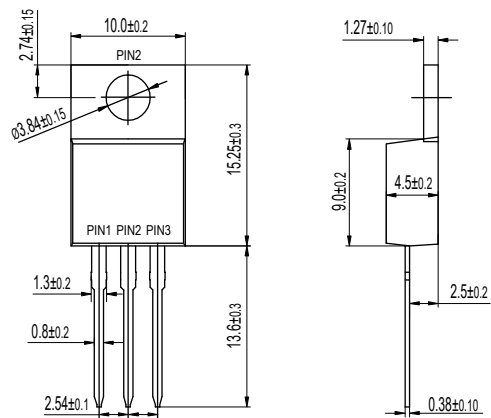
FIG.6- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



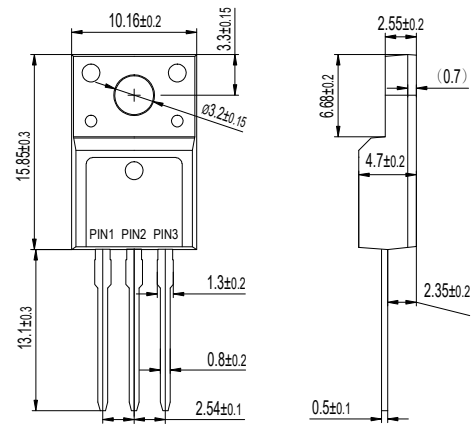
NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.



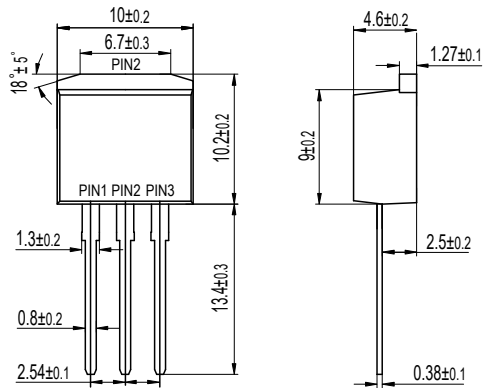
Package outline



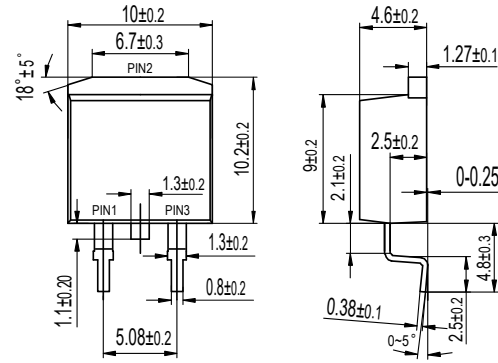
TO-220AB
MUR/A20XX



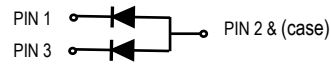
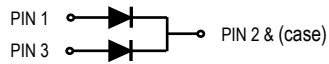
ITO-220AB
MUR/A20XXF



TO-262AB
MUR/A20XXW



TO-263(D²PAK)
MUR/A20XXD



Dimensions in millimeters