

MBR10CT series

Schottky Barrier Rectifiers

Features

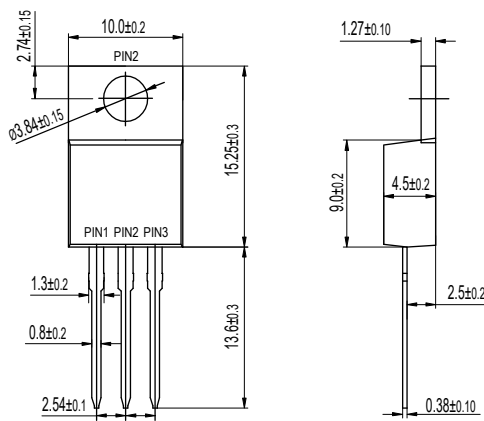
- High efficiency operation
- Low power loss
- Low stored charge majority carrier conduction
- High forward surge capability
- Lead free in compliance with EU RoHS
- 2011/65/EU directive
- Green molding compound as per IEC61249
- Std..(Halogen Free)

Mechanical Data

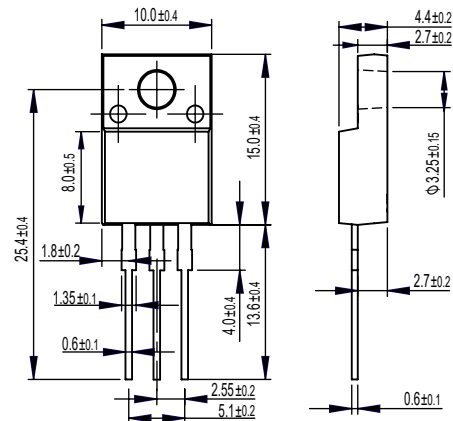
- Circuit figure: Common cathode
- Leads: Solderable per mil-std-202, Method 208
- Polarity: as marked
- Mounting torque: 5 in-lbs maximum
- Terminals: Puretin plated
- Weight: TO-220AB 1.85 grams
ITO-220AB 1.70 grams
TO-252 0.35 grams
TO-263(D²PAK) 1.35 grams

Package outline

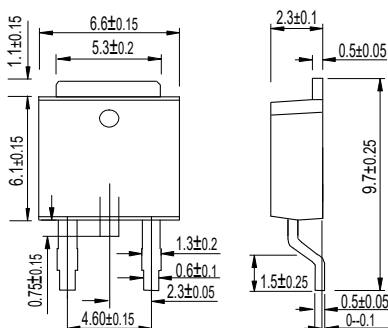
Dimensions in millimeters



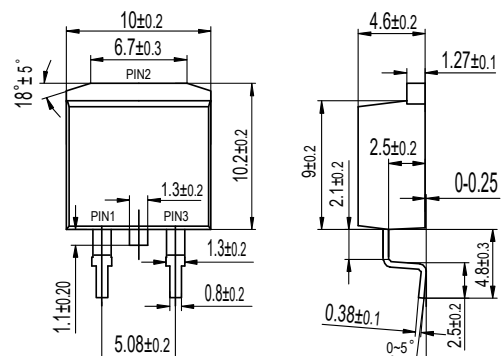
TO-220AB
MBR10XXCT



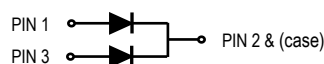
ITO-220AB
MBR10XXFCT



TO-252
MBR10XXBCT



TO-263(D²PAK)
MBR10XXDCT



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

RATINGS	SYMBOL	MBR 1040CT 1040FCT 1040BCT 1040DCT	MBR 1045CT 1045FCT 1045BCT 1045DCT	MBR 1060CT 1060FCT 1060BCT 1060DCT	MBR 10100CT 10100FCT 10100BCT 10100DCT	MBR 10150CT 10150FCT 10150BCT 10150DCT	MBR 10200CT 10200FCT 10200BCT 10200DCT	UNIT
Maximum repetitive reverse voltage	VRRM	40	45	60	100	150	200	V
Maximum RMS voltage	VRMS	28	32	42	70	105	140	V
Maximum DC blocking voltage	VDC	40	45	60	100	150	200	V
Maximum average forward current per device per diode	I _{AV}	10 5						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	150						A
Typical thermal resistance (Note 1) TO-220AB ITO-220AB TO-252(DPAK) TO-263(D ² PAK)	R _{θ-JC}	2.0 4.5 3.5 2.5						°C/W
Operating junction temperature range	T _J	-55 to +150				-55 to +175		°C
Storage temperature range	T _{STG}	-55 to +175						°C
CHARACTERISTICS	SYMBOL	MBR 1040CT 1040FCT 1040BCT 1040DCT	MBR 1045CT 1045FCT 1045BCT 1045DCT	MBR 1060CT 1060FCT 1060BCT 1060DCT	MBR 10100CT 10100FCT 10100BCT 10100DCT	MBR 10150CT 10150FCT 10150BCT 10150DCT	MBR 10200CT 10200FCT 10200BCT 10200DCT	UNIT
Maximum forward voltage per leg at I _F =5A	V _F	0.65		0.75	0.85	0.92		V
Maximum average reverse current at rated DC blocking voltage T _J =25°C T _J =125°C	I _R	0.10 15			0.01 5			mA

Notes: 1. Thermal resistance from junction to case.

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

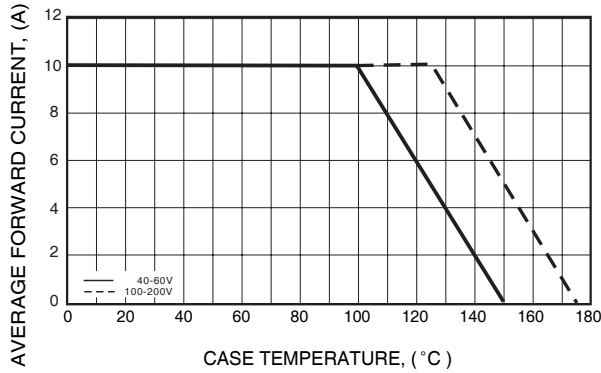


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

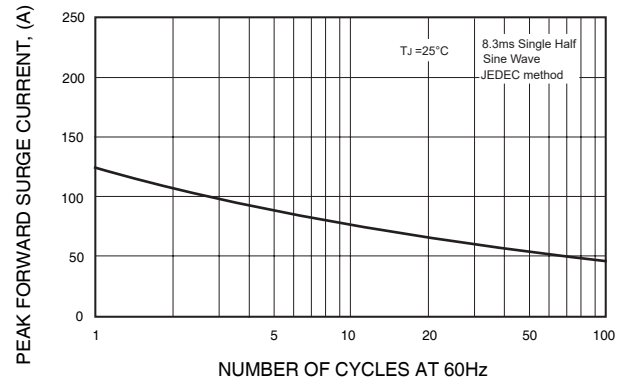


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

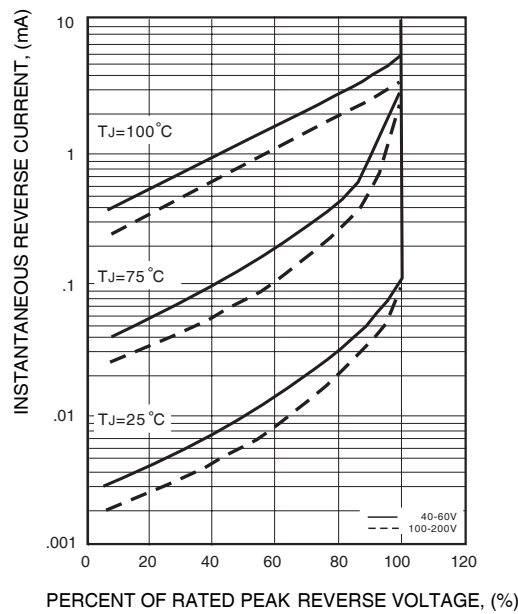


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

