

MBR20CT series Schottky Barrier Rectifiers

Features

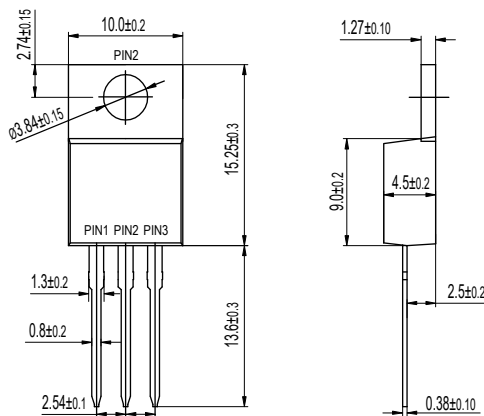
- High efficiency operation
- Low power loss
- Low stored charge majority carrier conduction
- High forward surge capability
- Lead free in compliance with EU RoHS
- 2011/65/EU directive
- Green molding compound as per IEC61249
- Std..(Halogen Free)

Mechanical Data

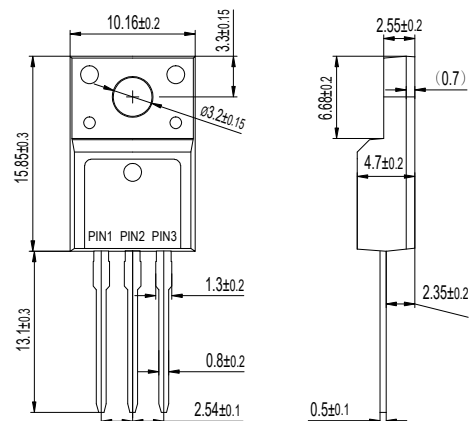
- Circuit figure: Common cathode
- Leads: Solderable per mil-std-202, Method 208
- Polarity: as marked
- Mounting torque: 5 in-lbs maximum
- Terminals: Puretin plated
- Weight: TO-220AB 1.85 grams
- ITO-220AB 1.70 grams
- TO-262AB 1.45 grams
- TO-263(D²PAK) 1.35 grams

Package outline

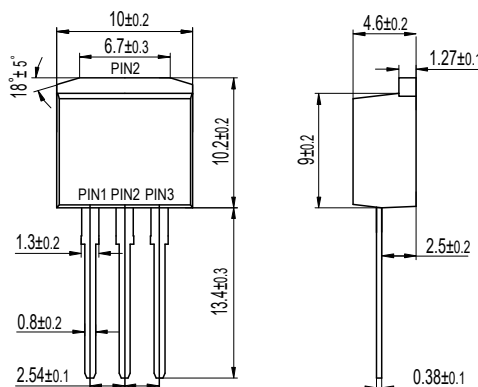
Dimensions in millimeters



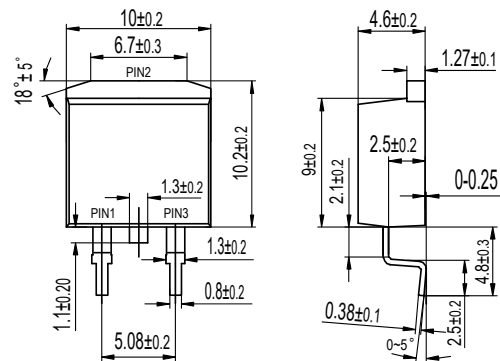
TO-220AB
MBR20XXCT



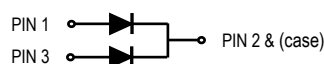
ITO-220AB
MBR20XXFCT



TO-262AB
MBR20XXWCT



TO-263(D²PAK)
MBR20XXDCT



MBR20CT series

Schottky Barrier Rectifiers

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

RATINGS	SYMBOL	MBR 2040CT 2040FCT 2040WCT 2040DCT	MBR 2045CT 2045FCT 2045WCT 2045DCT	MBR 2060CT 2060FCT 2060WCT 2060DCT	MBR 20100CT 20100FCT 20100WCT 20100DCT	MBR 20150CT 20150FCT 20150WCT 20150DCT	MBR 20200CT 20200FCT 20200WCT 20200DCT	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}	20 10						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	220						A
Typical thermal resistance (Note 1)	R _{θ-JC}	TO-220AB 2.0 ITO-220AB 4.5 TO-262AB 2.5 TO-263(D ² PAK) 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 2040CT 2040FCT 2040WCT 2040DCT	MBR 2045CT 2045FCT 2045WCT 2045DCT	MBR 2060CT 2060FCT 2060WCT 2060DCT	MBR 20100CT 20100FCT 20100WCT 20100DCT	MBR 20150CT 20150FCT 20150WCT 20150DCT	MBR 20200CT 20200FCT 20200WCT 20200DCT	UNIT
Maximum forward voltage per leg at I _F =10A	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.

MBR20CT series Schottky Barrier Rectifiers

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

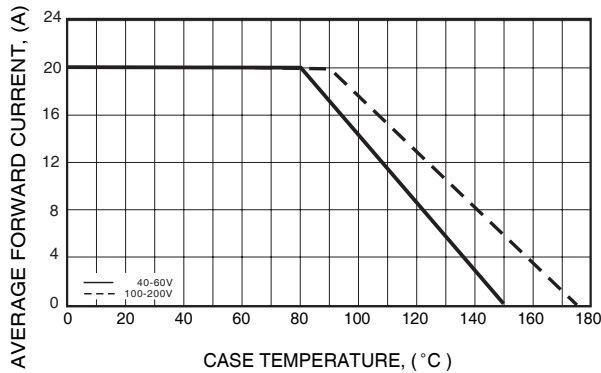


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

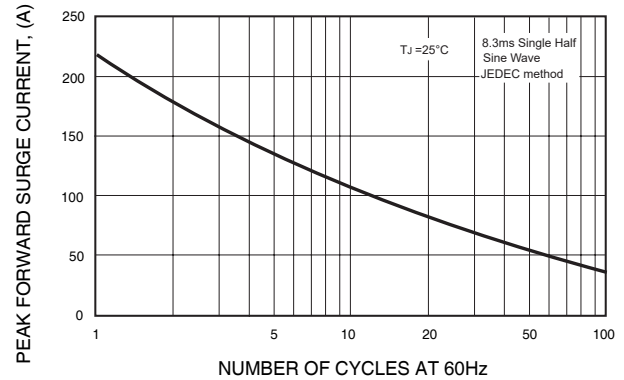


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

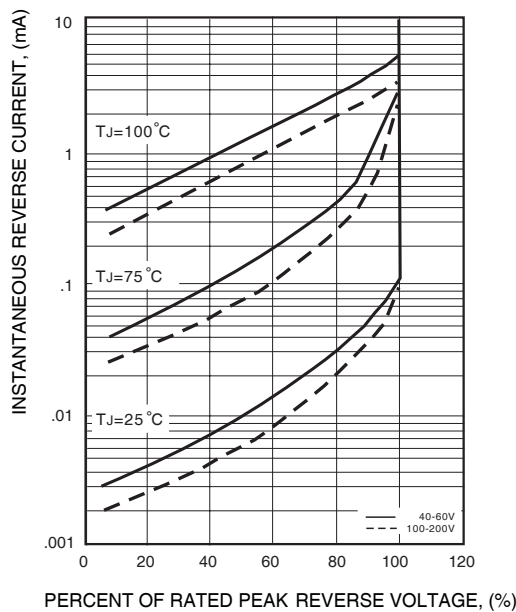


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

