

MBR20CT Series



High Power Schottky Barrier Rectifier

Reverse Voltage: 40 to 200 Volts

Forward Current: 20 Ampere

RoHS Device

Halogen Free

Features

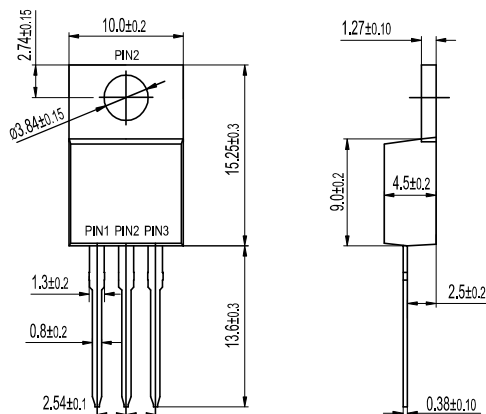
- High efficiency operation
- Low power loss
- Low stored charge majority carrier conduction
- High forward surge capability
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std..(Halogen Free)

Mechanical data

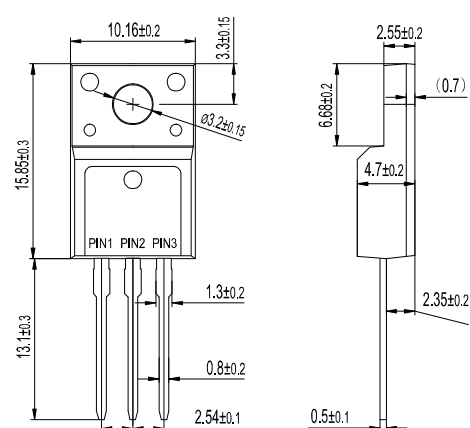
- Circuit figure: Common cathode
- Leads: Solderable per mil-std-202, Method 208
- Polarity: as marked
- Mounting torque: 5 in-lbs maximum
- Terminals: Puretin plated
- Weight: TO-220AB 1.85 grams
ITO-220AB 1.70 grams
TO-262AB 1.45 grams
TO-263(D²PAK) 1.35 grams

Package outline

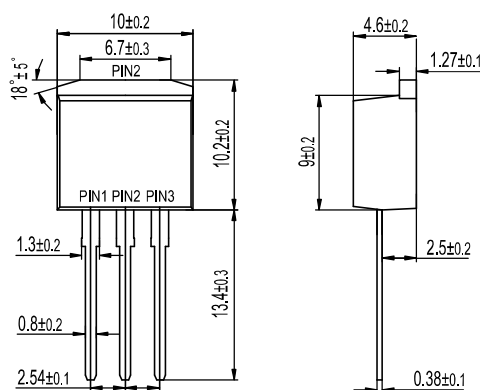
Dimensions in millimeters



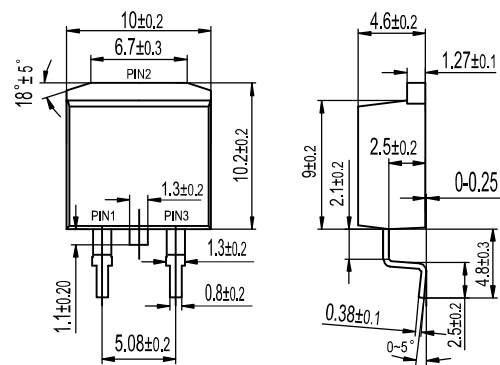
TO-220AB
MBR20XXCT



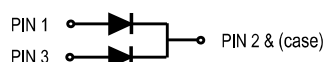
ITO-220AB
MBR20XXFCT



TO-262AB
MBR20XXWCT



TO-263(D²PAK)
MBR20XXBCT



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

Rev:1.0

Maximum Ratings and Electrical Characteristics

Ratings at Ta=25°C unless otherwise noted.

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

For capacitive load, derate current by 20% .

Parameter	Symbol	MBR 2040CT 2040FCT 2040WCT 2040BCT	MBR 2045CT 2045FCT 2045WCT 2045BCT	MBR 2060CT 2060FCT 2060WCT 2060BCT	MBR 20100CT 20100FCT 20100WCT 20100BCT	MBR 20150CT 20150FCT 20150WCT 20150BCT	MBR 20200CT 20200FCT 20200WCT 20200BCT	Units
Max. Repetitive peak reverse voltage	V _{RRM}	40	45	60	100	150	200	V
Max. RMS voltage	V _{RMS}	28	32	42	70	105	140	V
Max. DC blocking voltage	V _{DC}	40	45	60	100	150	200	V
Max. Instantaneous forward voltage @10A, T _A =25°C	V _F	0.65	0.65	0.75	0.85	0.92	0.92	V
Operating Temperature	T _J	-55 to +150				-55 to +175		°C
Maximum DC reverse current T _j = 25°C at rated DC reverse voltage T _j =125°C	I _R	0.1 15			0.01 5			mA

Parameter	Symbol	Value	Units
Maximum average forward current	I _{F(AV)}	20 10	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	220	A
Typical thermal resistance (Note 1)	R _{θJC}	TO-220AB 2.0 ITO-220AB 4.5 TO-262AB 2.5 TO-263(D2PAK) 2.5	°C/W
Storage temperature	T _{STG}	-55 ~ +175	°C

Notes: 1. Thermal resistance from junction to case.

Rating and Characteristic Curves

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

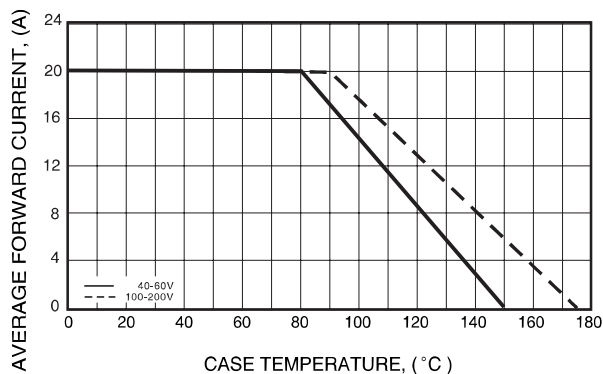


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

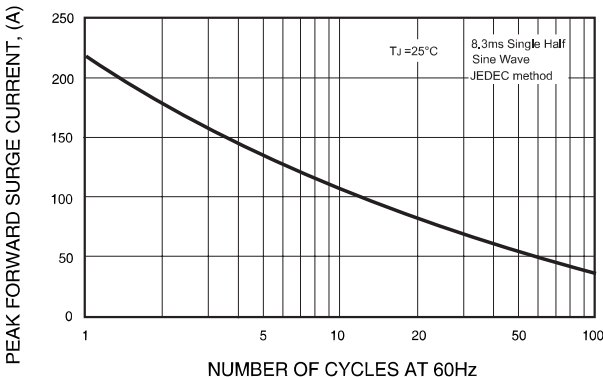


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

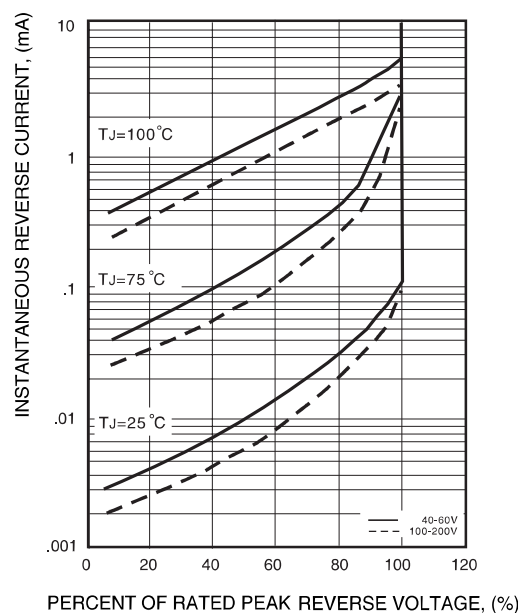
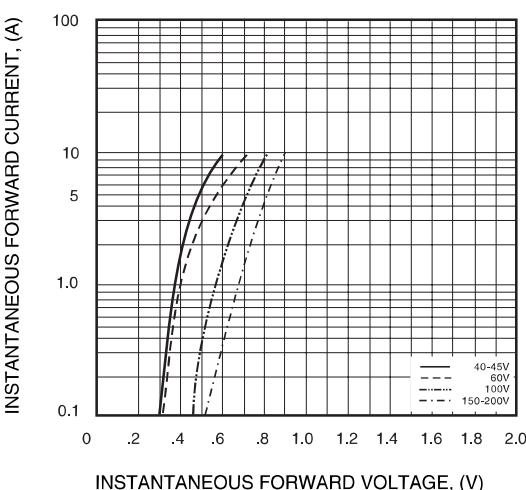
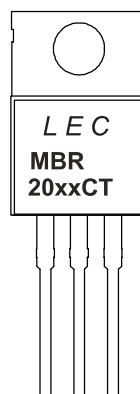


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



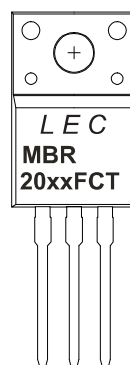
Standard Packaging

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



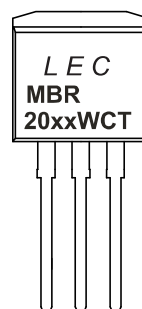
Standard Packaging

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



Standard Packaging

Case Type	TUBE PACK	
	TUBE (pcs)	BOX (pcs)
TO-262AB	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

