RUME

Schottky Barrier Rectifiers

MBR30CT series

Feaures

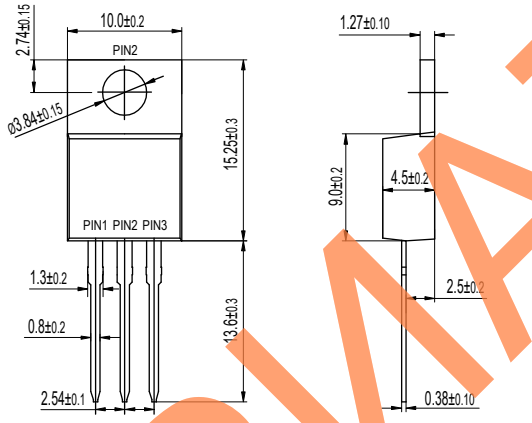
- High efficiencty operation
- Low power loss
- Low stored charge majority carrier conduction
- High forward surge capability
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std..(Halogen Free)

Mechanical Data

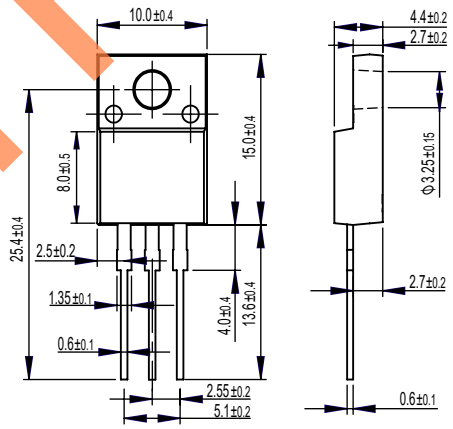
- Circuit figure: Common cathode
- Leads: Solderable per mil-std-202, Method 208
- Polarity: as marked
- Mounting torque: 5 in-lbs maximum
- Terminals: Puretin plated
- Weight: TO-220AB 1.85 grams
  ITO-220AB 1.70 grams
  TO-262AB 1.45 grams
  TO-263(D^2PAK) 1.35 grams

Package outline

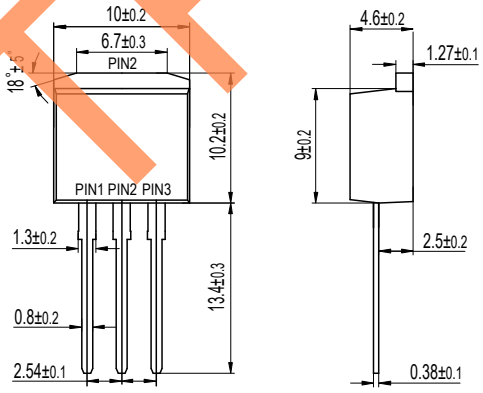
Dimensions in millimeters



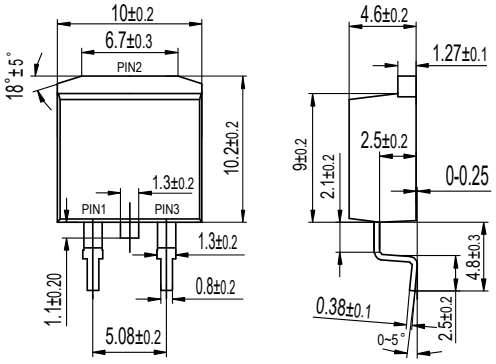
TO-220AB
MBR30XXCT



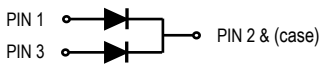
ITO-220AB
MBR30XXFCT



TO-262AB
MBR30XXWCT



TO-263(D^2PAK)
MBR30XXDCT



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

RATINGS	SYMBOL	MBR 3040CT 3040FCT 3040WCT 3040DCT	MBR 3045CT 3045FCT 3045WCT 3045DCT	MBR 3060CT 3060FCT 3060WCT 3060DCT	MBR 30100CT 30100FCT 30100WCT 30100DCT	MBR 30150CT 30150FCT 30150WCT 30150DCT	MBR 30200CT 30200FCT 30200WCT 30200DCT	UNIT
Maximum repetitive reverse voltage	V_{RRM}	40	45	60	100	150	200	V
Maximum RMS voltage	V_{RMS}	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	I_{AV}	30						A
Maximum average forward current — per diode	I_{AV}	15						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	200						A
Typical thermal resistance (Note 1) — TO-220AB	$R_{\theta-JC}$	2.0						°C/W
Typical thermal resistance (Note 1) — ITO-220AB	$R_{\theta-JC}$	4.5						°C/W
Typical thermal resistance (Note 1) — TO-262AB	$R_{\theta-JC}$	2.5						°C/W
Typical thermal resistance (Note 1) — TO-263(D^2PAK)	$R_{\theta-JC}$	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 3040CT 3040FCT 3040WCT 3040DCT	MBR 3045CT 3045FCT 3045WCT 3045DCT	MBR 3060CT 3060FCT 3060WCT 3060DCT	MBR 30100CT 30100FCT 30100WCT 30100DCT	MBR 30150CT 30150FCT 30150WCT 30150DCT	MBR 30200CT 30200FCT 30200WCT 30200DCT	UNIT
Maximum forward voltage per leg at I_F=15A	V_F	0.65		0.75	0.85	0.95		V
Maximum average reverse current at rated DC blocking voltage — T_J=25°C	I_R	0.10			0.01			mA
Maximum average reverse current at rated DC blocking voltage — T_J=125°C	I_R	15			8			mA

Notes: 1. Thermal resistance from junction to case.

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

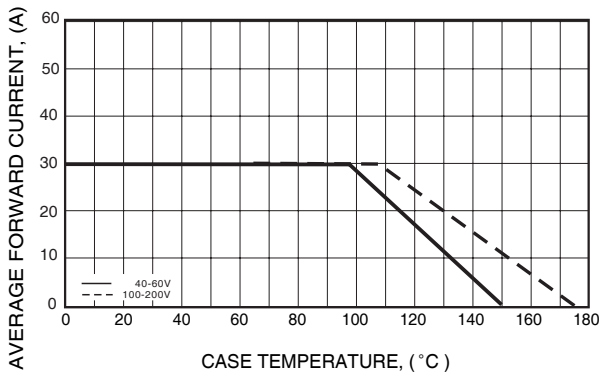


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

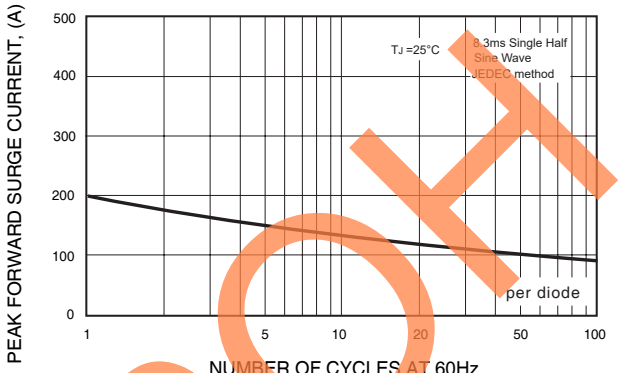


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

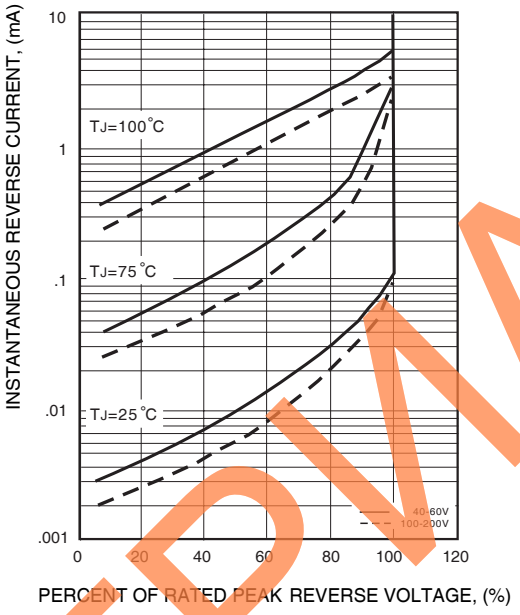
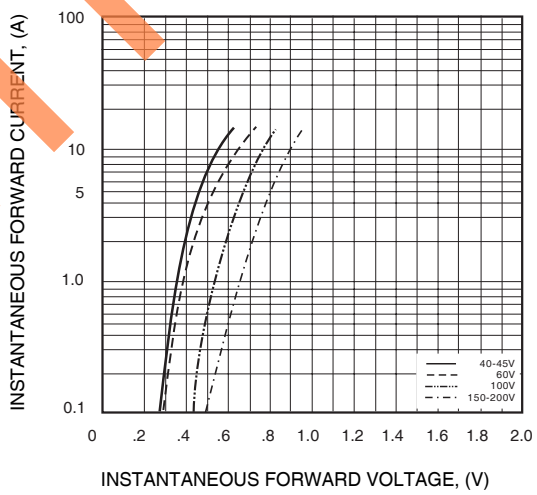


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



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