

MBR40L100CT series

Features

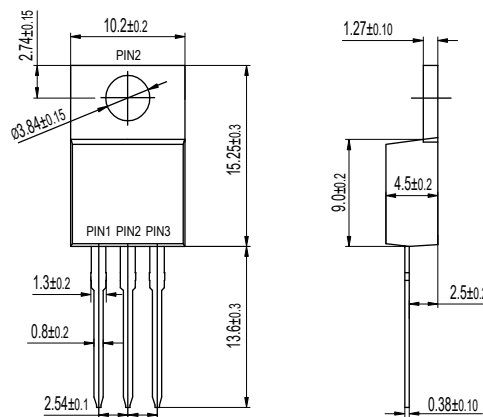
- Ultra low v_f
- High efficiency operation
- Low power loss
- Low stored charge majority carrier conduction
- High forward surge capability
- Lead free in compliance with EU RoHS 2011/65/EU directive

Mechanical Data

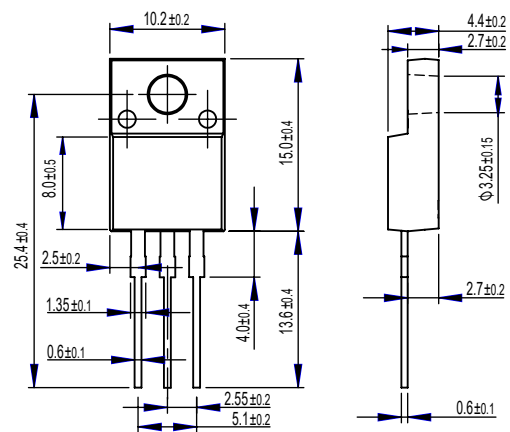
- Circuit figure: Common cathode
- Leads: Solderable per mil-std-202, Method 208
- Polarity: as marked
- Mounting torque: 5 in-lbs maximum
- Terminals: Puretin plated
- Weight: TO-220AB 1.85 grams
ITO-220AB 1.70 grams
TO-262AB 1.40 grams
TO-263(D²PAK) 1.35 grams

Package outline

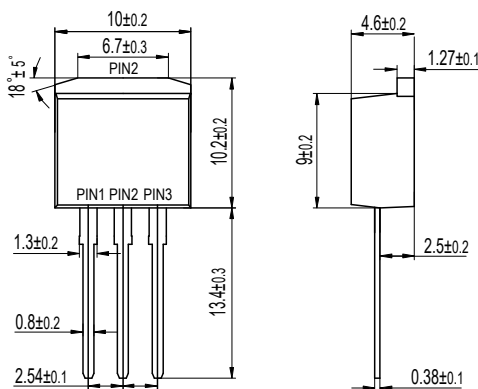
Dimensions in millimeters



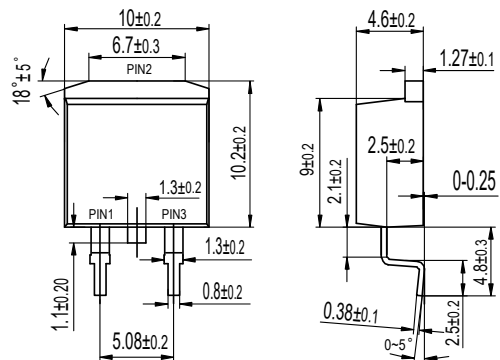
TO-220AB
MBR40L100CT



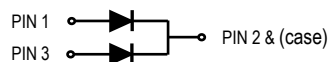
ITO-220AB
MBR40L100FCT



TO-262AB
MBR40L100WCT



TO-263(D²PAK)
MBR40L100DCT



MAXIMUM RATINGS(TA=25°C)

RATINGS	SYMBOL	MBR40L100CT	MBR40L100FCT	MBR40L100WCT	MBR40L100DCT	UNIT
Maximum repetitive reverse voltage	VRRM	100				V
Maximum RMS voltage	VRMS	70				V
Maximum DC blocking voltage	VDC	100				V
Maximum average forward current per device per diode	IAV	40 20				A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	IFSM	225				A
Typical thermal resistance per diode(Note 1)	Rθ-JC	2.0	4.5	2.5	2.5	°C/W
Operating junction temperature range	TJ	-55 to +150				°C
Storage temperature range	TSTG	-55 to +150				°C

Notes: 1. Thermal resistance from junction to case.

ELECTRICAL CHARACTERISTICS(TA=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Breakdown voltage per diode	VBR	IR=0.5mA	100	-	-	V
Instantaneous forward voltage per diode	VF	IF=20A TJ=25°C	-	0.70	0.73	V
		IF=20A TJ=125°C	-	-	0.66	V
Reverse current per diode	IR	VR=100V TJ=25°C	-	-	100	uA
		TJ=125°C	-	-	30	mA

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

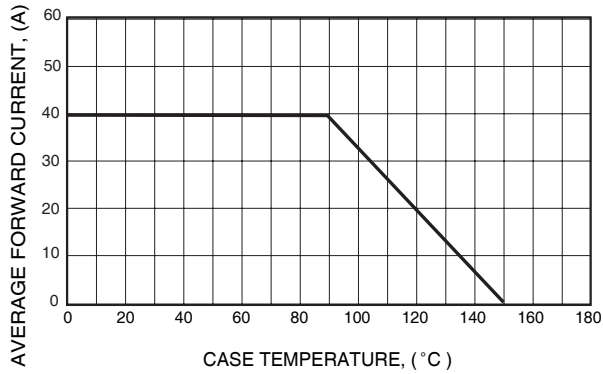


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

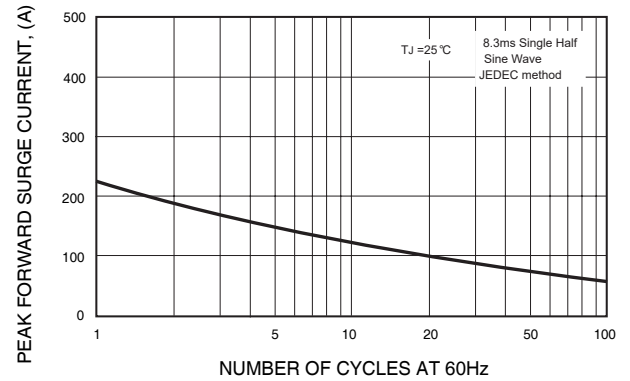


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

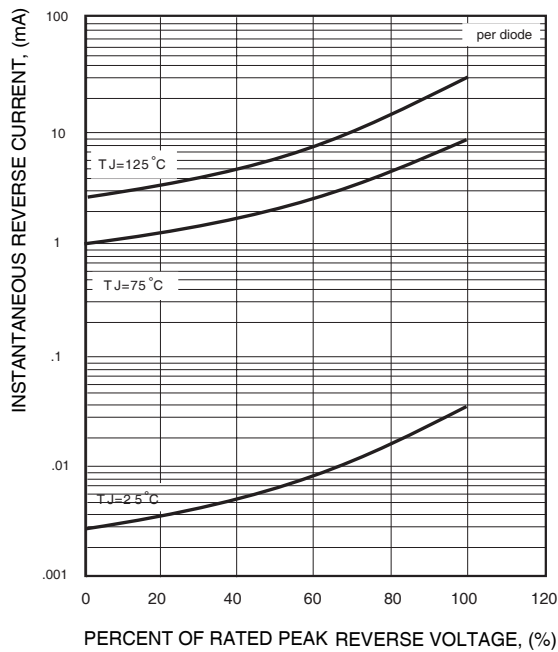


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

