

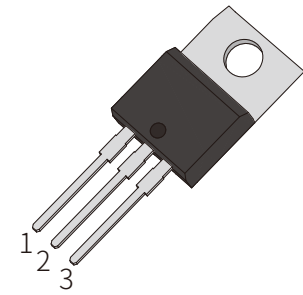
FEATURES

- | High frequency operation

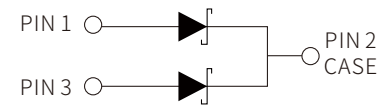
- | Low forward voltage drop

- | High purity, high temperature epoxy encapsulation
forenhanced mechanical strength and moisture resistance

- | Guard ring for enhanced ruggedness and long term reliability



TO-220AB



Schematic Symbol

MECHANICAL DATA

- | Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	MBR40100CT-H	Unit	
Marking		MBR40100CT		
Repetitive Peak Reverse Voltage	V_{RRM}	100	V	
Average Rectified Output Current @60Hz sine wave, R-load, $T_c=95^{\circ}\text{C}$	I_O	40	A	
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$ $T_j=25^{\circ}\text{C}$	I^2t	373	A^2s	
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, $T_j=25^{\circ}\text{C}$	I_{FSM}	300	A	
Maximum instantaneous forward voltage drop per diode $I_{FM}=20.0\text{A}$	$V_{FM}^{(1)}$	0.85	V	
Maximum DC reverse current at rated DC blocking voltage per diode $V_{RM}=V_{RRM}$	$T_j=25^{\circ}\text{C}$	$I_{RRM}^{(2)}$	0.1	mA
	$T_j=125^{\circ}\text{C}$		20	mA
Thermal Resistance Between junction and case	$R_{\theta J-C}$	2.0	$^{\circ}\text{C}/\text{W}$	
Operating Junction Temperature Range	T_J	-55 to +175	$^{\circ}\text{C}$	
Storage Temperature Range	T_{STG}	-55 to +175	$^{\circ}\text{C}$	

Note:

- 1:Pulse test:300uS pulse widh,1% duty cycle
- 2:Pulse test:pulse widh 40mS

CHARACTERISTIC CURVES

Fig. 1- I_o -T_c Curve

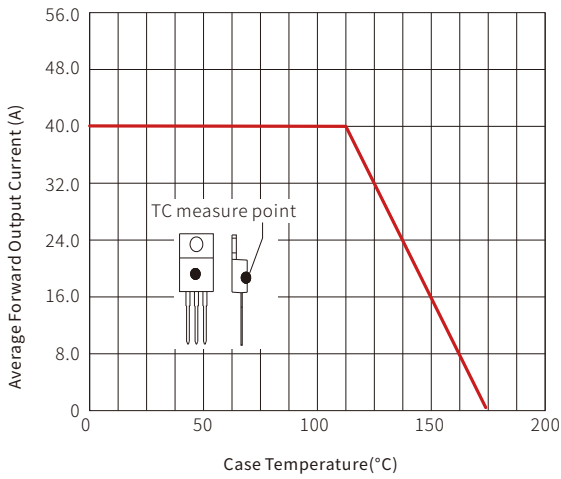


Fig. 2-Surge Forward Current Capability

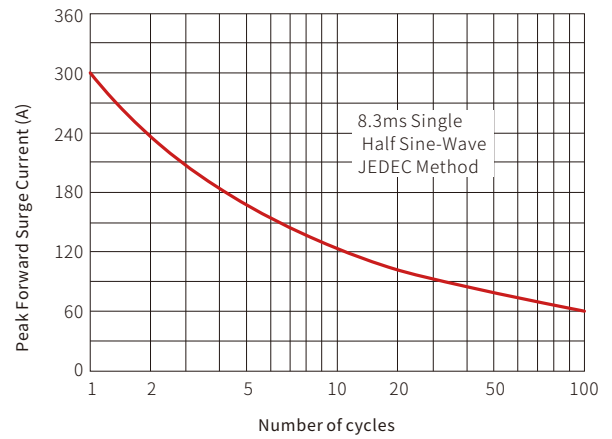


Fig. 3-Forward Voltage

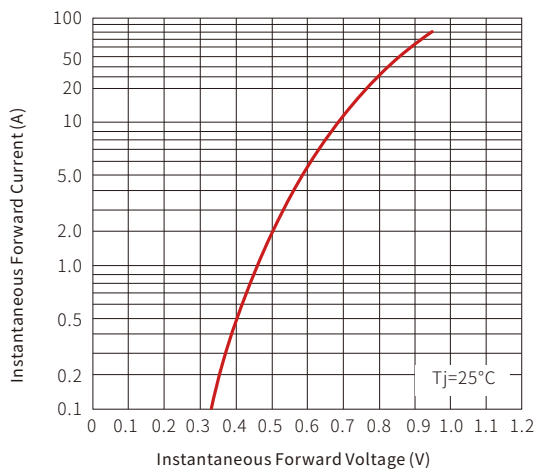
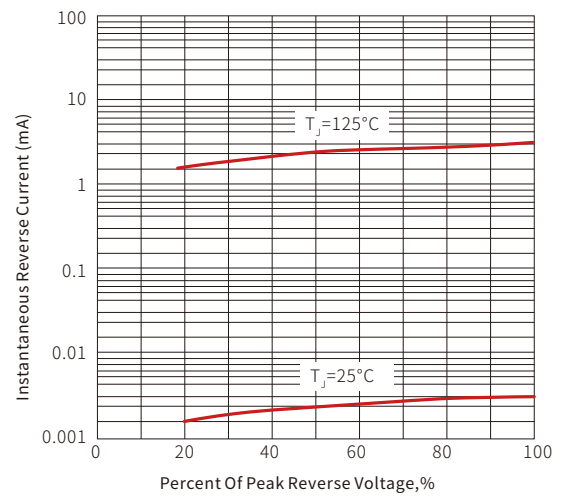
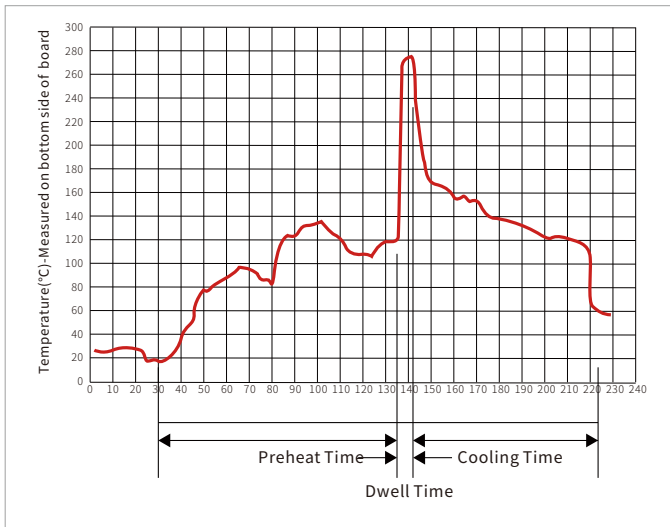


Fig. 4-Instantaneous Reverse Characteristics

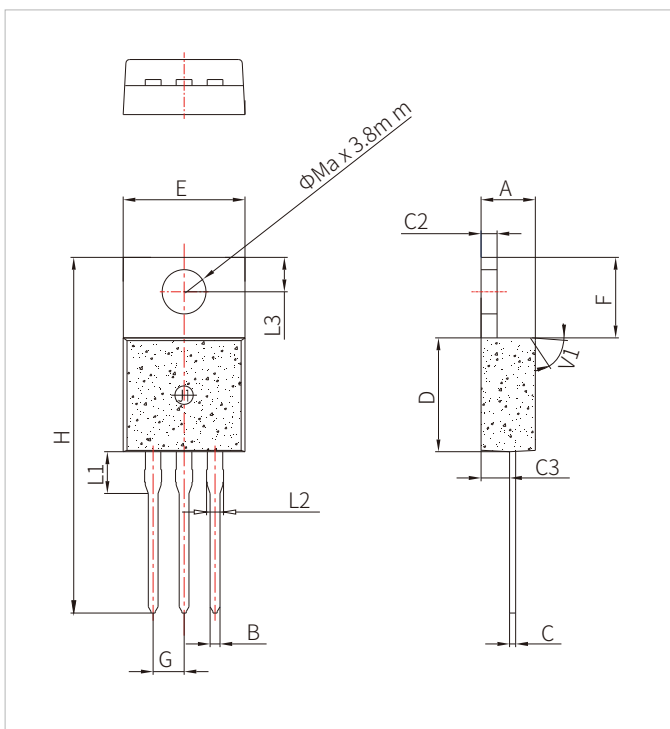


WAVE SOLDERING



Wave Parameter		Lead-free assembly
Pre Heat	Temperature Min	100°C
	Temperature Max	150°C
	Time(min to max)	60 – 180 secs
Solder pot Temperature		280°C Max
Solder Dwell Time		2-5 seconds

TO-220AB PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.80		10.4	0.386		0.409
F	6.55		6.95	0.258		0.274
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.75			0.148	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
V1		45°			45°	

ORDERING INFORMATION

Part Number	Component Package	QTY/Tube	QTY/Box	QTY/Carton
MBR40100CT-H	TO-220AB	50PCS	1000PCS	5000PCS

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By QR Code

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