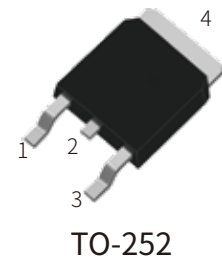


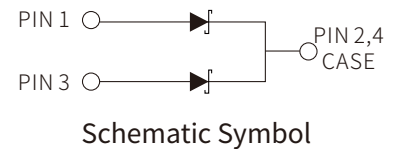
FEATURES

- | For surface mounted applications
- | Ideal for automated placement
- | High forward surge current capability



APPLICATION

- | For use in low voltage high frequency inverters, freewheeling, DC/DC Converters and polarity protection applications



APPROVALS

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

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

Parameter	Symbol	MBR10200DT	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	V
Maximum RMS Voltage	V_{RMS}	140	V
Maximum DC Blocking Voltage	V_{DC}	200	V
Maximum Average Forward Rectified Current $T_c=125^{\circ}\text{C}$	Per device	10.0	A
	Per diode	5.0	
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on rated load	I_{FSM}	120.0	A
Typical Junction capacitance (Note1)	C_J	65	pF
Typical Thermal Resistance	$R_{\theta JA}$	50	$^{\circ}\text{C}/\text{W}$
	$R_{\theta JC}$	5.0	$^{\circ}\text{C}/\text{W}$
Operating Temperature Range	T_J	-55 to +175	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

Note1: Measured at 1MHz and applied reverse voltage of 4.0V D. C.

ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$)

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Minimum reverse breakdown voltage	$I_R=0.2\text{mA}$	V_R	200	240		V
Minimum instantaneous forward voltage	$I_F=1.0\text{A}$	V_F		0.72		V
	$I_F=5.0\text{A}$			0.87	0.95	
Maximum DC reverse current at rated DC blocking voltage	$T_A=25^{\circ}\text{C}$	I_R		0.1	10	μA
	$T_A=125^{\circ}\text{C}$			0.1	10	mA
	$T_A=150^{\circ}\text{C}$			0.7	50	mA

CHARACTERISTIC CURVES

Fig.1 Maximum Forward Current Derating Curve

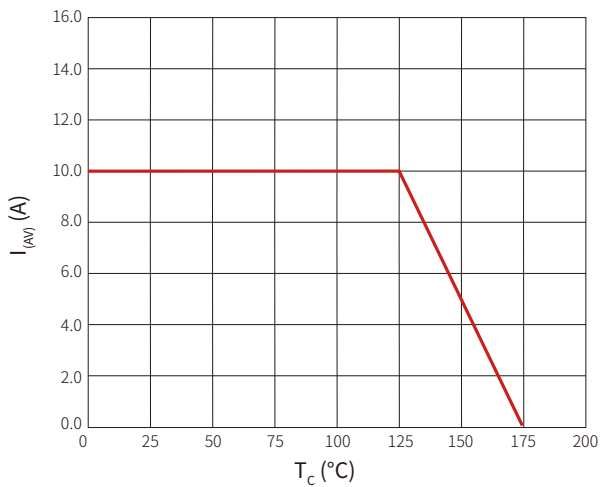


Fig.2 Maximum Non-repetitive Forward Surge Current Per Leg

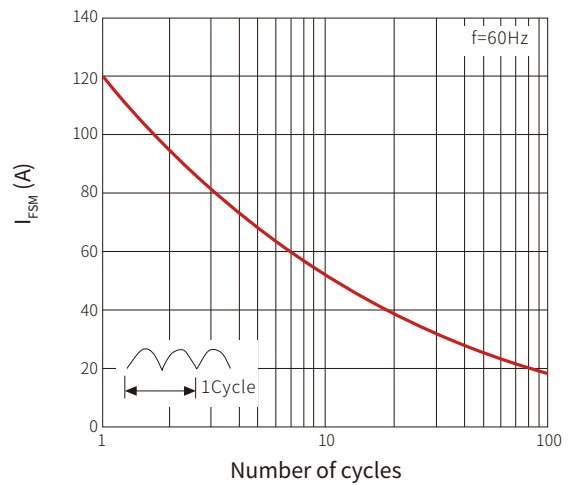
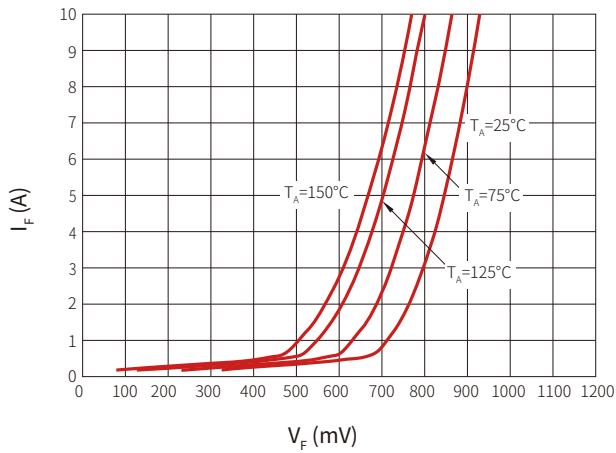
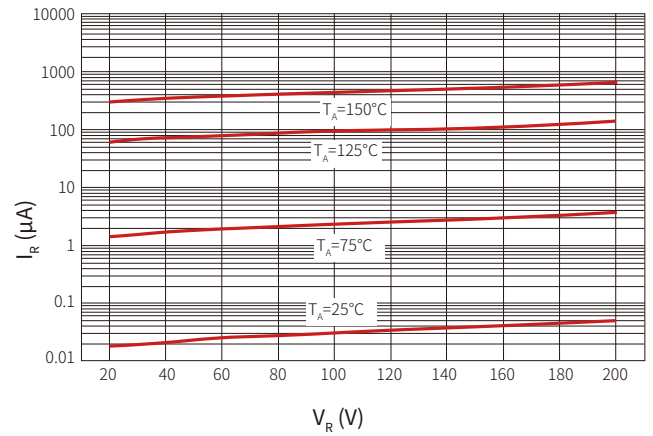
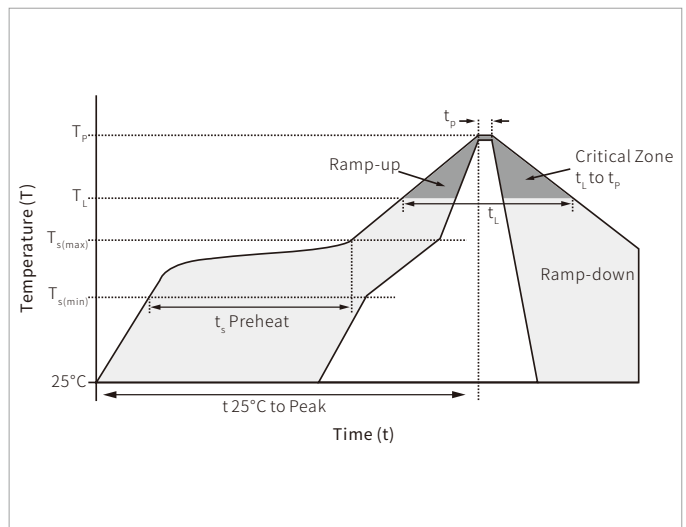


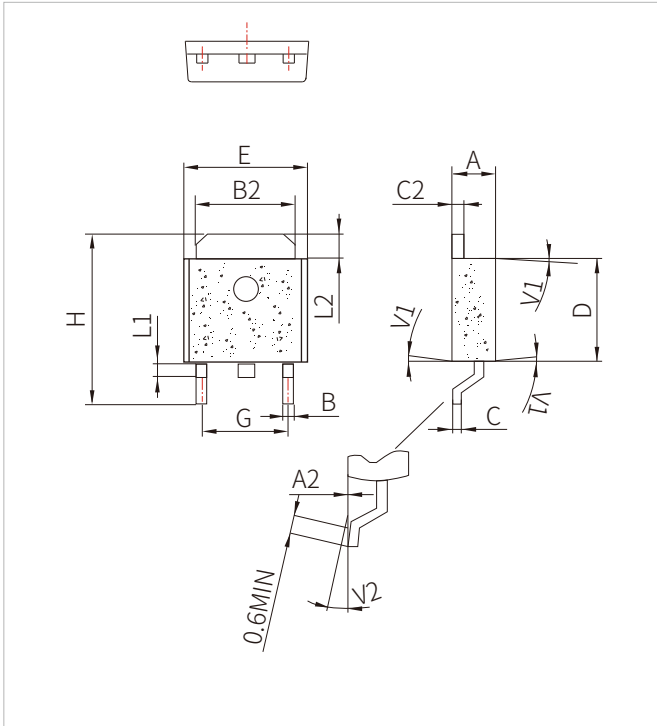
Fig.3 Typical Forward Characteristics Per Leg

Fig.4 Typical Reverse Characteristics Per Leg


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C




TO-252 PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.10		2.50	0.083		0.098
A2	0.03		0.23	0.001		0.009
B	0.60		0.90	0.024		0.035
B2	5.10		5.40	0.200		0.213
C	0.45		0.62	0.018		0.024
C2	0.48		0.62	0.019		0.024
D	6.00		6.20	0.236		0.244
E	6.40		6.80	0.252		0.268
G	4.40		4.70	0.173	0.1	0.185
H	9.35		10.7	0.368		0.421
L1	1.30		1.70	0.051	0.143	0.067
L2	1.37		1.50	0.054		0.059
V1		4°			0.130	
V2	0°		8°	0°		8°

ORDERING INFORMATION

Part Number	Package	Marking	QTY/Reel	Reel Size
MBR10200DT	TO-252	 MBR10200 XXXX	2500PCS	13"

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By QR Code

Website



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