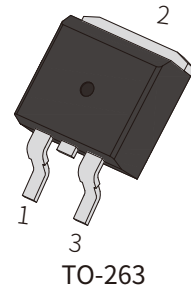


FEATURES

- | Construction Utilizes Void-free Molded Plastic Technique

- | Low Reverse Leakage

- | High Forward Surge Current Capability

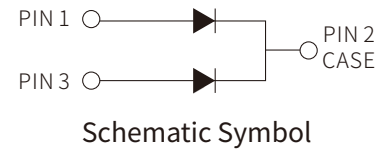


MECHANICAL DATA

- | Case : Molded Plastic Body

- | Polarity : Polarity Symbol Marking On Body

- | Mounting Position : Any



APPROVALS

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

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

Parameter	Symbol	MBR 2040VCT	MBR 2045VCT	MBR 2060VCT	MBR 20100VCT	MBR 20150VCT	MBR 20200VCT	Unit
		MBR 2040CT	MBR 2045CT	MBR 2060CT	MBR 20100CT	MBR 20150CT	MBR 20200CT	
Marking		MBR 2040CT	MBR 2045CT	MBR 2060CT	MBR 20100CT	MBR 20150CT	MBR 20200CT	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	45	60	100	150	200	V
Maximum RMS Voltage	V_{RMS}	28	31.5	42	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	40	45	60	100	150	200	V
Maximum Average Forward Rectified Current at $T_c=110^{\circ}\text{C}$	per device	20.0						A
	per diode	10.0						
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load	I_{FSM}	150.0						A
Maximum Instantaneous Forward Voltage Per Diode at 10.0A	V_F	0.65	0.75	0.85	0.95		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A=25^{\circ}\text{C}$	0.5			0.05		mA	
	$T_A=125^{\circ}\text{C}$	50			10		mA	
Typical Thermal Resistance	$R_{\theta JC}$	3.5						$^{\circ}\text{C}/\text{W}$
Operating Junction Temperature Range	T_J	-55 to +150						$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150						$^{\circ}\text{C}$

CHARACTERISTIC CURVES

Fig. 1- Derating Curve Output Rectified Current

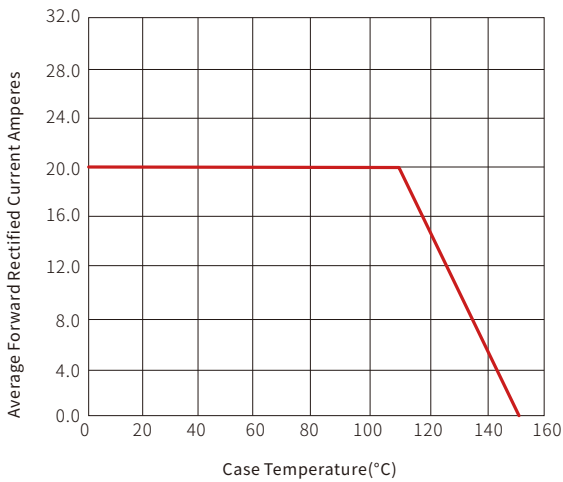


Fig. 2- Maximum Non-Repetitive Peak Forward Surge Current Perleg

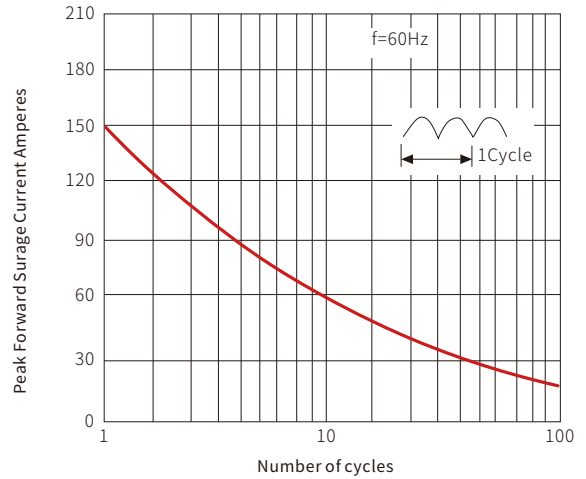


Fig. 3- Typical Forward Voltage Characteristics

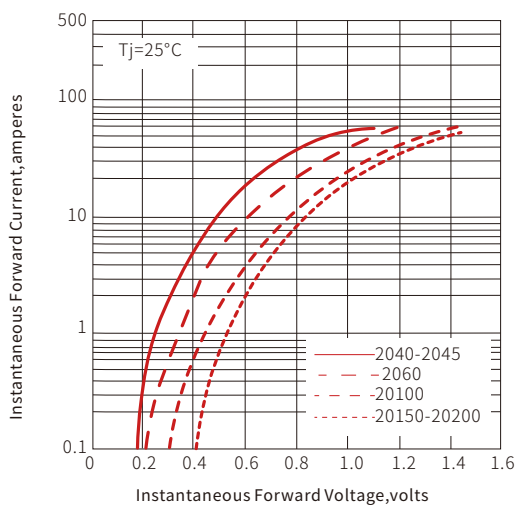
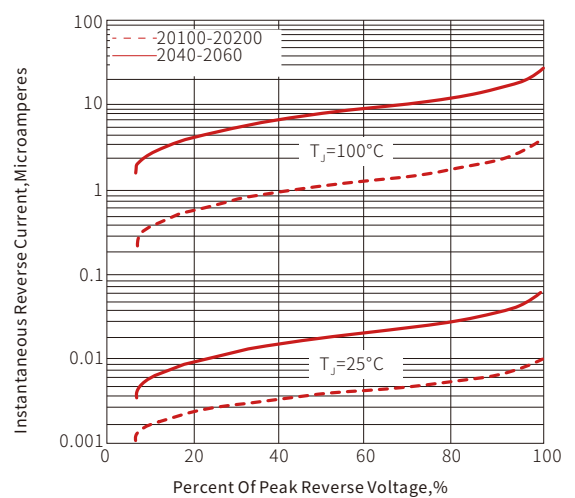
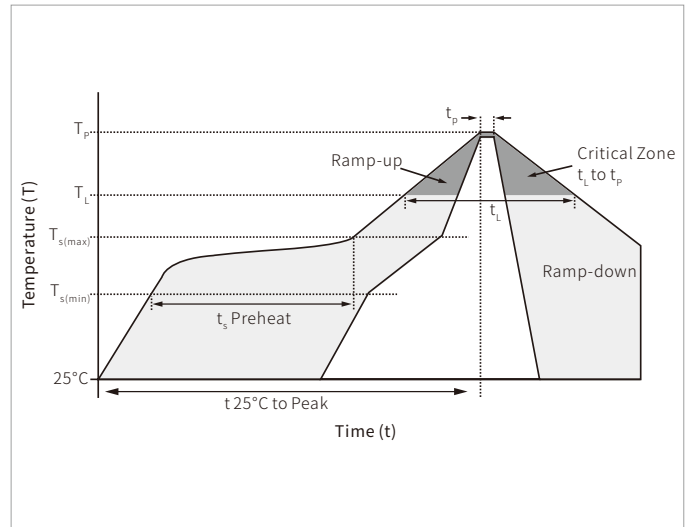


Fig. 4- Typical Reverse Leakage Characteristics

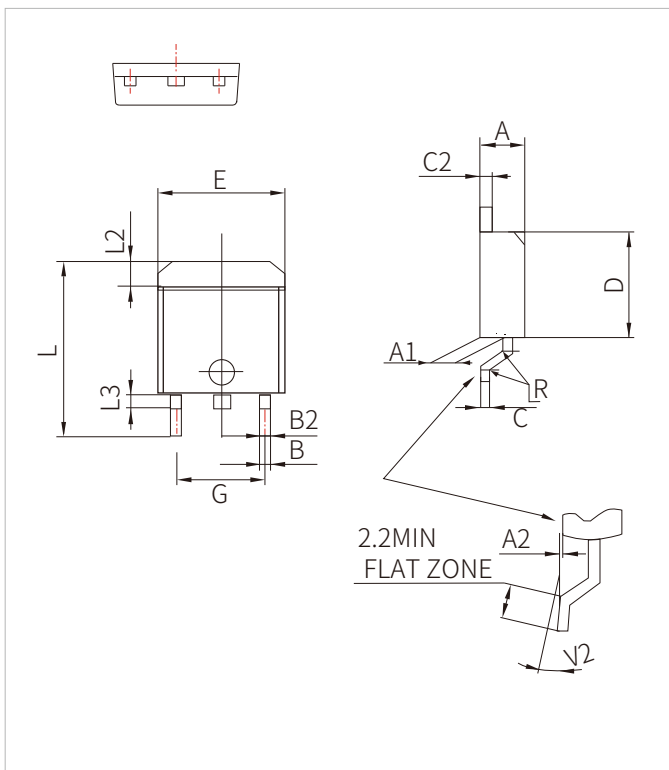


SOLDERING PARAMETERS

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_r)	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-263 PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.30		4.60	0.169		0.181
A1	2.49		2.69	0.098		0.106
A2	0.03		0.23	0.001		0.009
B	0.70		0.93	0.027		0.037
B2	1.25	1.40		0.048	0.055	
C	0.45		0.60	0.017		0.024
C2	1.21		1.36	0.047		0.054
D	8.95		9.35	0.352		0.368
E	10.00		10.28	0.392		0.405
G	4.88		5.28	0.192		0.208
L	15.00		15.85	0.590		0.624
L2	1.27		1.40	0.050		0.055
L3	1.40		1.75	0.055		0.069
R		0.40			0.016	
V2	0°		8°	0°		8°

ORDERING INFORMATION

Part Number	Package	QTY/Reel	Reel Size
MBR2040VCT-MBR20200VCT	TO-263	800PCS	13"

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By QR Code

Website



Wechat

To find your local partner within Semiware' s global website: www.semiware.com

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