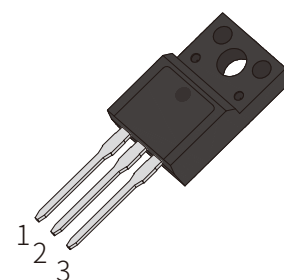


FEATURES

Construction Utilizes Void-free Molded Plastic Technique

Low Reverse Leakage

High Forward Surge Current Capability



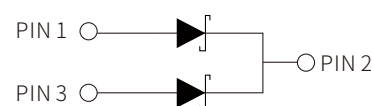
TO-220F

MECHANICAL DATA

Case : Molded Plastic Body

Polarity : Polarity Symbol Marking on Body

Mounting Position : Any



Schematic Symbol

APPROVALS

RoHS Compliance with 2011/65/EU

HF Compliance with IEC61249-2-21:2003

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

Parameter		Symbol	MBRF 2040CT MBR 2040FCT	MBRF 2045CT MBR 2045FCT	MBRF 2060CT MBR 2060FCT	MBRF 20100CT MBR 20100FCT	MBRF 20150CT MBR 20150FCT	MBRF 20200CT MBR 20200FCT	Unit
Marking									
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°C	per device	I _(AV)	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 at 10.0A		V _F	0.55		0.70	0.85	0.95		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	I _R	0.5			0.05			mA
	T _A =125°C		50			10			mA
Typical Thermal Resistance		R _{θJC}	3.5						°C/W
Operating Junction Temperature Range		T _J	-55 to +150						°C
Storage Temperature Range		T _{STG}	-55 to +150						°C

CHARACTERISTIC CURVES

Fig.1 -Derating Curve Output Rectified Current

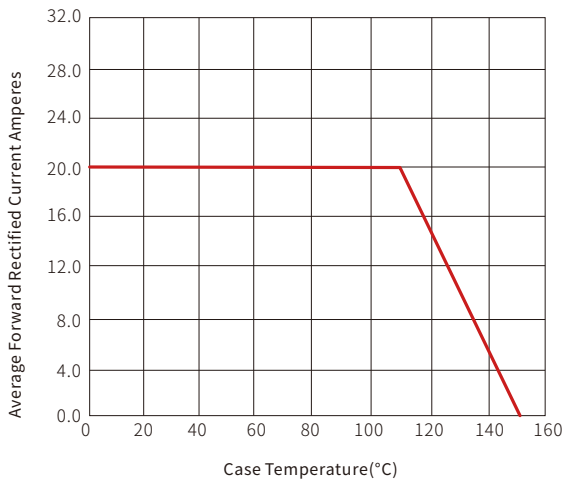


Fig.2 -Maximum Non-repetitive Peak Forward Surge Current Perleg

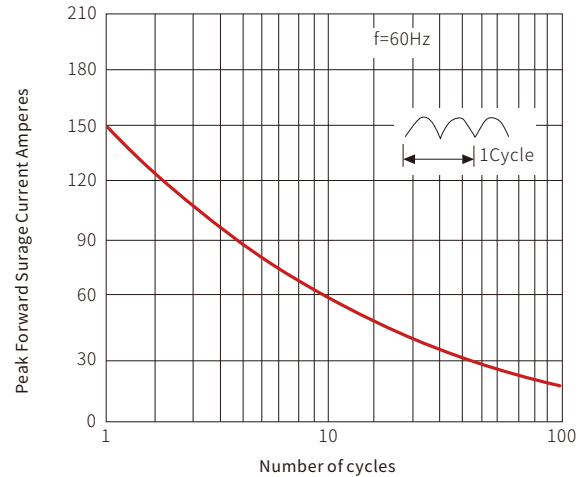


Fig.3 -Typical Forward Voltage Characteristics

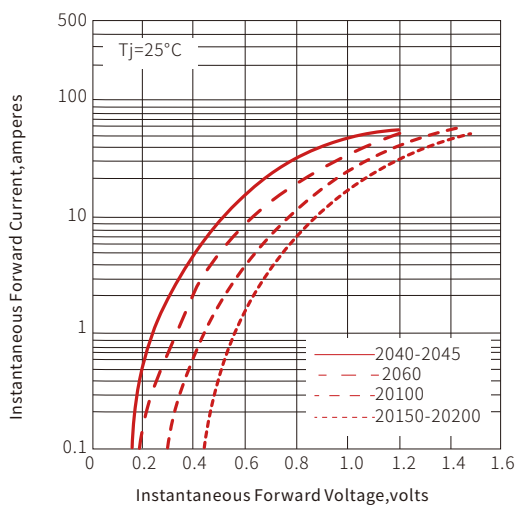
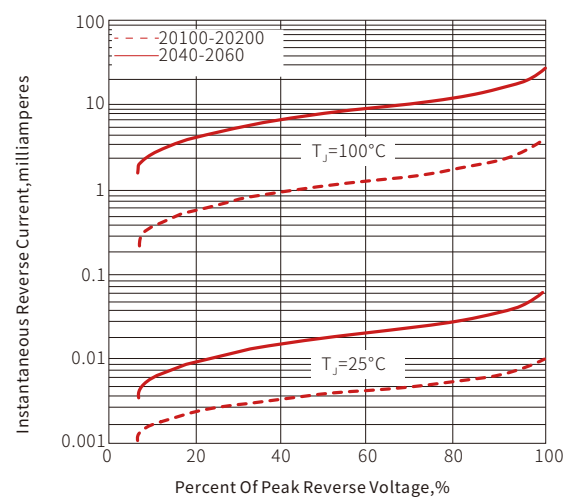
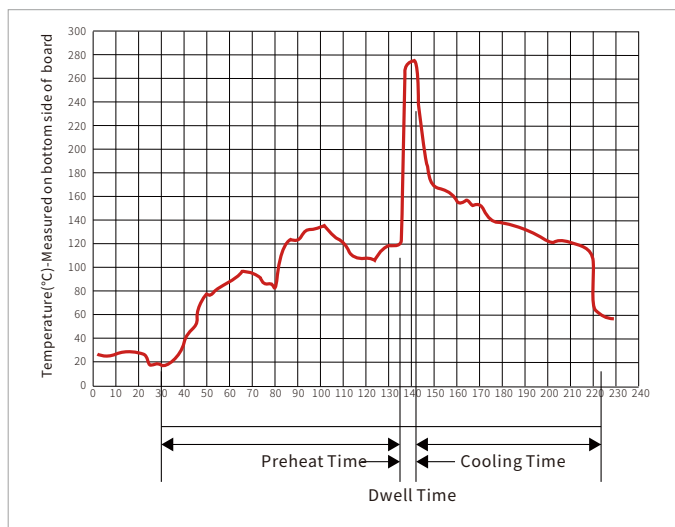


Fig.4 -Typical Reverse Leakage Characteristics

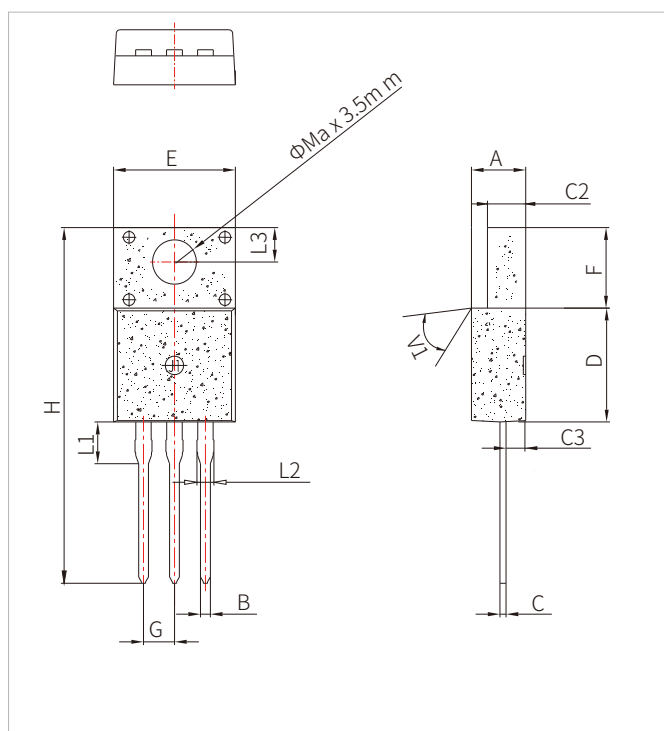


WAVE SOLDERING



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-220F PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.90	0.173		0.193
B	0.74	0.80	0.83	0.029		0.033
C	0.45		0.75	0.018		0.030
C2	2.40		2.70	0.094		0.106
C3	2.60		3.00	0.102		0.118
D	8.80		9.30	0.346		0.366
E	9.70		10.4	0.382		0.409
F	6.40		7.00	0.252		0.276
G		2.54			0.1	
H	28.0		30.0	1.102		1.181
L1		3.55			0.140	
L2	1.14		1.70	0.045		0.067
L3		3.30			0.130	
V1		45°			45°	

ORDERING INFORMATION

Part Number	Component Package	QTY/Tube	QTY/Box	QTY/Carton
MBRF2040CT-MBRF20200CT	TO-220F	50PCS	1000PCS	5000PCS

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