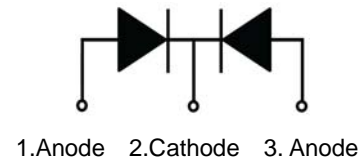
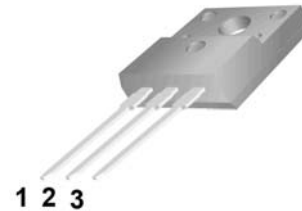




TO-220F



### MBR2040FCT-MBR20200FCT

#### Features:

- Low power loss,high efficiency.  
High surge capacity
- For use in low voltage,high frequency inverters,  
free wheeling,and polarity protection applications.
- Metal silicon junction,majority carrier conduction.
- High current Capability,low forward voltage drop.
- Guard ring for over voltage protection.

#### Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

PARAMETER	Symbol	MBR 2040 FCT	MBR 2045 FCT	MBR 2050 FCT	MBR 2060 FCT	MBR 2080 FCT	MBR 2090 FCT	MBR 20100 FCT	MBR 20150 FCT	MBR 20200 FCT	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	40	45	50	60	80	90	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	28	31.5	35	42	56	63	70	105	140	V
Maximum DC Blocking Voltage	$V_{R(DC)}$	40	45	50	60	80	90	100	150	200	V
Maximum Average Forward Current	$I_{F(AV)}$	20									A
Peak Forward Surge Current:8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	200									A
Maximum Forward Voltage at 10A per leg	$V_F$	0.65		0.72			0.85		0.95		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_j=25^\circ\text{C}$	0.1									mA
	$T_j=125^\circ\text{C}$	20									mA
Maximum Operating Junction Temperature	$T_j$	150					175				°C
Storage Temperature	$T_{stg}$	-55~+ 150					-65~+175				°C
Typical Thermal Resistance	$R_{\theta JC}$	1.4									°C/W

Typical Characteristics

RATING AND CHARACTERISTIC CURVES

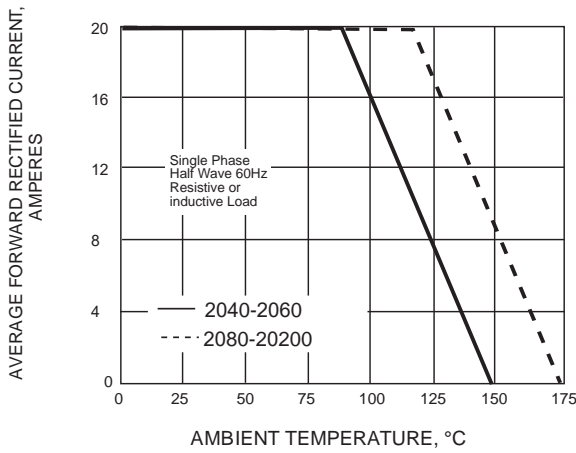


Fig.1 FORWARD CURRENT ERATING CURVE

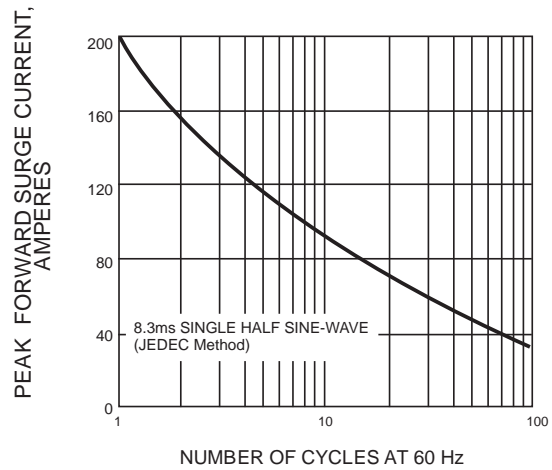


Fig.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

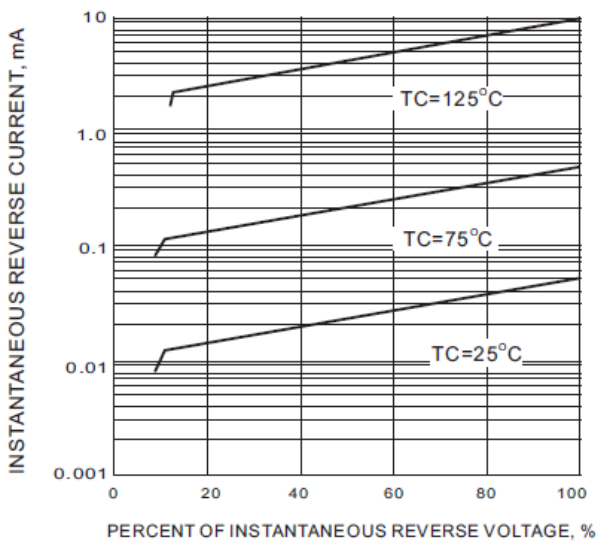


Fig.3 TYPICALREVERSE CHARACTERISTIC

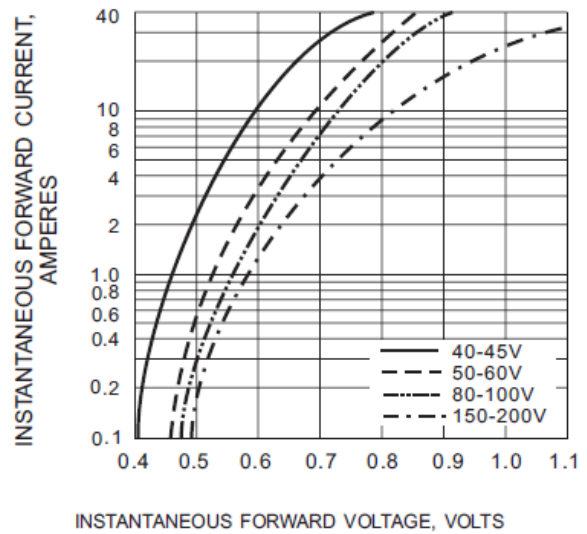
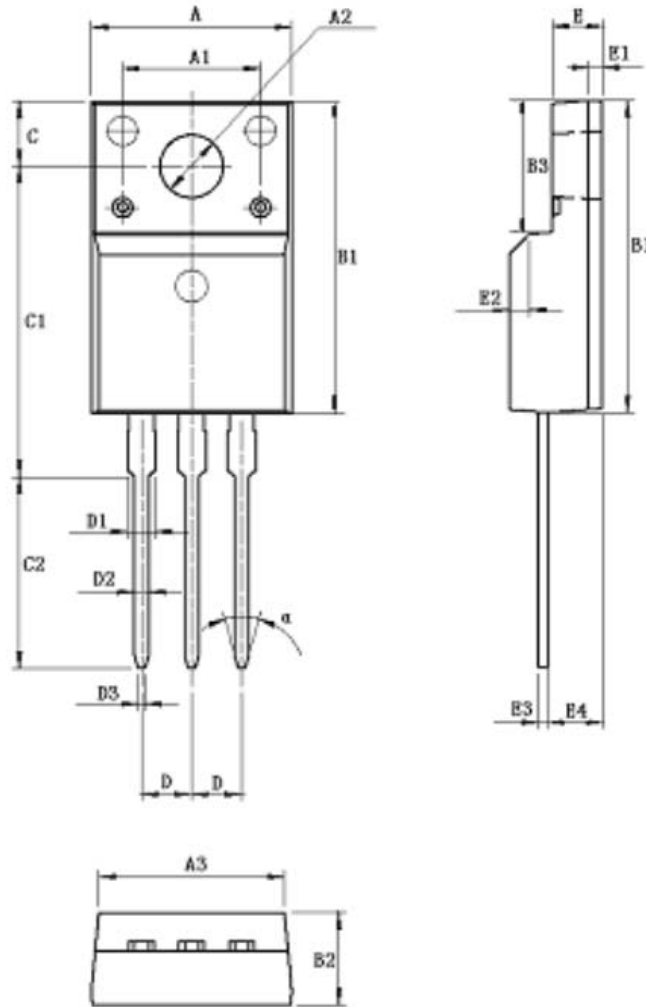


Fig.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

Package Dimension

TO-220F

Units: mm



Symbol	Min	Max	Symbol	Min	Max
A	9.96	10.36	D	2.54	
A1	7.00		D1	1.15	1.35
A2	3.08	3.28	D2	0.70	0.90
A3	9.25	9.65	D3	0.28	0.48
B1	15.70	16.10	E	2.34	2.74
B2	4.50	4.90	E1	0.70	
B3	6.20	6.80	E2	1.0×45°	
C	3.20	3.40	E3	0.36	0.65
C1	15.20	16.00	E4	2.55	2.95
C2	9.75	10.15	a(度)	30°	