



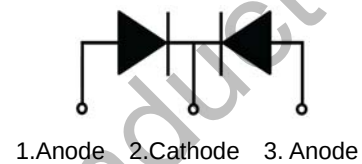
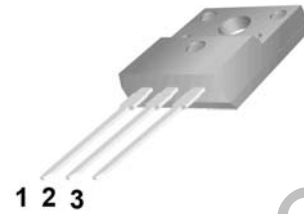
MBRF2040SCT-MBRF20200SCT

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.



TO-220F



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

PARAMETER		Symbol	MBRF 2040 SCT	MBRF 2045 SCT	MBRF 2050 SCT	MBRF 2060 SCT	MBRF 2080 SCT	MBRF 2090 SCT	MBRF 20100 SCT	MBRF 20150 SCT	MBRF 20200 SCT	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}	175									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℃	I _R	0.1									mA
	T _j =125℃		20									mA
Maximum Operating Junction Temperature		T _j	150				175				℃	
Storage Temperature		T _{stg}	-55~+ 150				-65~+175				℃	
Typical Thermal Resistance		R _{θJC}	1.4									℃/W

Typical Characteristics

RATING AND CHARACTERISTIC CURVES

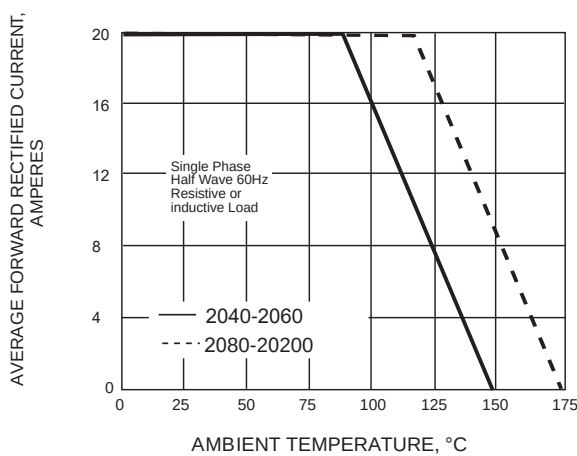


Fig.1 FORWARD CURRENT ERATING CURVE

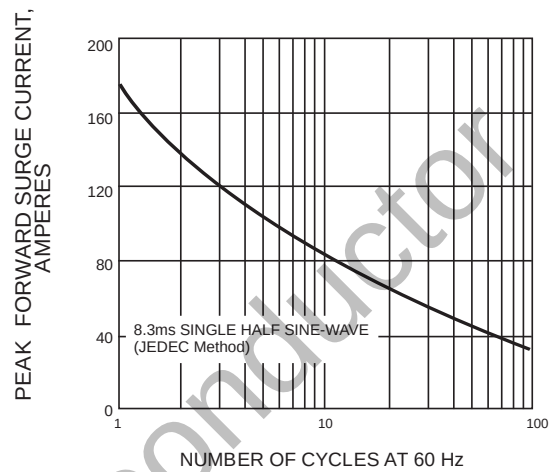


Fig.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

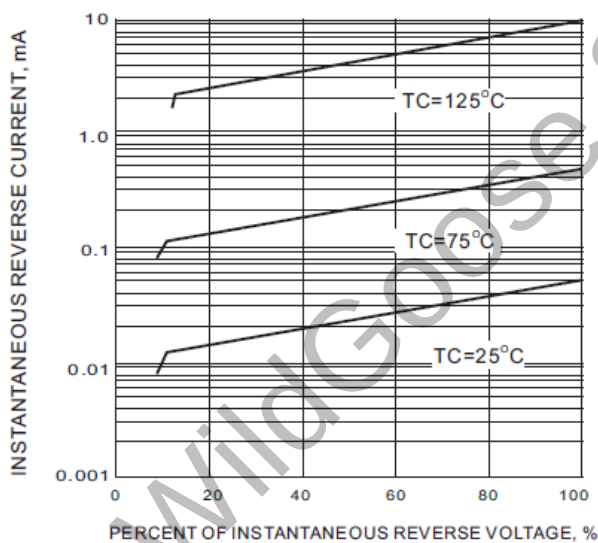


Fig.3 TYPICAL REVERSE CHARACTERISTIC

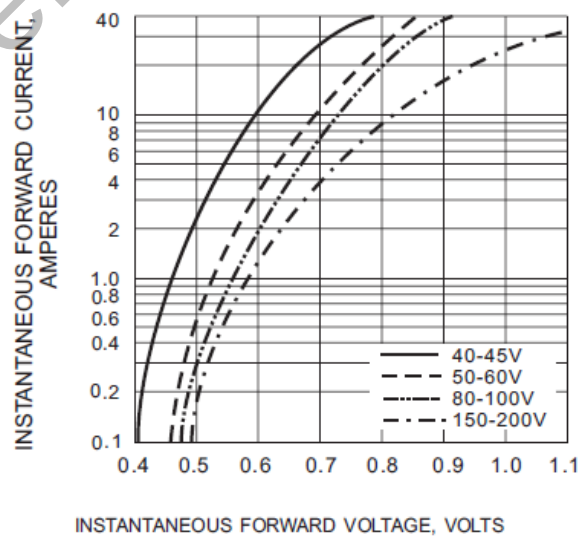
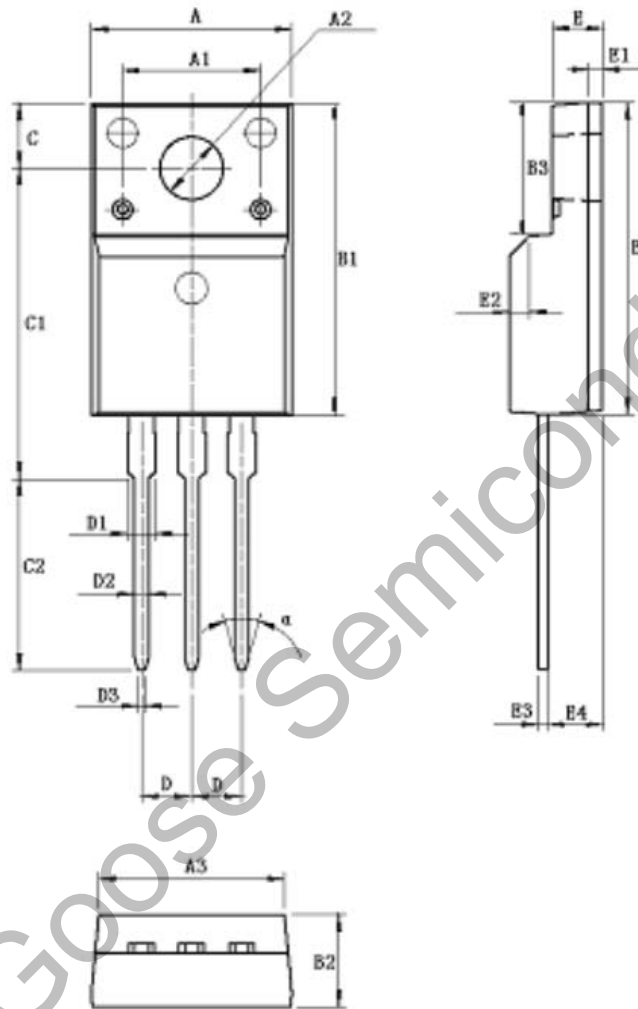


Fig.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

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°	