



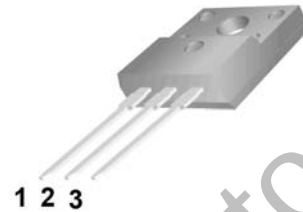
MBRF3045VCT

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



1.Anode 2.Cathode 3. Anode

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

Parameter		Symbol	Value	Unit
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	45	V
Maximum RMS Voltage		V_{RMS}	31.5	V
Maximum DC Blocking Voltage		$V_{R(DC)}$	45	V
Maximum Average Forward Current		$I_{F(AV)}$	30	A
Peak Forward Surge Current: 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	200	A
Maximum Forward Voltage		V_F	0.52	V
Maximum DC Reverse Current	Tj=25°C	I_R	0.2	mA
	Tj=125°C		20	mA
Maximum Operating Junction Temperature		T_j	150	°C
Storage Temperature		T_{stg}	-40~+150	°C

Typical Characteristics

RATING AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

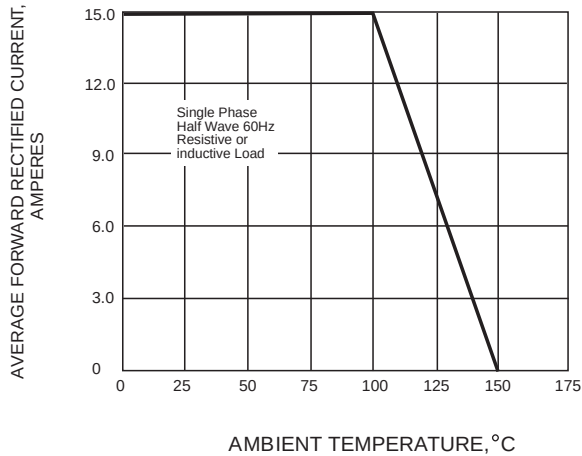


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

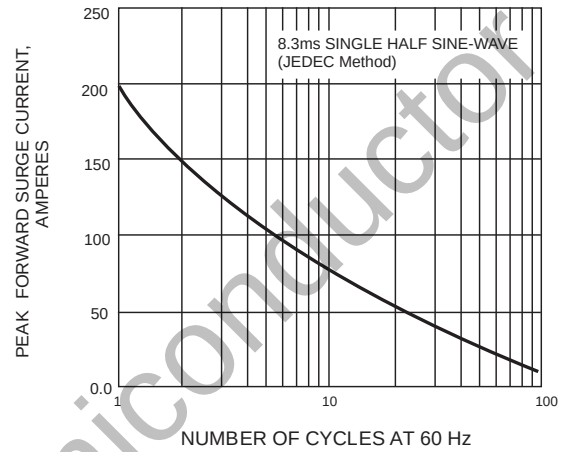


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

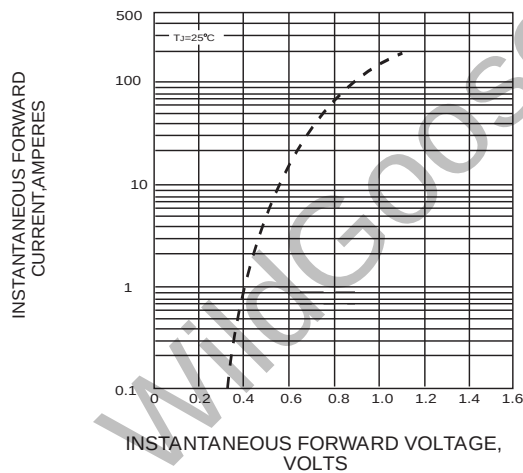
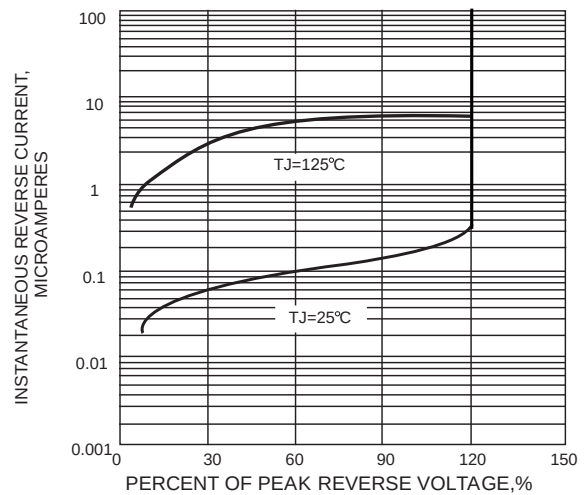
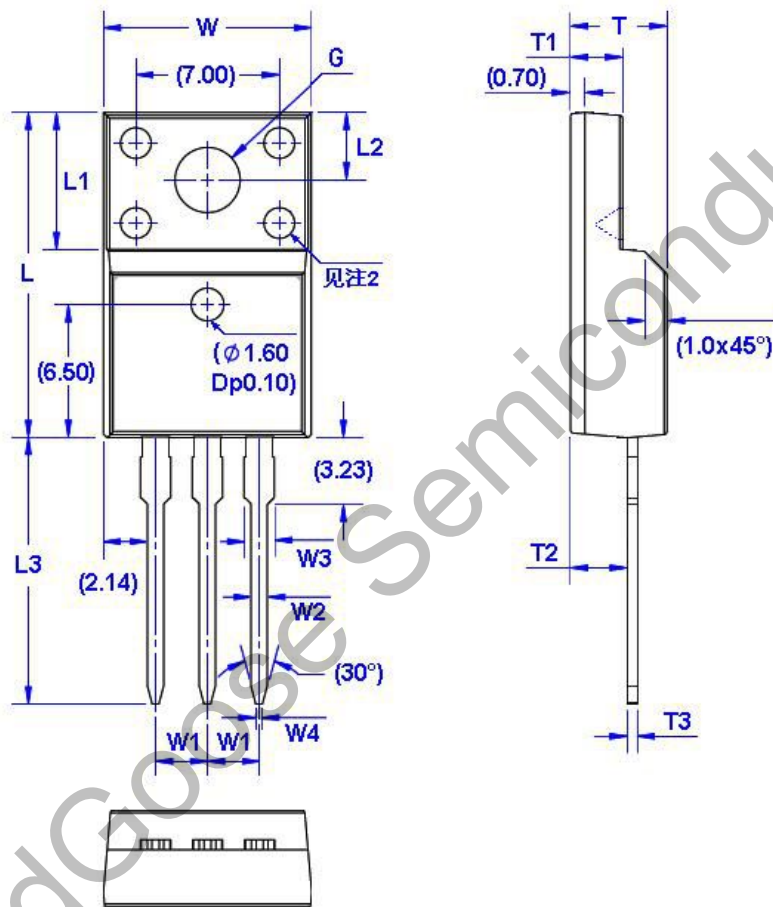


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



Package Dimension

TO-220F



Symbol	Size		Symbol	Size		Symbol	Size		Symbol	Size	
	Min	Max		Min	Max		Min	Max		Min	Max
W	9.96	10.36	W4	0.25	0.45	L3	12.78	13.18	T3	0.45	0.60
W1	2.54 (TYP)		L	15.67	16.07	T	4.50	4.90	G(Φ)	3.08	3.28
W2	0.70	0.90	L1	6.48	6.88	T1	2.34	2.74			
W3	1.24	1.47	L2	3.20	3.40	T2	2.56	2.96			