



Features

Low power loss,high efficiency.

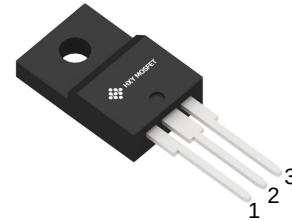
High surge capacity

For use in low voltage,high frequency inverters,
free wheeling,and polarity protection applications.

Metal silicon junction,majority carrier conduction.

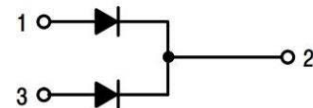
High current Capability,low forward voltage drop.

Guard ring for over voltage protection.



TO-220F

PIN CONNECTIONS



Absolute Maximum Ratings (T_c=25℃)

Parameter		Symbol	MBRF 1040 CT	MBRF 1045 CT	MBRF 1050 CT	MBRF 1060 CT	MBRF 1080 CT	MBRF 1090 CT	MBRF 10100 CT	MBRF 10150 CT	MBRF 10200 CT	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	
Maximum DC Blocking Voltage		V _{R(DC)}	40	45	50	60	80	90	100	150	200	
Maximum Average Forward Current		I _{F(AV)}	10									A
Peak Forward Surge Current:8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I _{FSM}	150									
Maximum Forward Voltage at 5A 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									
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

FIG. 1- FORWARD CURRENT DERATING CURVE

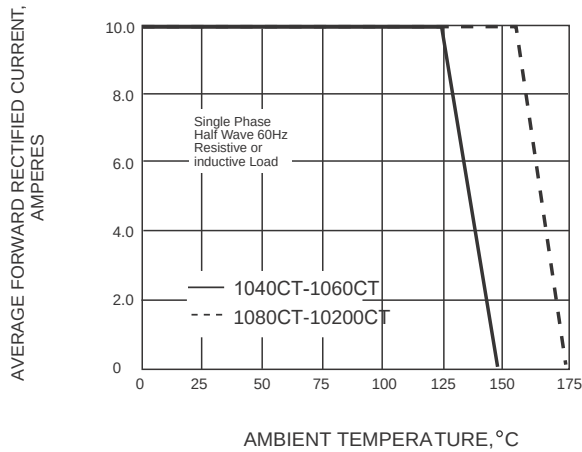


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

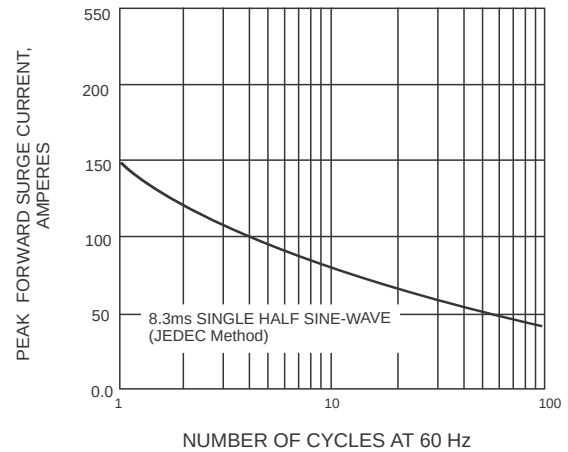


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

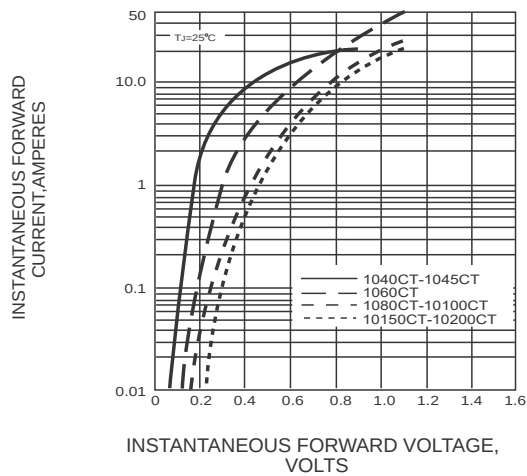
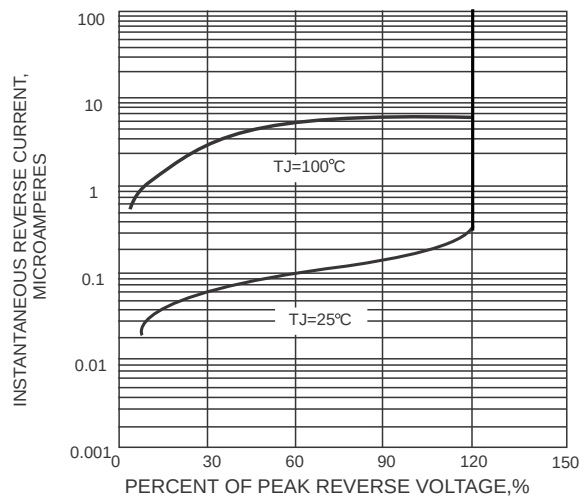
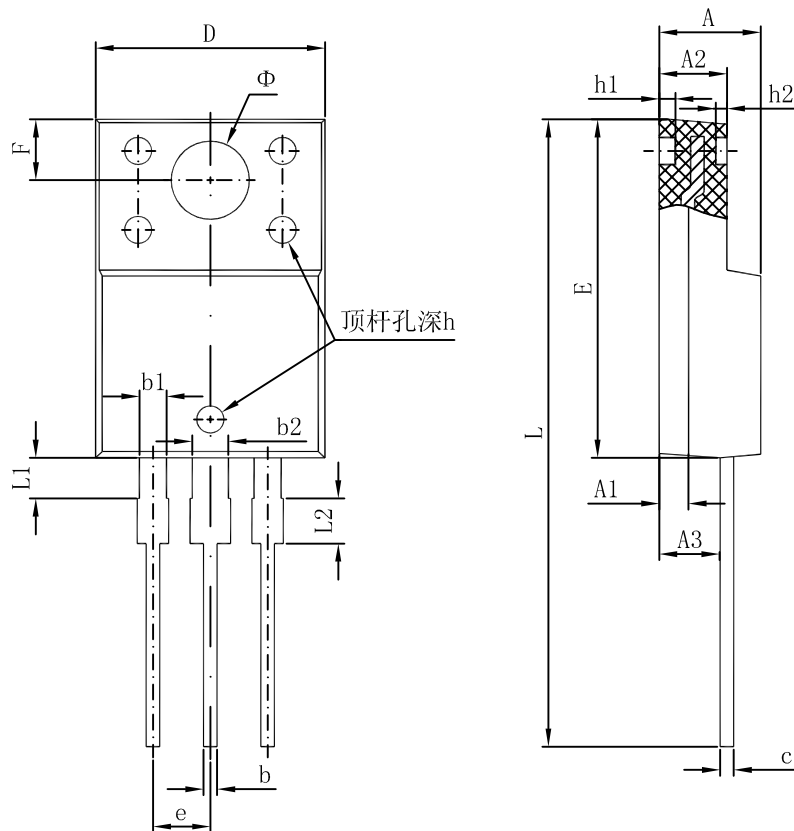


FIG. 4-TYPICAL REVERSE CHARACTERISTICS





TO-220F Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.300	4.700	0.169	0.185
A1	1.300 REF.		0.051 REF.	
A2	2.800	3.200	0.110	0.126
A3	2.500	2.900	0.098	0.114
b	0.500	0.750	0.020	0.030
b1	1.100	1.350	0.043	0.053
b2	1.500	1.750	0.059	0.069
c	0.500	0.750	0.020	0.030
D	9.960	10.360	0.392	0.408
E	14.800	15.200	0.583	0.598
e	2.540 TYP.		0.100 TYP.	
F	2.700 REF.		0.106 REF.	
Φ	3.500 REF.		0.138 REF.	
h	0.000	0.300	0.000	0.012
h1	0.800 REF.		0.031 REF.	
h2	0.500 REF.		0.020 REF.	
L	28.000	28.400	1.102	1.118
L1	1.700	1.900	0.067	0.075
L2	1.900	2.100	0.075	0.083



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