



Features

Low power loss. high efficiency.

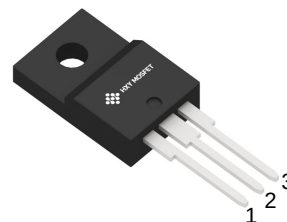
High surge capacity

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

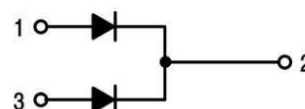
Metal silicon junction, majority carrier conduction.

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 4040 CT	MBRF 4045 CT	MBRF 4050 CT	MBRF 4060 CT	MBRF 4080 CT	MBRF 4090 CT	MBRF 40100 CT	MBRF 40150 CT	MBRF 40200 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)}	40									A
Peak Forward Surge Current:8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I _{FSM}	350									
Maximum Forward Voltage at 20A per leg		V _F	0.65		0.72			0.82		0.92		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _J =25℃	I _R	0.1							0.05		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}	1.3									℃/W



Typical Characteristics

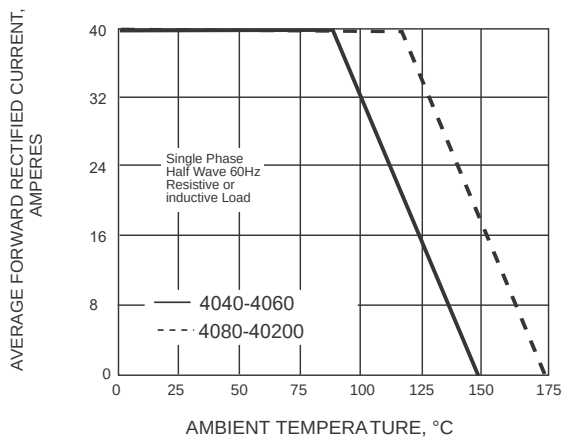


Fig.1 FORWARD CURRENT DERATING CURVE

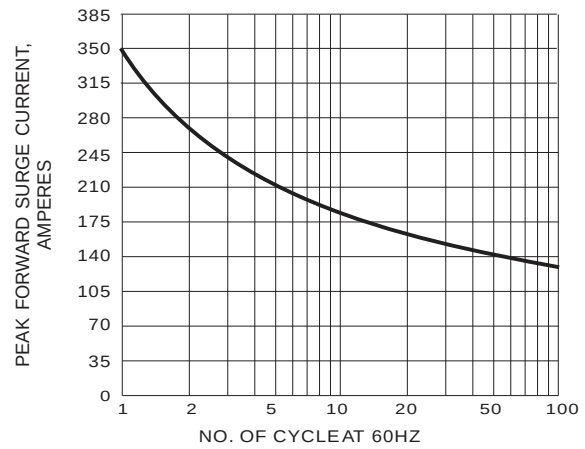


Fig.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

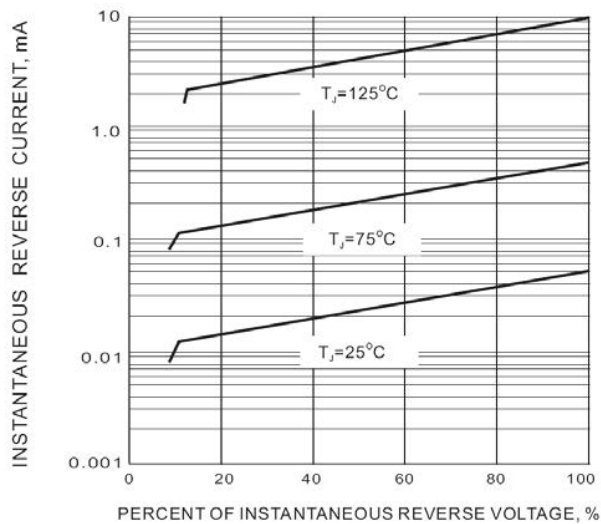


Fig 3. TYPICAL REVERSE CHARACTERISTIC

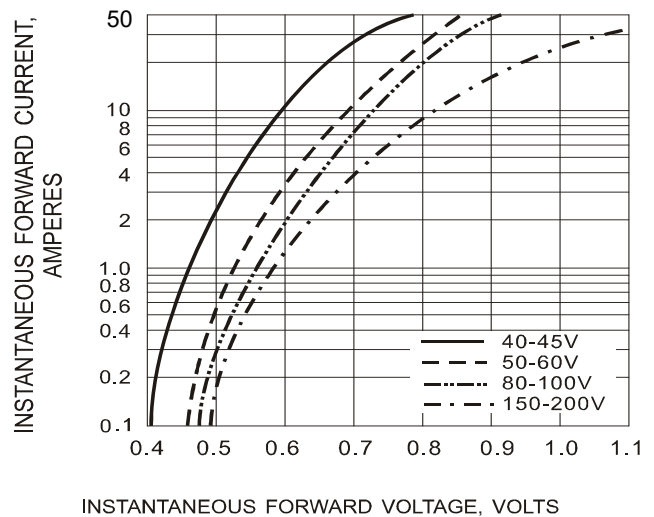
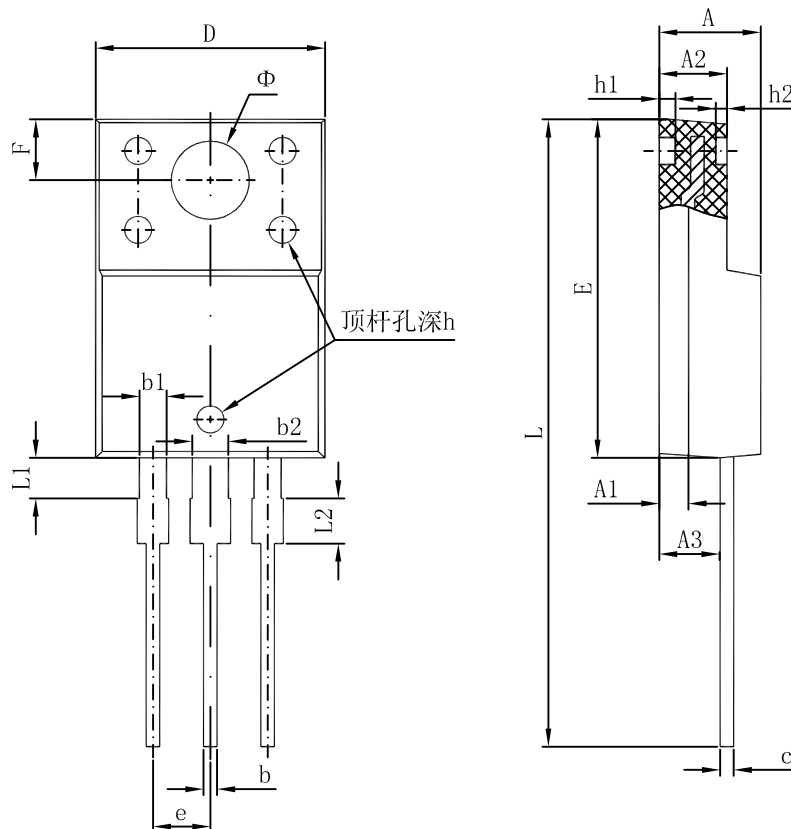


Fig 4. TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC



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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