

#### **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.

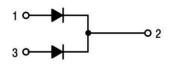
High current Capability,low forward voltage drop.

Guard ring for over voltage protection.



**TO-220F** 

### **PIN CONNECTIONS**



# Absolute Maximum Ratings (Tc=25℃)

PARAMET	ER	Symbol	HMBRF 3040 CT	HMBRF 3045 CT	HMBRF 3050 CT	HMBRF 3060 CT	HMBRF 3080 CT	HMBRF 3090 CT	HMBRF 30100 CT	HMBRF 30150 CT	HMBRF 30200 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	V
Maximum DC Block	Maximum DC Blocking Voltage		40	45	50	60	80	90	100	150	200	V
Maximum Average Forward Current		I <sub>F(AV)</sub>	20								Α	
Peak Forward Surge Current:8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I <sub>FSM</sub>	200							А		
	Maximum Forward Voltage at 10A per leg		0.65 0.72 0.82 0.92			.92	>					
Maximum DC Reverse Current at Rated DC Blocking Voltage	Tj=25℃						0.1					mA
	Tj=125℃	I <sub>R</sub>	20									mA
Maximum Operating Junction Temperature		Tj	150 175					5	$^{\circ}$			
Storage Temperature		$T_{stg}$	-55~+ 150 -65~+175							$^{\circ}$		
Typical Thermal Resistance		R <sub>θJC</sub>					1.4					°C/W

### **Typical Characteristics**

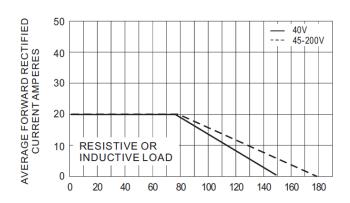


Fig.1 FORWARD CURRENT ERATING CURVE

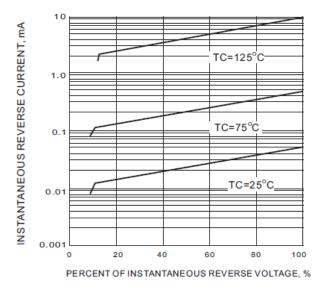


Fig.3 TYPICALREVERSE CHARACTERISTIC

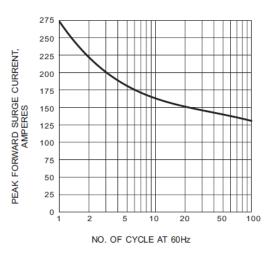
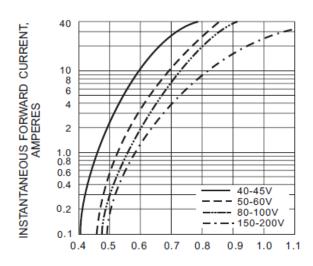


Fig.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

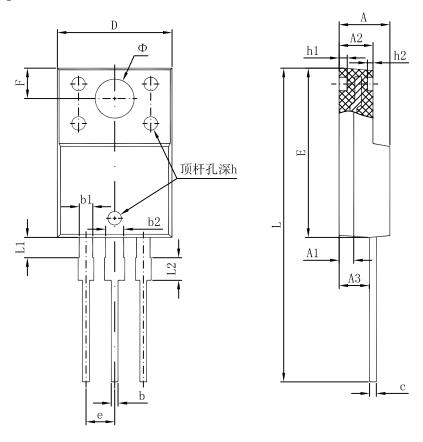


INSTANTANEOUS FORWARD VOLTAGE, VOLTS

Fig.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC



# **TO-220F Package Information**



Cumb of	Dimensions	In Millimeters	Dimensions In Inches			
Symbol	Min.	Max.	Min.	Max.		
Α	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		
С	0.500	0.750	0.020	0.030		
D	9.960	10.360	0.392	0.408		
Е	14.800	15.200	0.583	0.598		
е	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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