

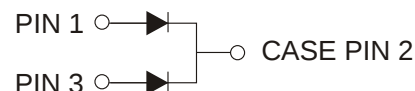


Features

- Low power loss,high efficiency
- High current capability,low forward voltage drop
- High surge capability



TO-220F



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

Symbol	Parameter	MBRF20150CT	Unit
V_{RRM}	Peak repetitive reverse voltage	150	V
V_{RWM}	Working peak reverse voltage		
V_R	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	110	V
I_O	Average rectified output current	20	A
I_{FSM}	Non-Repetitive peak forward surge current (8.3ms half sine wave)	175	A
$R_{\theta JC}$	Thermal resistance from junction to case ,Tc=25°C	2.0	°C/W
$R_{\theta JA}$	Thermal resistance from junction to ambient	62.5	°C/W
T_j	Junction temperature	150	°C
T_{stg}	Storage temperature	-55~+150	°C

Electrical Characteristics (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=0.1mA$		150			V
Reverse current	I_R	$V_R=150V$	$T_j=25^\circ C$			100	μA
			$T_j=125^\circ C$			150	mA
Forward voltage	V_F	$I_F=10A$	$T_j=25^\circ C$		0.92		V
			$T_j=125^\circ C$		0.80		V
		$I_F=20A$	$T_j=25^\circ C$		1.10		V
			$T_j=125^\circ C$		1.00		V

*Pulse test: pulse width $\leq 300\mu s$, duty cycles $\leq 2.0\%$.



Typical Characteristics

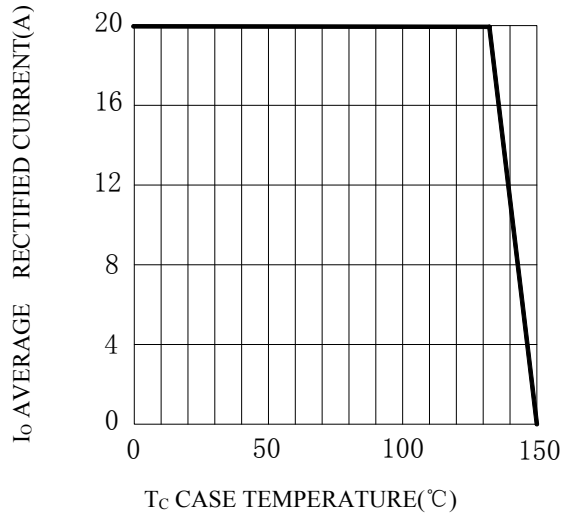


Fig.1 Forward Current Derating Curve

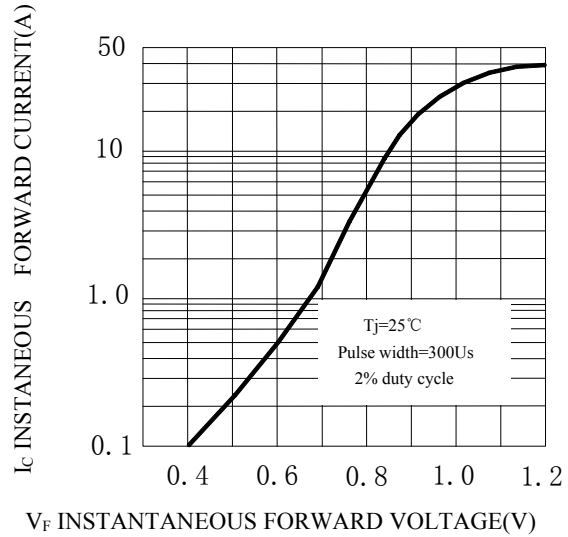


Fig.2 Typical Forward Characteristics

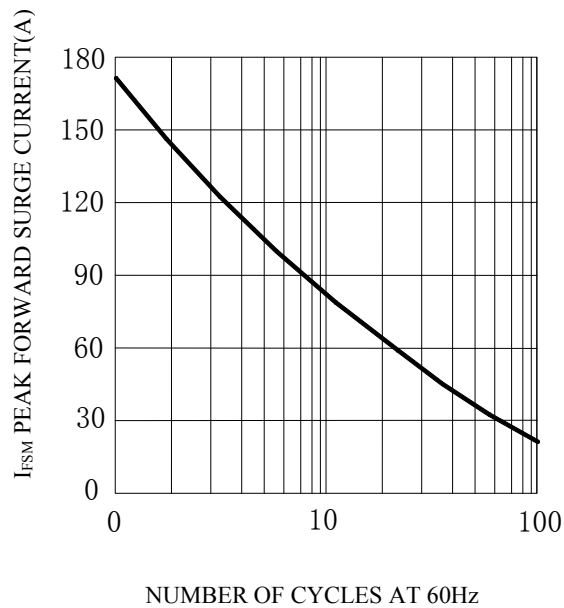


Fig.3 Max Non-Repetitive Surge Current

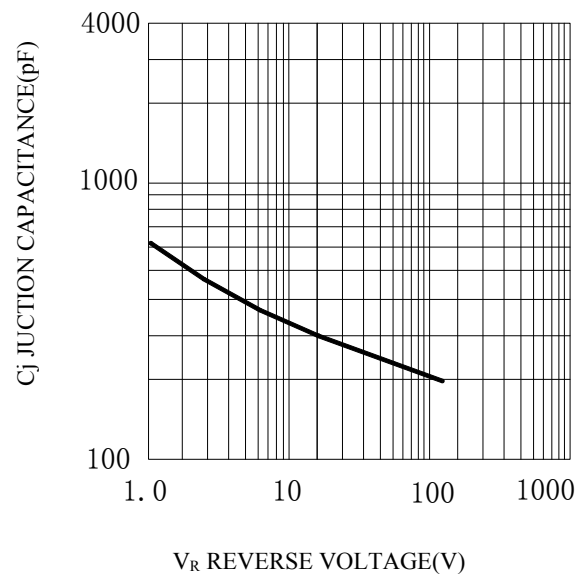
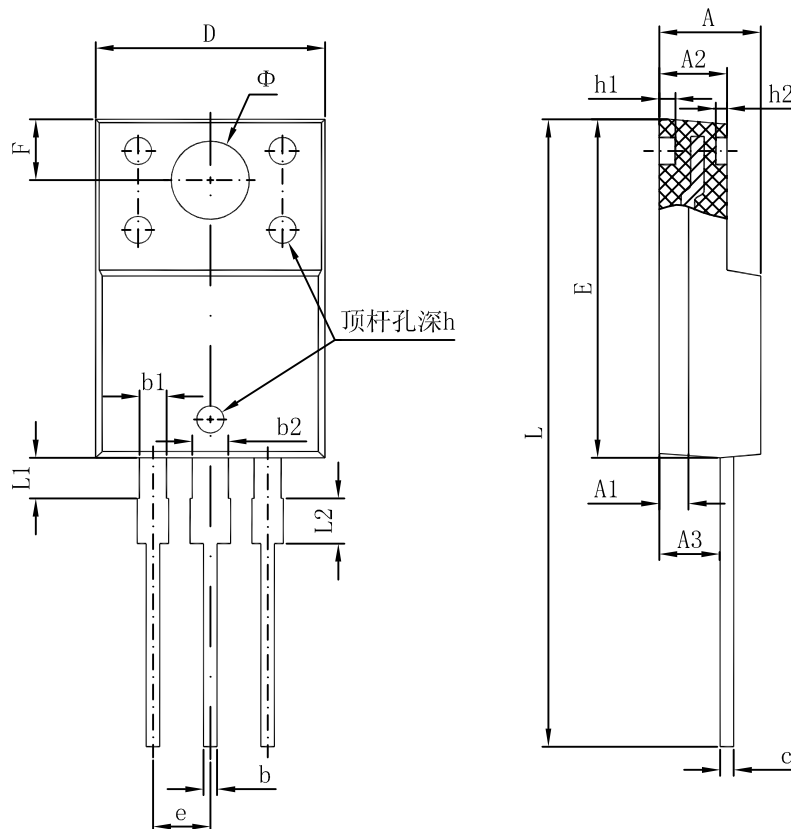


Fig.4 Typical Junction Capacitance



Package Information
TO-220F



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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