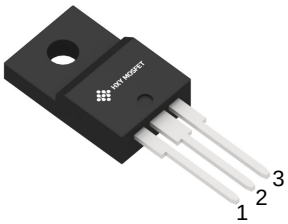
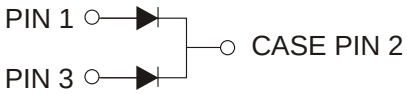
MBR1090FCT_T0_00001
Schottky Rectifier Diodes

Features

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



TO-220F(TO-220F-3)



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

Symbol	Parameter	Limit	Unit
V_{RRM}	Peak repetitive reverse voltage	100	V
V_{RWM}	Working peak reverse voltage		
V_R	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	70	V
I_O	Average rectified output current	10	A
I_{FSM}	Non-Repetitive peak forward surge current (8.3ms half sine wave)	125	A
$R_{\Theta Jc}$	Thermal resistance from junction to case ,Tc=25℃	2.0	℃/W
$R_{\Theta JA}$	Thermal resistance from junction to ambient	62.5	℃/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		100			V
Reverse current	I_R	V_R=100V	Tj =25℃			100	uA
			Tj =125°C			150	mA
Forward voltage	V_F	I_F=5A	Tj =25°C		0.85		V
			Tj =125°C		0.75		V
		I_F=10A	Tj =25°C		1.00		V
			Tj =125°C		0.90		V

*Pulse test: pulse width ≤300μs, duty cycle≤ 2.0%.

Typical Characteristics

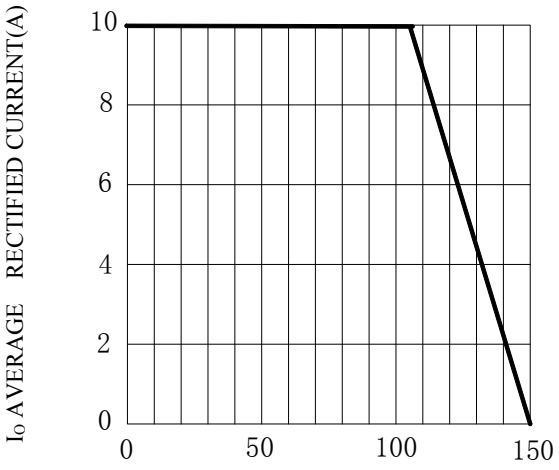


Fig.1 Forward Current Derating Curve

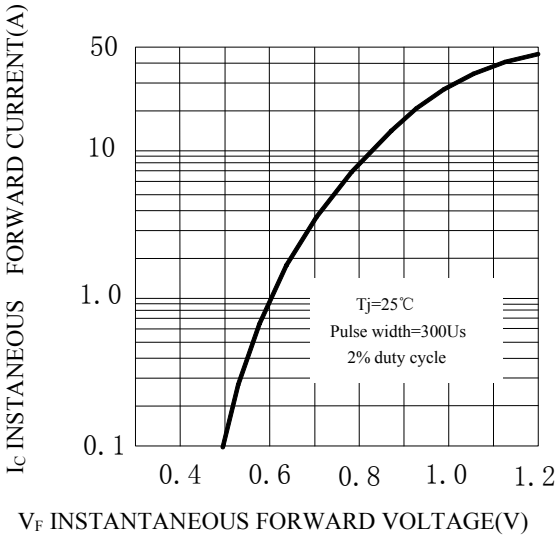


Fig.2 Typical Forward Characteristics

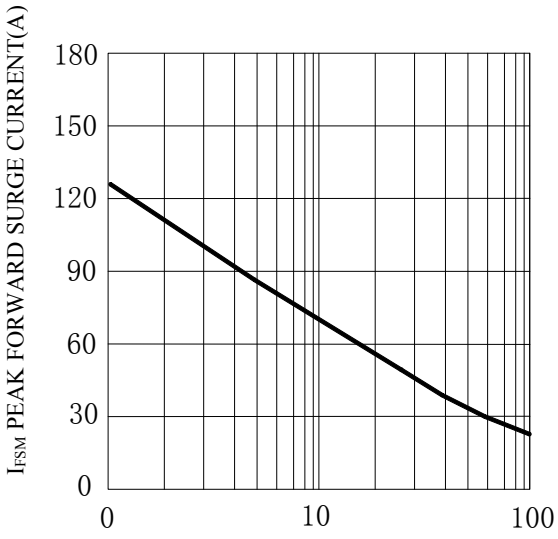


Fig.3 Max Non-Repetitive Surge Current

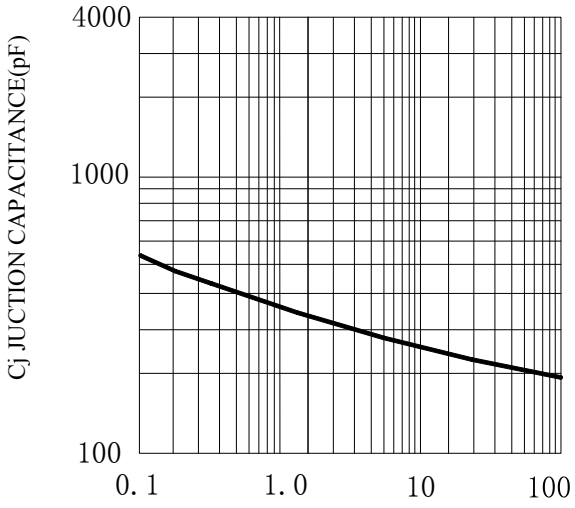
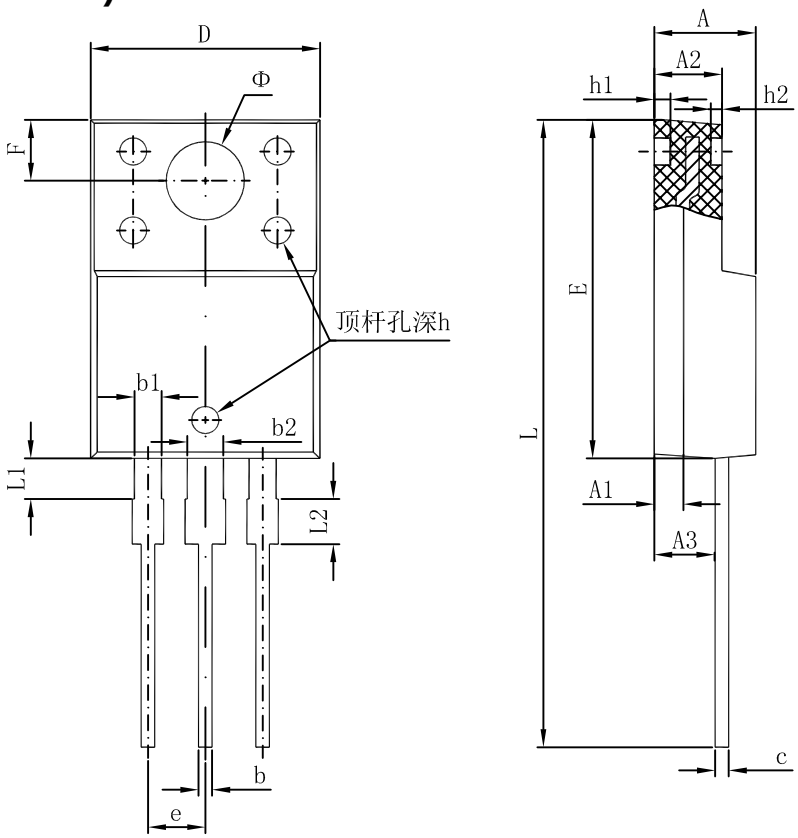


Fig.4 Typical Junction Capacitance

Package Information
TO-220F(TO-220F-3)



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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