Toohong

MBRF40200CT

SCHOTTKY BARRIER RECTIFIER

FEATURES

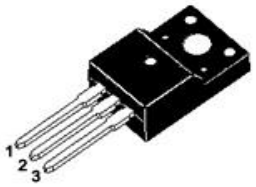
- Low forward voltage
- High current capability
- High forward surge capability
- Low power losses，High efficiency
- Guarding for over voltage protection

APPLICATIONS

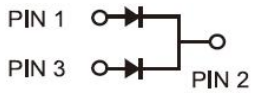
Low VF Schottky barrier rectifier are designed for high freqency, miniature switched mode power supplies such as adapters ,lighting and on-board DC/DC conerters

MECHANICAL DATA

- **Case:** Molded plastic
- **Polarity:** As marked
- **Mounting Position:** Any
- **Molded Plastic:** UL Flammability Classification Rating 94V-0
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Solder bath temperature 275℃ maximum,10s per JESD 22-B106



TO-220F



Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified

Characteristics		Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	200	V
Working Peak Reverse Voltage		V_{RWM}	200	V
Maximum DC Blocking Voltage		V_{DC}	200	V
Maximum Average Forward Rectified Current	Per Leg	I_O	20	A
	Total		40	
Peak Forward Surge Current,8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)		I_{FSM}	420	A
Operating Temperature Range		T_J	150	°C
Storage Temperature Range		T_{STG}	-40 to +150	°C
Typical Thermal Resistance (Note1) TO-220AB,TO-263 TO-220F		$R_{\theta JC}$	 2 4	°C/W
Note1: Thermal resistance from Junction to case per leg mounted on heatsink.				

Electrical Characteristics (Per Leg) unless otherwise specified

Characteristics		Symbol	Value		Unit
Forward Voltage Drop(Note2)		V_F	Typ.	Max.	V
at I_F=10A	TA=25°C		0.82	-	
	TA=125°C		0.69	-	
at I_F=15A	TA=25°C		0.87	-	
	TA=125°C		0.74	-	
at I_F=20A	TA=25°C		0.91	0.98	
	TA=125°C		0.79	-	
Maximum Reverse Current at V_R=200V	TA=25°C	I_R	2.5	10	μA
	TA=125°C		2	-	mA

Note2:Pulse test: 300 μs pulse width, 1 % duty cycle

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

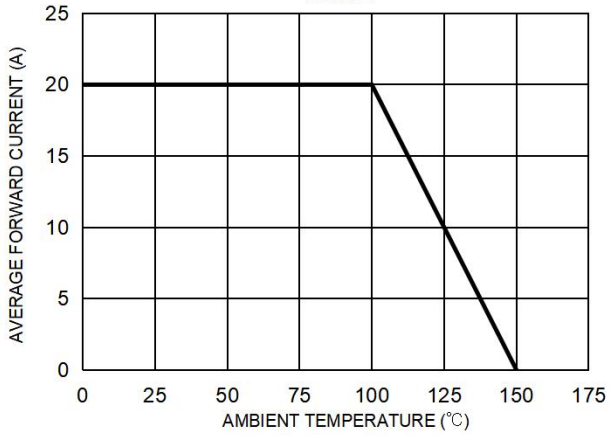


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

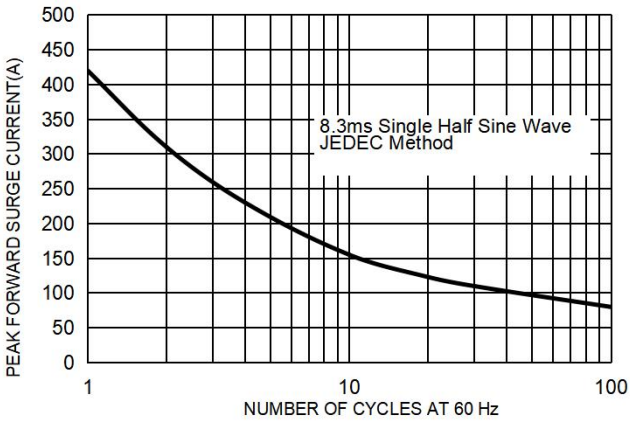


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

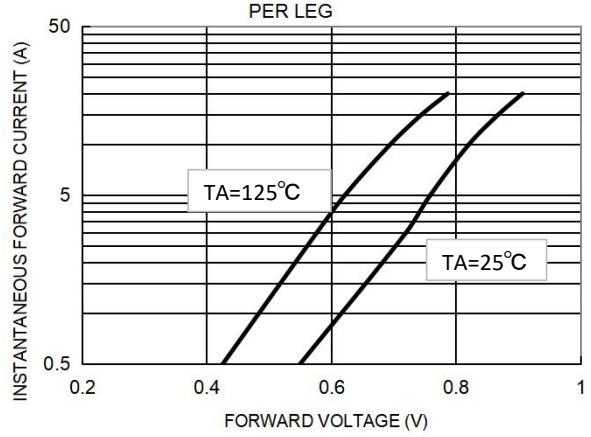
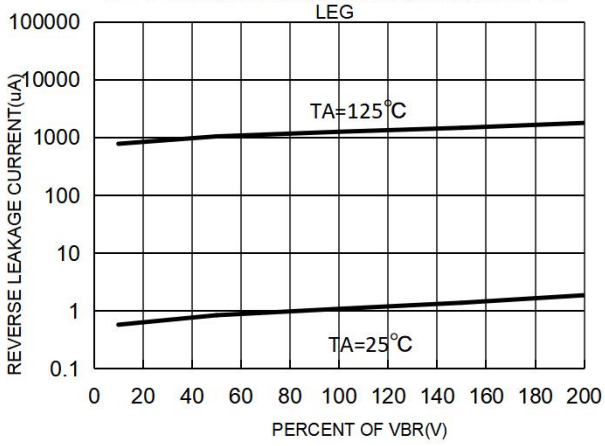
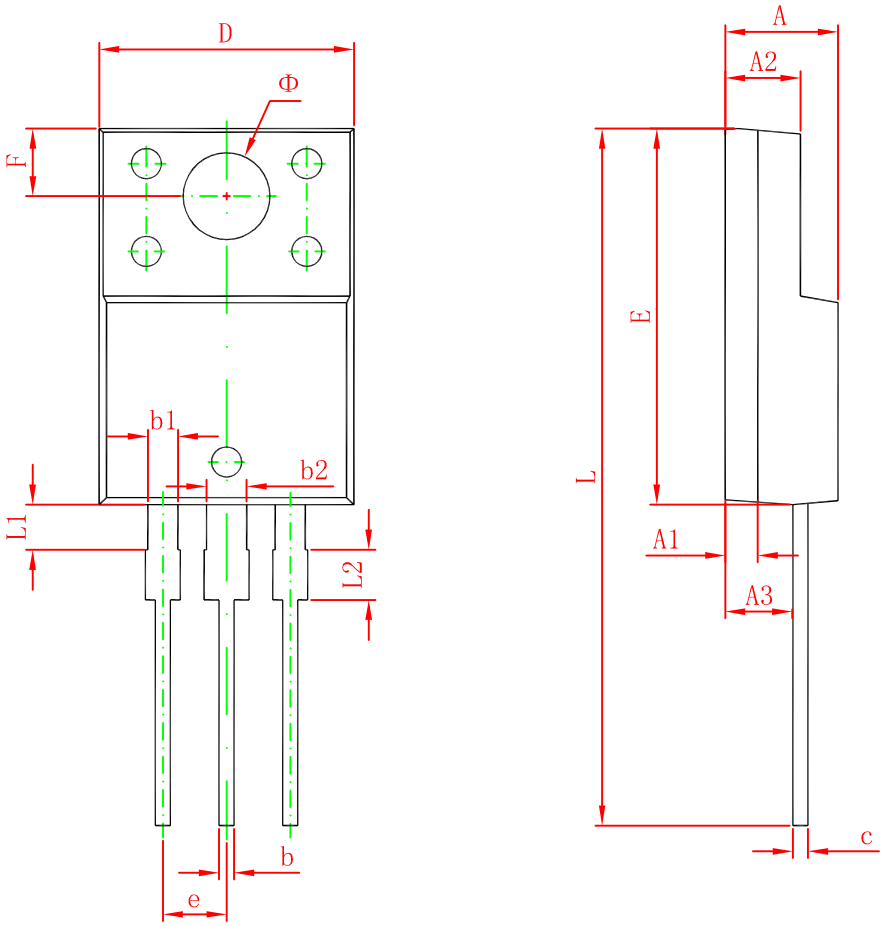


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



TO-220F Package Outline Dimensions



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	3.300	3.700	0.130	0.146
L	28.000	28.400	1.102	1.118
L1	1.700	1.900	0.067	0.075
L2	0.900	1.100	0.035	0.043