鼎德丰 DING DE FENG

MBRF20150CT

SCHOTTKY BARRIER RECTIFIER

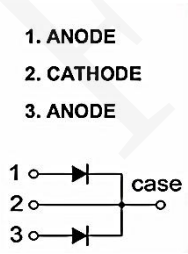
■ DESCRIPTION

The MBR20150CT meet the ROHS and Green Product requirement with full function reliability approved.

■ FEATURE

*Schottky Barrier Chip
*Guard Ring Die Construction for Transient Protection
*Low Power Loss,High Efficiency
*High Surge Capability
*High Current Capability and Low Forward Voltage Drop
*For Use in Low Voltage, High Frequency Inverters,Free Wheeling, and Polarity Protection Applications





■ ABSOLUTE MAXIMUM RATINGS(TA=25°C, unless otherwise specified.)

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM}	Peak repetitive reverse voltage	150	V
V_{RWM}	Working peak reverse voltage	150	V
V_R	DC blocking voltage	150	V
$V_{R(RMS)}$	RMS reverse voltage	105	V
I_O	Average rectified output current	20（10*2）	A
I_{FSM}	Non-Repetitive peak forward surge current	150*2	A
Tj	Junction temperature	175	°C
Tstg	Storage temperature	-55 ~ +150	°C
Cj (Ctot)	Typical total capacitance V_R=5V,f=1MHz	500	pF
$R_{\theta JA}$	Thermal Resistance fromJunction to Ambient	58	°C/W
$R_{\theta JC}$	Thermal Resistance From Junction To Case	3	°C/W

Notes: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

Shenzhen DingDeFeng Technology Co., Ltd Tel: +86-755-83677999

■ 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	Tj =25℃		0.5	5	uA
			Tj =125℃		2.0		mA
Forward voltage	V_F	I_F=5A	Tj =25℃		0.76		V
			Tj =125℃		0.64		V
		I_F=10A	Tj =25℃		0.83	0.90	V
			Tj =125℃		0.71		V
Pulse test: pulse width ≤300μs, duty cycle≤ 2.0%.							

■ TYPICAL CHARACTERISTICS

FIG.1: FORWARD CURRENT DERATING CURVE

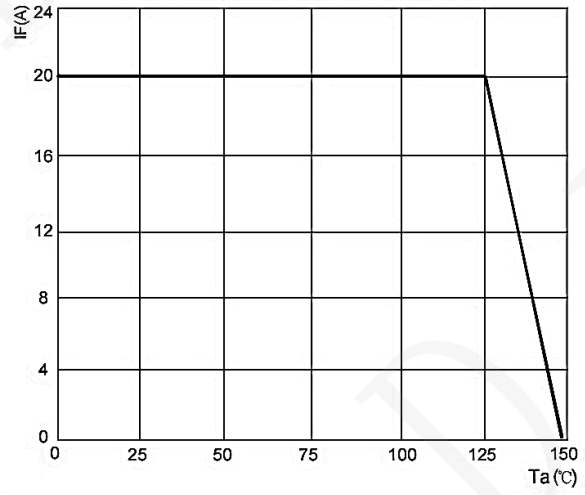


FIG.2: TYPICAL FORWARD CHARACTERISTICS

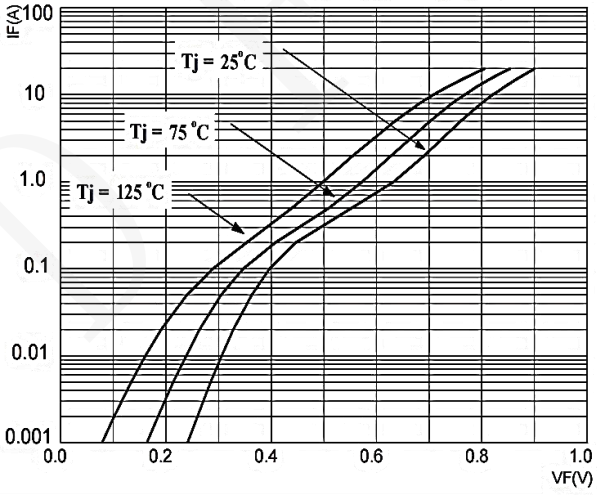


FIG.3: TOTAL CAPACITANCE DERATING CURVE

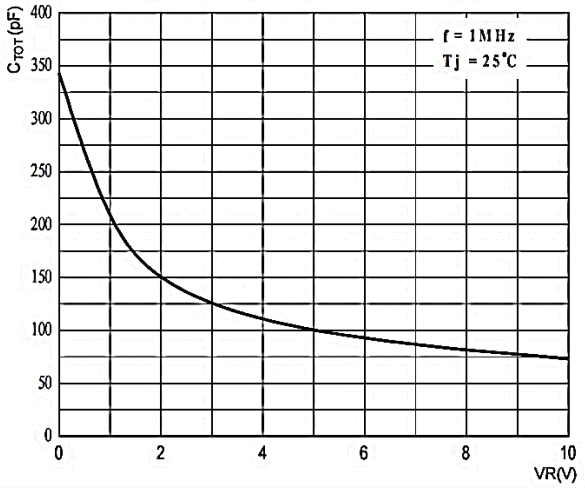
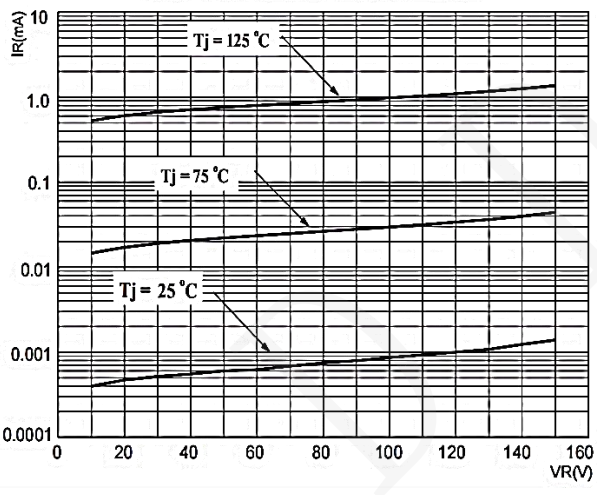
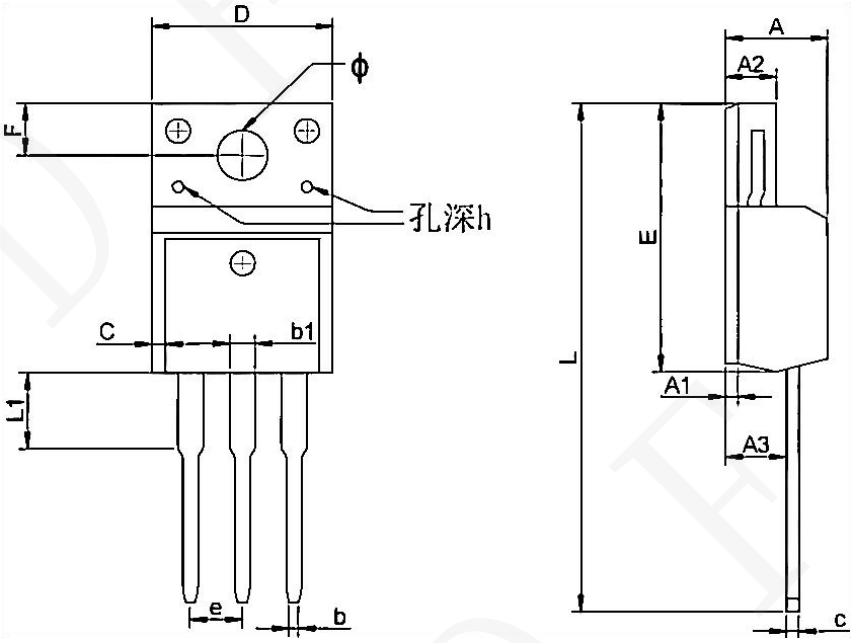


FIG.4: TYPICAL REVERSE CHARACTERISTICS



■ TO- 220F PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max	Min	Max
A	4.300	4.750	0.169	0.185
A1	1.830 REF		0.072 REF	
A2	2.300	2.850	0.090	0.112
A3	2.500	2.900	0.098	0.114
b	0.400	0.420	0.016	0.016
b1	1.220	1.280	0.048	0.050
C	0.690	0.720	0.027	0.028
c	0.490	0.510	0.019	0.020
D	9.960	10.200	0.392	0.400
E	15.000	15.950	0.588	0.625
e	2.574 TYP		0.101TYP	
F	3.470 REF		0.136 REF	
y	3.200 REF		0.125 REF	
h	0.000	0.300	0.000	0.012
L	28.780	28.900	1.128	1.133
L1	2.990	3.100	0.117	0.122