

DESCRIPTION

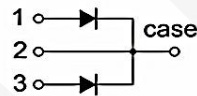
The MBR30100CT meet the ROHS and Green Product requirement with full function reliability approved.

FEATURE

- * Low Power Loss,High Efficiency
- * Guard Ring Die Construction for Transient Protection
- * High Current Capability and Low Forward Voltage Drop



- 1. ANODE
- 2. CATHODE
- 3. ANODE



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

SYMBOL	PARAMETER	VALUE	UNIT
VRRM	Peak repetitive reverse voltage	100	V
VRWM	Working peak reverse voltage		V
VR	DC blocking voltage		V
VR(RMS)	RMS reverse voltage	70	V
IO	Average forward rectified output current	30(15*2)	A
IFSM	Non-Repetitive Peak Forward Surge Current 8.3ms Single	200*2	A
Tj	Junction temperature	175	°C
Tstg	Storage temperature	-55~+150	°C
RθJA	Thermal Resistance from Junction to Ambient	62.5	°C/W
RθJC	Thermal Resistance From Junction To Case	2	°C/W

Note: 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.

■ 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
Instantaneous Reverse Current	I_R	$V_R=100V$	$T_j=25^\circ C$	5.0	100	μA
			$T_{j1}=25^\circ C$	5.0		mA
Instantaneous Forward Voltage Drop	V_{F1}	$I_F=10A$	$T_j=25^\circ C$	0.772	0.82	V
			$T_{j1}=25^\circ C$	0.64		V
		$I_F=15A$	$T_j=25^\circ C$	0.833	0.85	V
			$T_{j1}=25^\circ C$	0.70		V

Notes: Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2.0\%$

■ TYPICAL CHARACTERISTICS

FIG.1: FORWARD CURRENT DERATING CURVE

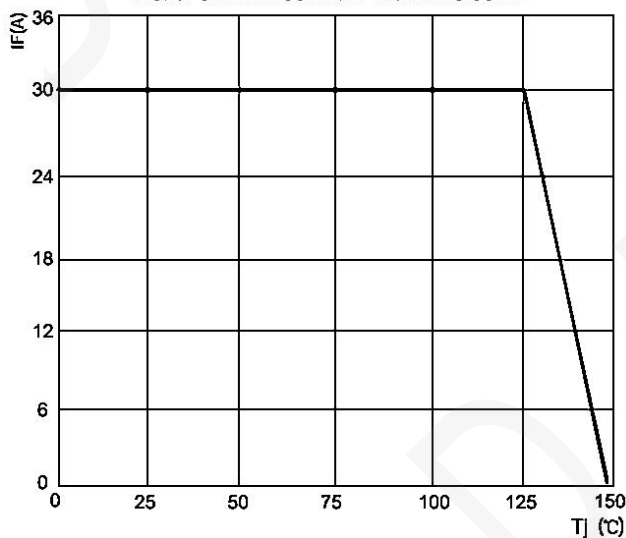


FIG.2: TYPICAL FORWARD CHARACTERISTICS

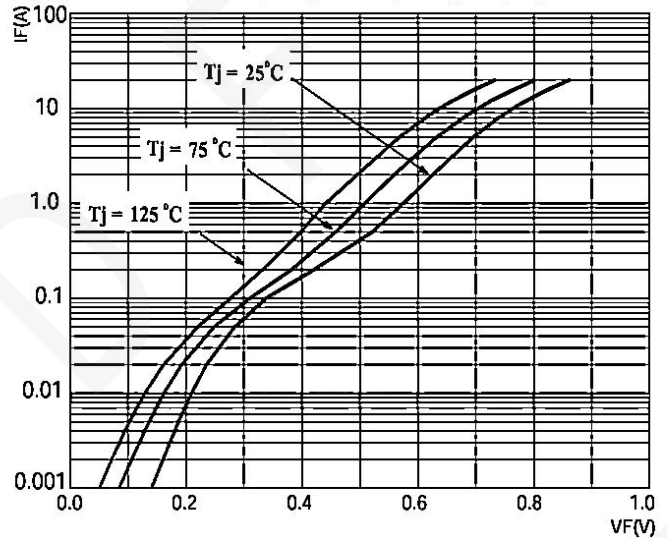


FIG.3: TOTAL CAPACITANCE DERATING CURVE

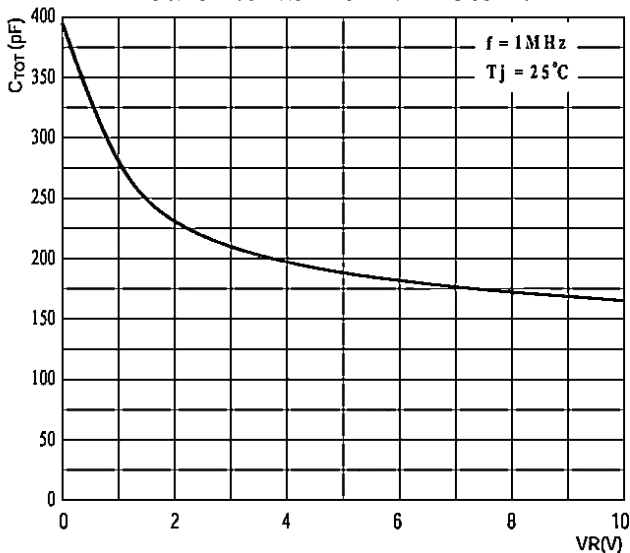
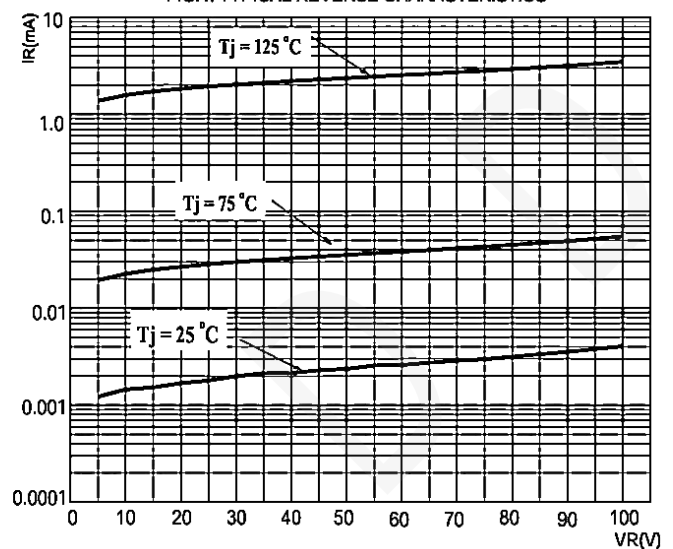
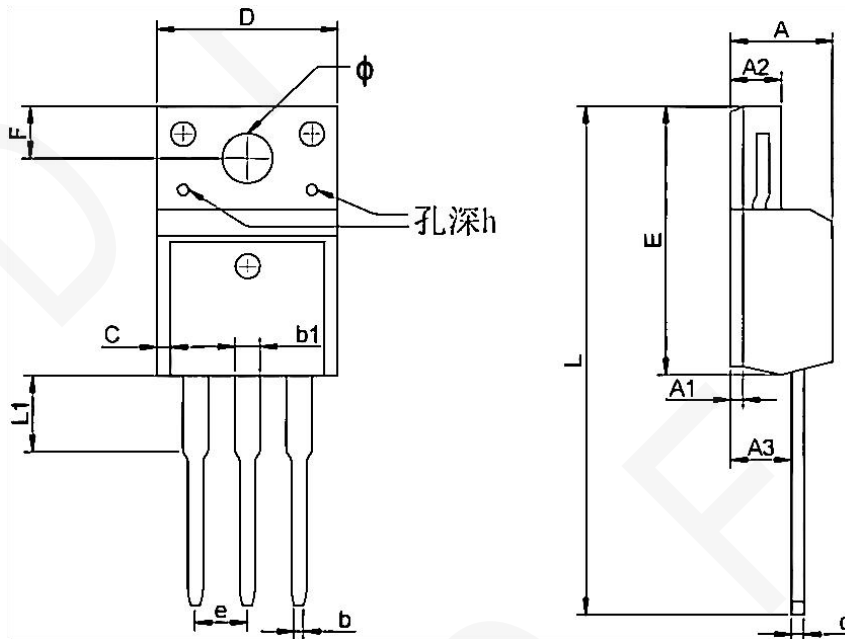


FIG.4: TYPICAL REVERSE CHARACTERISTICS



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		0.101 TYP	
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