

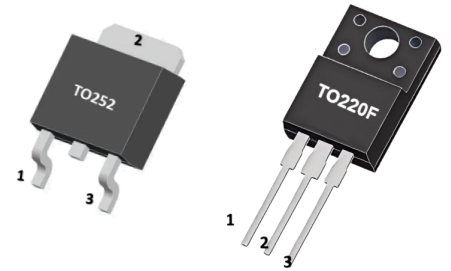
SCHOTTKY BARRIER RECTIFIER

■ **DESCRIPTION**

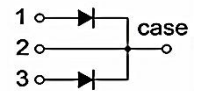
The MBR20100CT meet the ROHS and Green Product requirement with full function reliability approved.

■ **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



- 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	100	V	
VR	DC blocking voltage	100	V	
VR(RMS)	RMS reverse voltage	70	V	
IO	Average rectified output current	20 (10*2)	A	
IFSM	Non-Repetitive peak forward surge current(8.3ms half sine wave)	150*2	A	
Tj	Junction temperature	175	°C	
Tstg	Storage temperature	-55 ~ +150	°C	
Cj (Ctot)	Typical total capacitance VR=5V,f=1MHz	500	pF	
RθJA	Thermal Resistance fromJunction to Ambient	TO-252	100	°C/W
		TO-220F	58	
RθJC	Thermal Resistance From Junction To Case	TO-252	5	°C/W
		TO-220F	3	

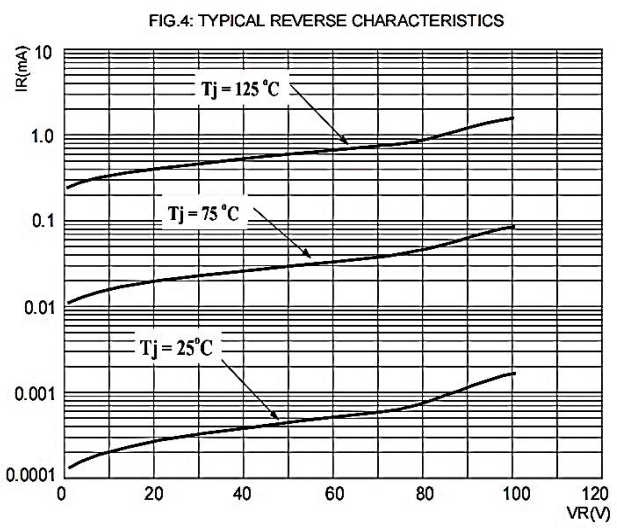
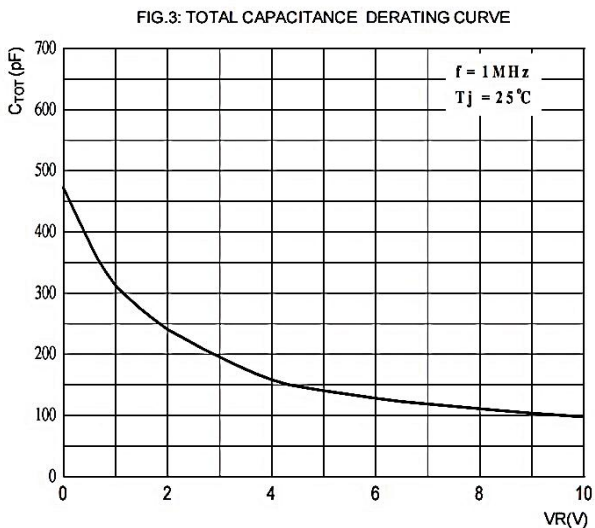
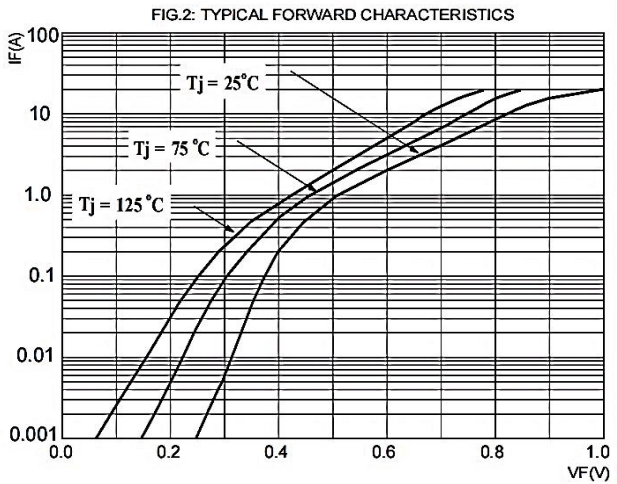
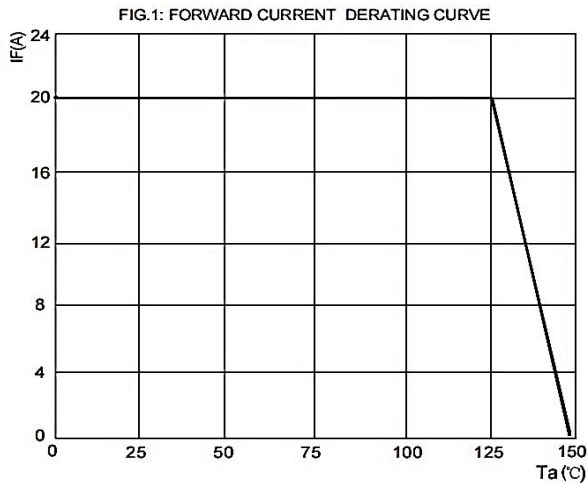
Notes: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ **ELECTRICAL CHARACTERISTICS** (TA=25°C, unless otherwise specified)

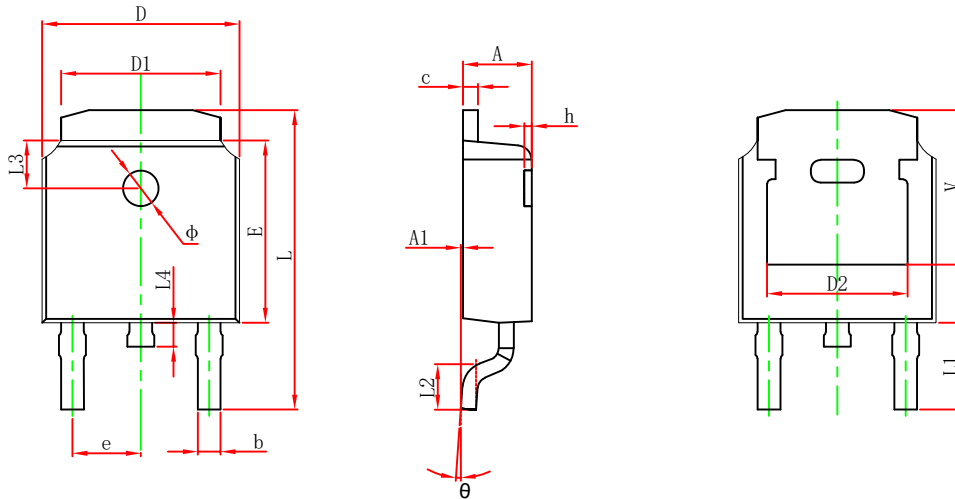
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=0.1mA$	100			V
Reverse current	I_R	$V_R=100V$	$T_j = 25^\circ C$	1	5	μA
			$T_j = 125^\circ C$	5.0		mA
Forward voltage	V_F	$I_F=5A$	$T_j = 25^\circ C$	0.72		V
			$T_j = 125^\circ C$	0.60		V
		$I_F=10A$	$T_j = 25^\circ C$	0.82	0.85	V
			$T_j = 125^\circ C$	0.68		V

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

TYPICAL CHARACTERISTICS

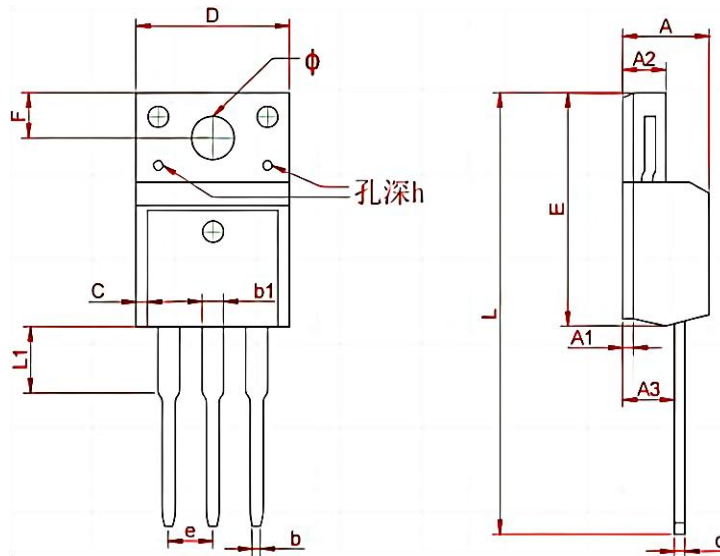


■ TO - 252 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
b	0.635	0.770	0.025	0.030
c	0.460	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.712	10.312	0.382	0.406
L1	2.900 REF.		0.114 REF.	
L2	1.400	1.700	0.055	0.067
L3	1.600 REF.		0.063 REF.	
L4	0.600	1.000	0.024	0.039
phi	1.100	1.300	0.043	0.051
theta	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.250 REF.		0.207 REF.	

■ 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