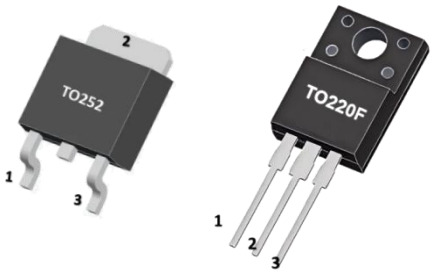
MBR30200CT

SCHOTTKY BARRIER RECTIFIER

■ DESCRIPTION

The MBR30200CT is a 30A schottky barrier rectifier, it uses our advanced technology to provide the customers withhigh surge capability, high efficiency, high current capability, low power loss and low forward voltage drop, etc.

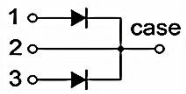
The MBR30200CT is suitable for free wheeling and polarity protection, etc.



■ FEATURE

*Schottky Barrier Chip
*Guard Ring Die Construction for Transient Protection
*High Current Capability and Low Forward Voltage Drop

1. ANODE
2. CATHODE
3. ANODE



■ MARKING

: HY LOGO

MBR30200CT=Device Code

XXXX=Date Code

Solid Dot=Green molding compound

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

SYMBOL	PARAMETER		VALUE	UNIT
V_{RRM}	Peak repetitive reverse voltage		200	V
V_{RWM}	Working peak reverse voltage			V
V_R	DC blocking voltage			V
$V_{R(RMS)}$	RMS reverse voltage		140	V
I_O	Average rectified output current		30（15*2）	A
I_{FSM}	Non-Repetitive peak forward surge current(8.3ms half sine wave)		200*2	A
Tj	Junction temperature		175	°C
Tstg	Storage temperature		-55~+150	°C
$R_{\theta JA}$	Thermal Resistance fromJunction to Ambient	TO-252	62	°C/W
		TO-220F	62.5	
$R_{\theta JC}$	Thermal Resistance From Junction To Case	TO-252	4.5	°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.

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

PARAMETER	SYMBOL	TEST CONDITIONS		MIN	TYP	MAX	UNIT
Reverse Voltage	$V_{(BR)R}$	I_R=0.10mA		200			V
Reverse current	I_R	V_R=200V	Tj=25℃		5.0	100	μA
			Tj=125℃		5.0		mA
Forward voltage	V_F	I_F=10A	Tj=25℃		0.832	0.88	V
			Tj=125℃		0.71		V
		I_F=15A	Tj=25℃		0.87	0.95	V
			Tj=125℃		0.75		V

Notes: 1. Pulse Test: Pulse Width=300μs, Duty Cycle≤2.0%.

■ TYPICAL CHARACTERISTICS

FIG.1: FORWARD CURRENT DERATING CURVE

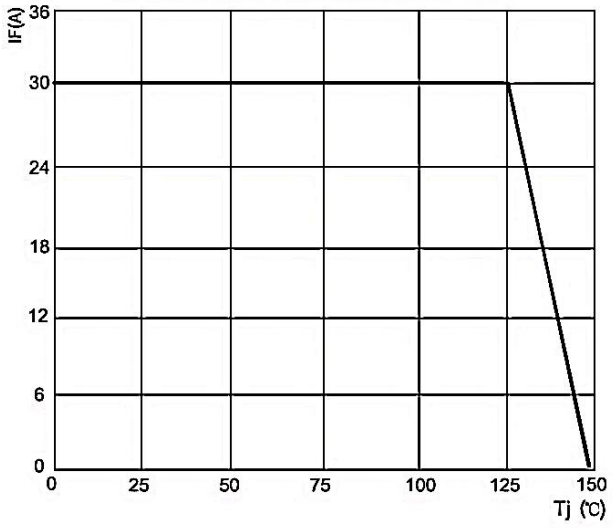


FIG.2: TYPICAL FORWARD CHARACTERISTICS

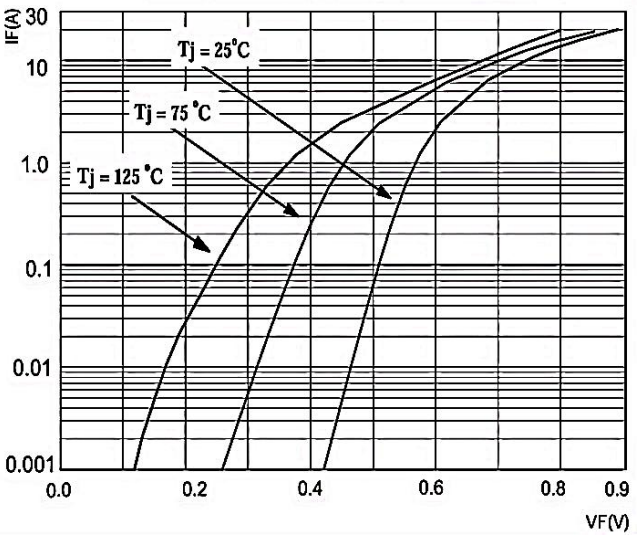


FIG.3: TOTAL CAPACITANCE DERATING CURVE

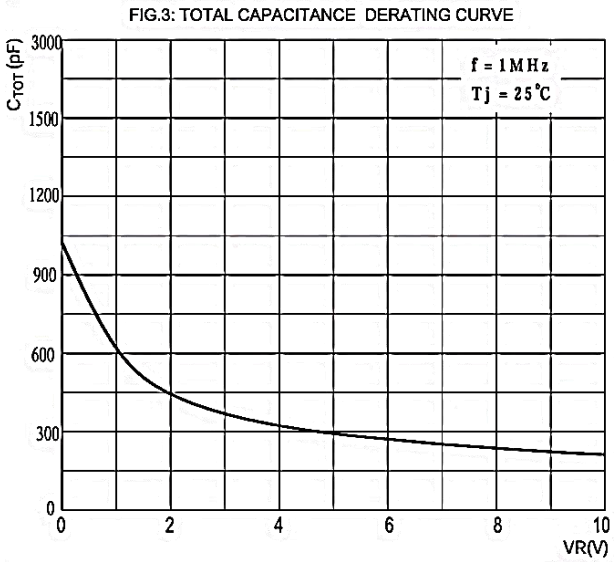
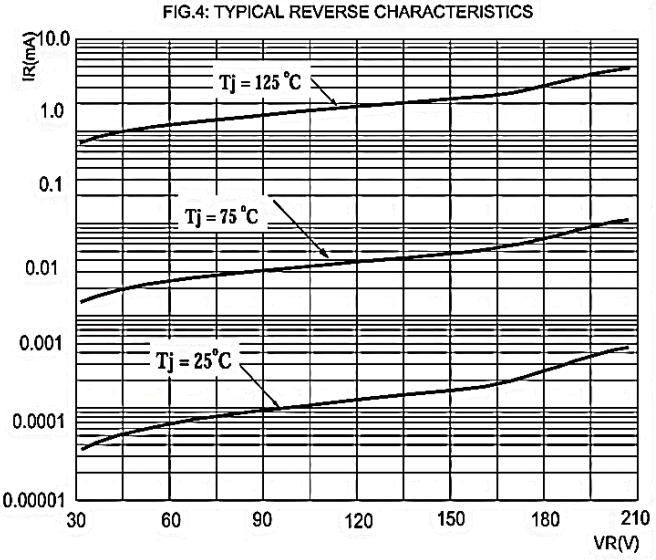


FIG.4: TYPICAL REVERSE CHARACTERISTICS



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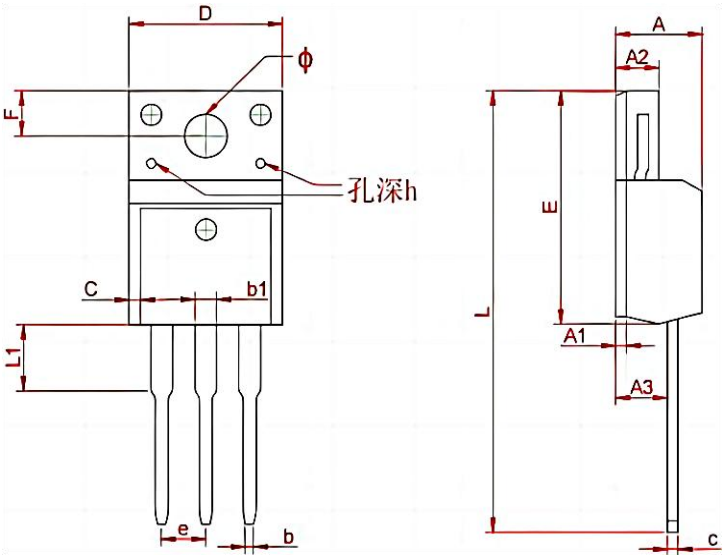
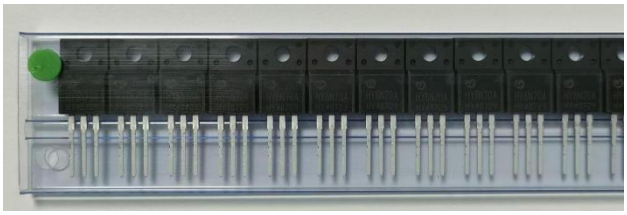
■ TO - 220F Package Outline Dimensions



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

■ TO - 220F Packing Information

50PCS



20 Tube

Inner Box

5 Inner Box

Outer Box

Package version	Tube dimensions LxW×H (mm)	Per Tube (pcs)	Tube per box	Inner box dimensions LxW×H (mm)	PCS/ Inner box	Outer box dimensions L×W×H(mm)	PCS/ Outer box
TO-220F	530*32*7	50	20	580*155*50	1000	602*277*188	5000

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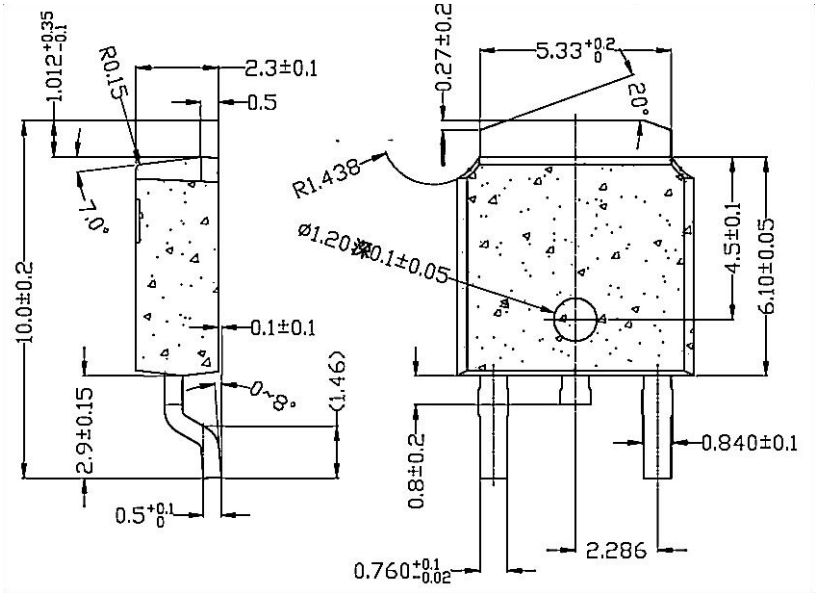
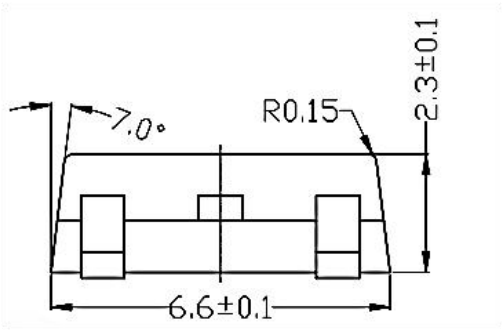
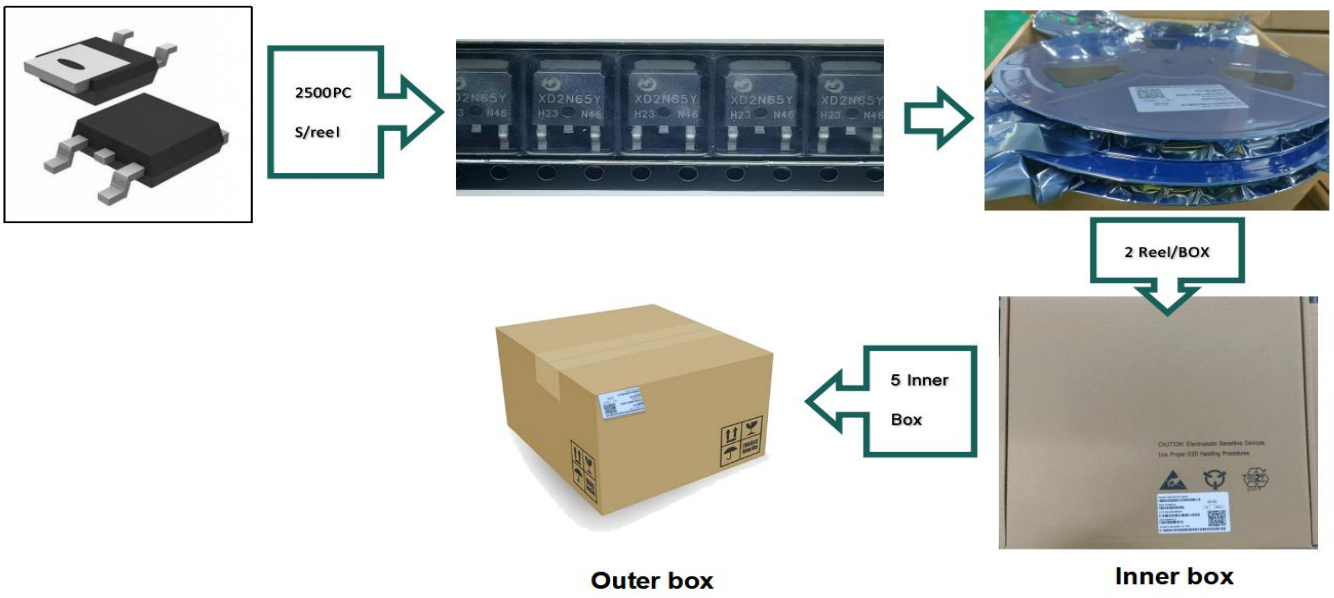
■ TO - 252 Package Outline Dimensions





■ TO - 252 Packing Information



Package version	Reel dimensions Φ×H (mm)	Per Reel (pcs)	Reels per box	Inner box dimensions L×W×H(mm)	Outer box (pcs)	Outer box dimensions L×W×H (mm)
TO-252	Φ330*20	2500	2	360*340*50	25000	375*375*280