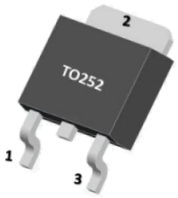
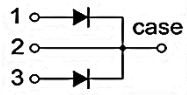
■ DESCRIPTION

The MBR30200CS 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 MBR30200CS is suitable for free wheeling and polarity protection, etc.



1. ANODE
2. CATHODE
3. ANODE



■ FEATURE

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

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

SYMBOL	PARAMETER		VALUE	UNIT
VRRM	Peak repetitive reverse voltage		200	V
VRWM	Working peak reverse voltage			V
VR	DC blocking voltage			V
VR(RMS)	RMS reverse voltage		140	V
IO	Average rectified output current		30（15*2）	A
IFSM	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
RθJA	Thermal Resistance fromJunction to Ambient	TO-252	62	°C/W
		TO-220F	62.5	
RθJC	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.

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

PARAMETER	SYMBOL	TEST CONDITIONS		MIN	TYP	MAX	UNIT
Reverse Voltage	$V_{(BR)R}$	I_R=0.2mA		200			V
Reverse current	I_R	V_R=200V	Tj=25℃			100	μA
			Tj=125℃		5.0		mA
Forward voltage	V_F	I_F=5A	Tj=25℃			0.9	V
			Tj=125℃		0.71		V
		I_F=15A	Tj=25℃			1.0	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

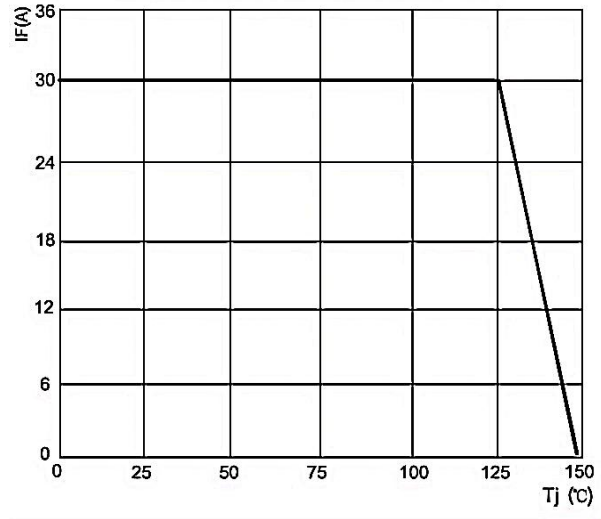


FIG.2: TYPICAL FORWARD CHARACTERISTICS

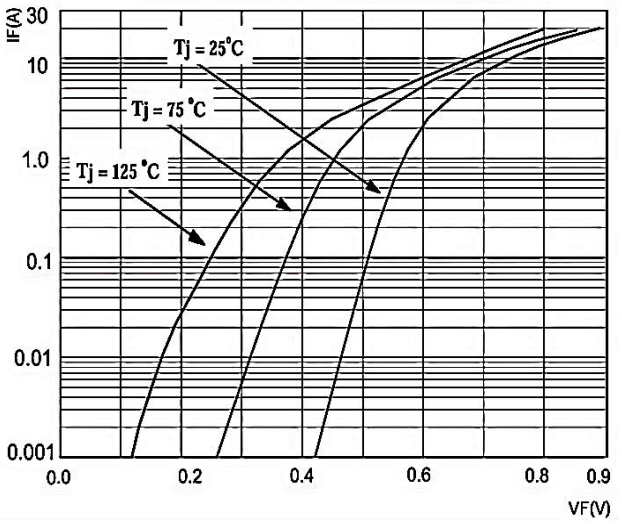


FIG.3: TOTAL CAPACITANCE DERATING CURVE

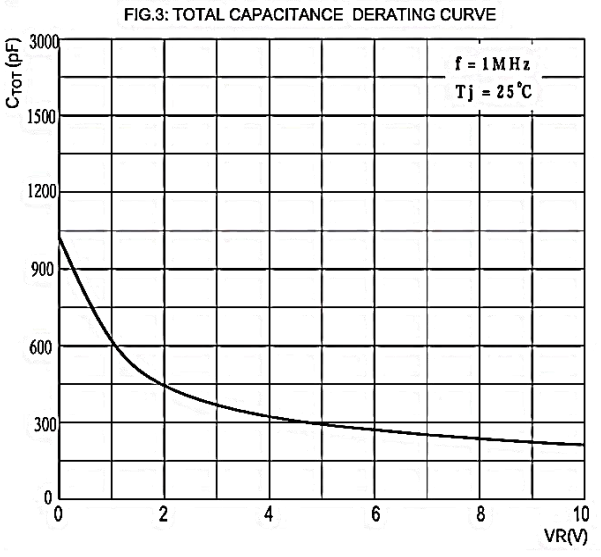
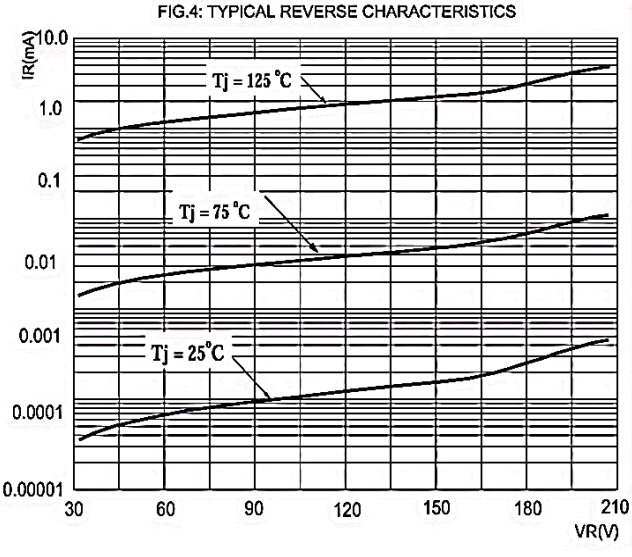
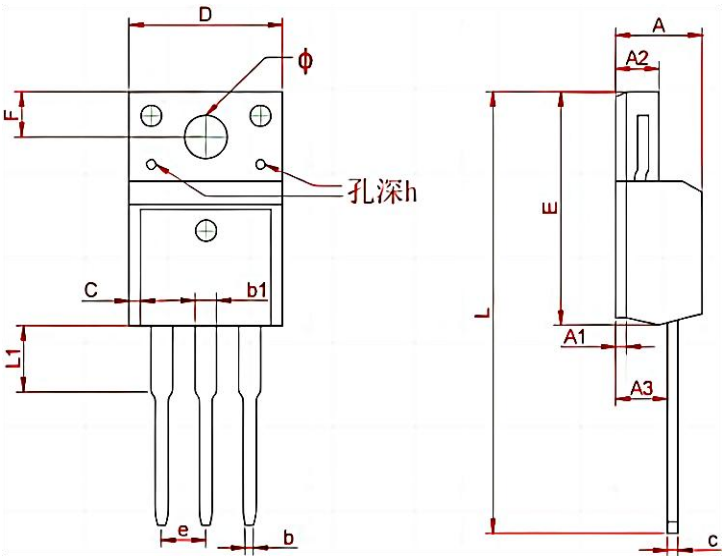


FIG.4: TYPICAL REVERSE CHARACTERISTICS



■ TO - 220F Package Outline Dimensions

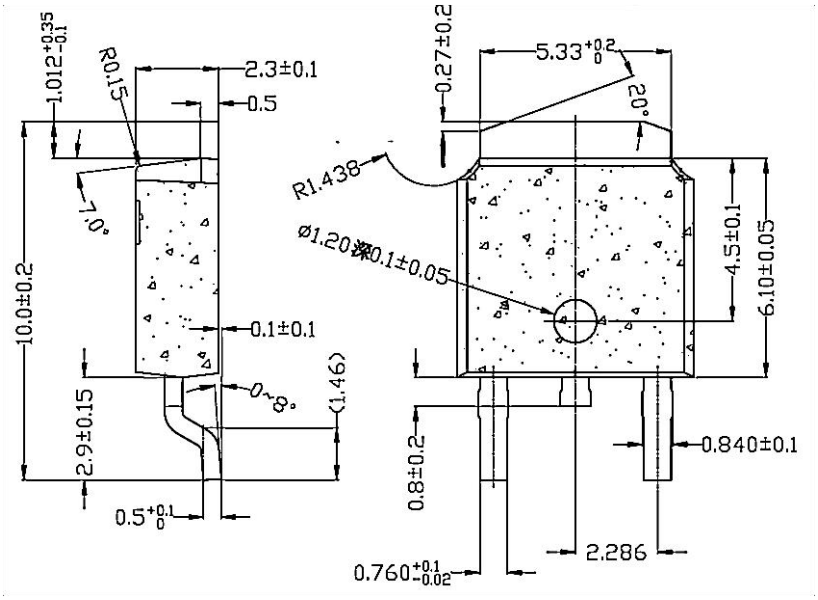


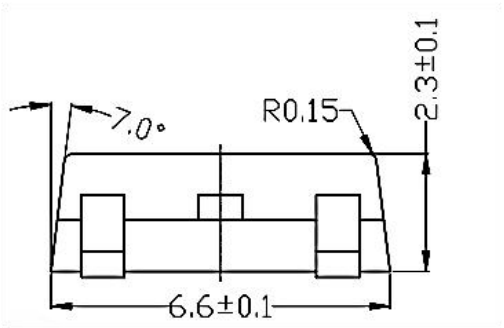
Symbol	Dimensions In Millimeters	
	Min	Max
A	4.300	4.750
A1	0.7 REF	
A2	2.300	2.850
A3	2.500	2.900
b	0.380	0.420
b1	1.220	1.280
C	1.08	1.200
c	0.480	0.520
D	10.15	10.450
E	15.700	15.950
e	2.574 TYP	
F	3.470 REF	
y	3.200 REF	
h	0.000	0.800
L	28.780	28.900
L1	2.990	3.100

■ TO - 220F Packing Information

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

■ 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