

MBR(D/F)20150CT

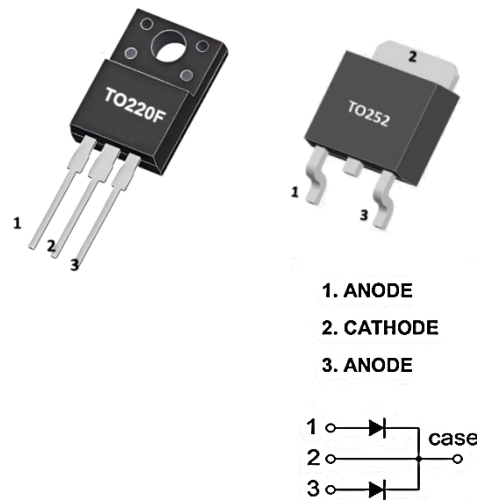
SCHOTTKY BARRIER RECTIFIER

DESCRIPTION

The MBR(D/F)20150CT 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



MARKING(The image is for reference only. Please take the actual product as the standard)



MBR(D/F)20150CT=Device Code

XXXX(X)=Date Code

Solid Dot=Green molding compound

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

SYMBOL	PARAMETER		VALUE	UNIT
VRRM	Peak repetitive reverse voltage		150	V
VRWM	Working peak reverse voltage		150	V
VR	DC blocking voltage		150	V
VR(RMS)	RMS reverse voltage		105	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.



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

PARAMETER	SYMBOL	TEST CONDITIONS		MIN	TYP	MAX	UNIT
Reverse voltage	V(BR)	I R=0.2mA		150			V
Reverse current	I R	VR=150V	Tj =25°C			100	uA
			Tj =125°C		2.0		mA
Forward voltage	VF	I F=5A	Tj =25°C			0.90	V
			Tj =125°C		0.64		V
		I F=10A	Tj =25°C			1	V
			Tj =125°C		0.71		V

Pulse test: pulse width $\leq 300\mu\text{s}$, duty cycles $\leq 2.0\%$.

■ TYPICAL CHARACTERISTICS

FIG.1: FORWARD CURRENT DERATING CURVE

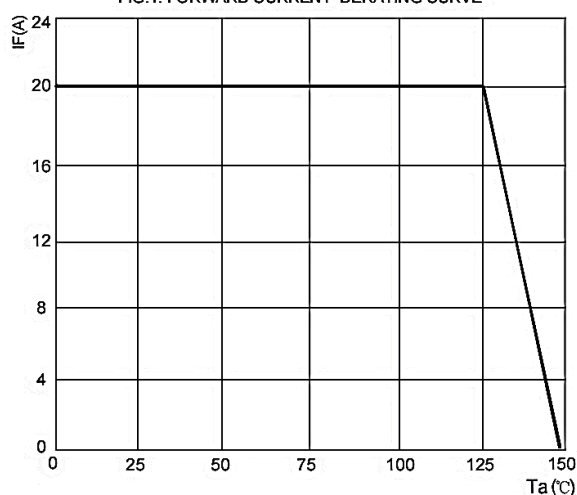


FIG.2: TYPICAL FORWARD CHARACTERISTICS

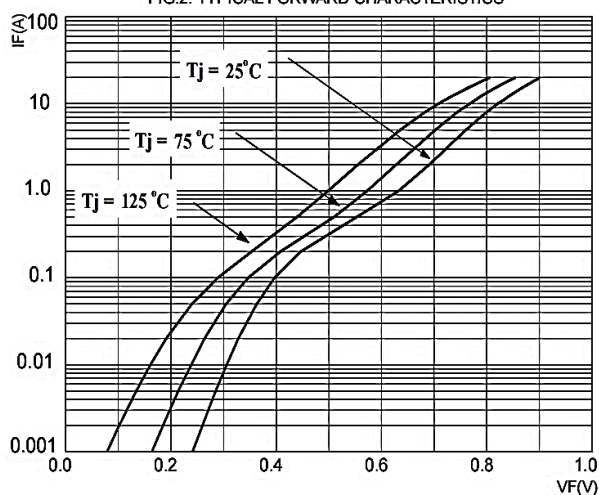


FIG.3: TOTAL CAPACITANCE DERATING CURVE

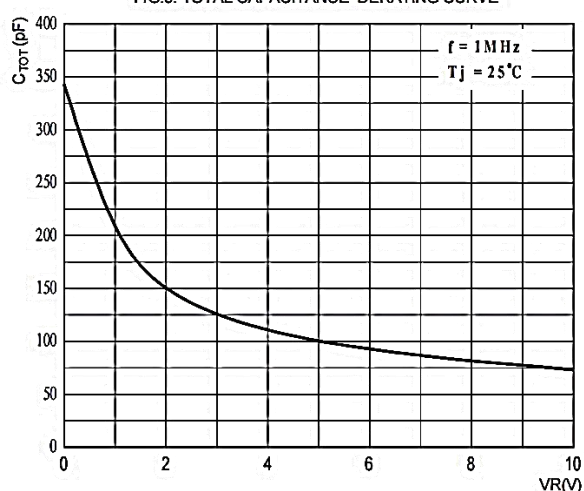
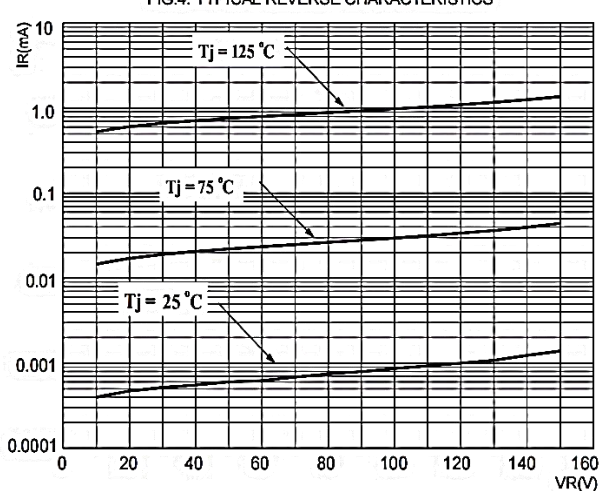
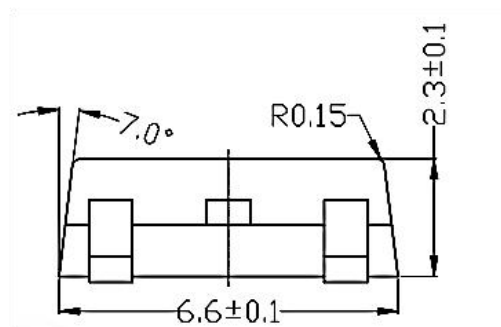


FIG.4: TYPICAL REVERSE CHARACTERISTICS





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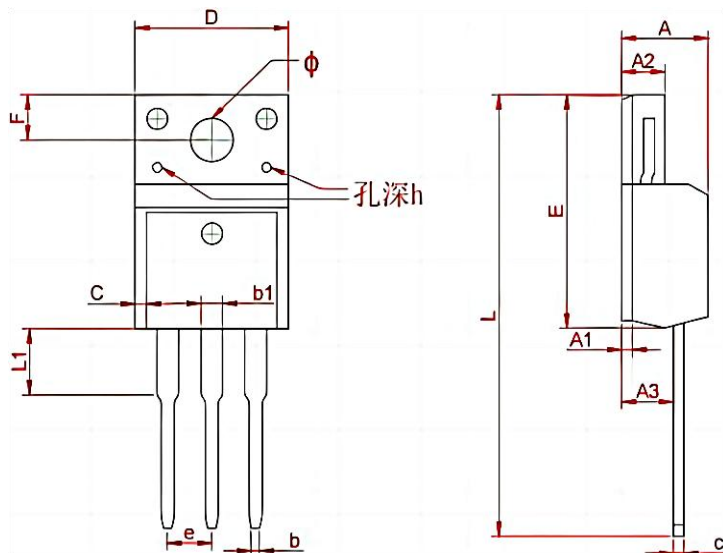
■ TO - 252 Packing Information

Package version	Reel dimensions $\Phi \times H$ (mm)	Per Reel (pcs)	Reels per box	Inner box dimensions $L \times W \times H$ (mm)	Outer box (pcs)	Outer box dimensions $L \times W \times H$ (mm)
T0-252	$\Phi 330 \times 20$	2500	2	360*340*50	25000	375*375*280

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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 LxWxH (mm)	Per Tube (pcs)	Tube per box	Inner box dimensions LxWxH (mm)	PCS/ Inner box	Outer box dimensions LxWxH(mm)	PCS/ Outer box
TO-220F	530*32*7	50	20	580*155*50	1000	602*277*188	5000