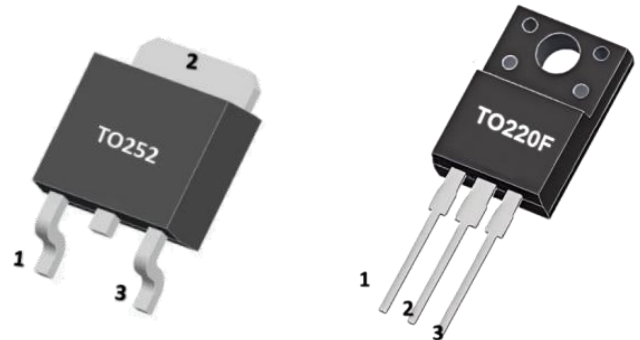


APPLICATIONS

The MBR3045CS/CT 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



MARKING

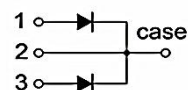


WPM : LOGO

MBR3045CT=Device Code(TO-220F)

MBR3045CS=Device Code(TO-252)

1. ANODE
2. CATHODE
3. ANODE



ABSOLUTE MAXIMUM RATINGS($T_A=25^\circ\text{C}$, unless otherwise specified.)

SYMBOL	PARAMETER		VALUE	UNIT
V_{RRM}	Peak repetitive reverse voltage		45	V
V_{RWM}	Working peak reverse voltage			
V_R	DC blocking voltage			
V_{R(RMS)}	RMS reverse voltage		31.5	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
R_{θJc}	Thermal resistance from junction to case , Tc=25 °C	TO-252	2.0	°C/W
		TO-220F	3.0	
R_{θJA}	Thermal resistance from junction to ambient	TO-252	62.5	°C/W
		TO-220F	62.5	
T_j	Junction temperature		150	°C
T_{stg}	Storage temperature		-55~+150	°C

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.

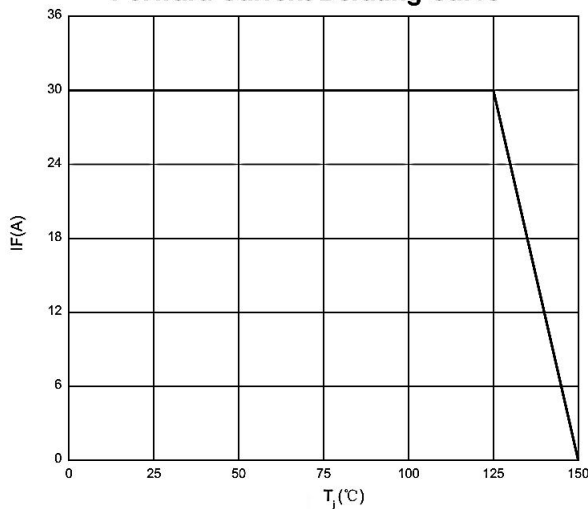
ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=mA$	45			V
Reverse current	I_R	$V_R=45V$	$T_J=25^\circ\text{C}$	40	150	μA
			$T_J=125^\circ\text{C}$	23		mA
Forward voltage	V_F	$I_F=10A$	$T_J=25^\circ\text{C}$	0.556	0.58	V
			$T_J=125^\circ\text{C}$	0.37		V
		$I_F=15A$	$T_J=25^\circ\text{C}$	0.48	0.55	V
			$T_J=125^\circ\text{C}$	0.44		V

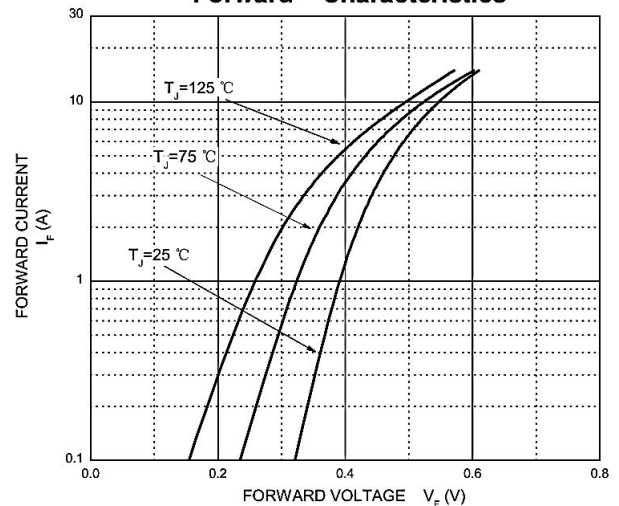
Pulse test: pulse width $\leq 300\mu s$, duty cycles $\leq 2.0\%$.

TYPICAL CHARACTERISTICS

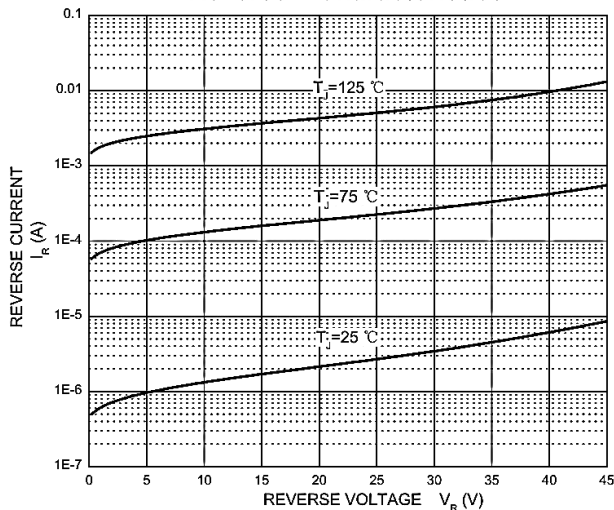
Forward Current Derating Curve



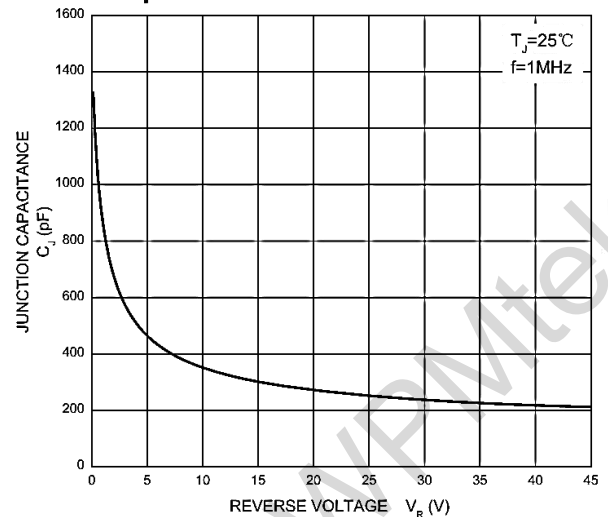
Forward Characteristics



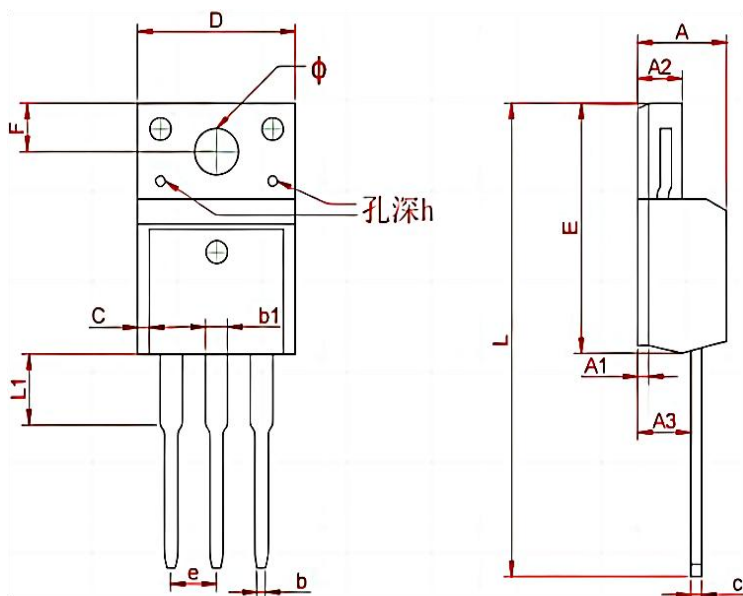
Reverse Characteristics



Capacitance Characteristics Per Diode



TO - 220F Package Outline Dimensions

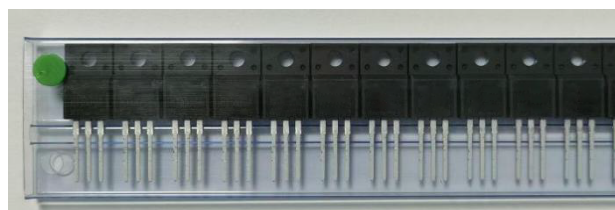


Symbol	Dimensions In Millimeters	
	Min	Max
A	4.300	4.750
A1	0.7 REF	
A2	2.300	2.850
A3	2.500	2.900
b	0.380	0.420
b1	1.220	1.280
C	1.08	1.200
c	0.480	0.520
D	10.15	10.450
E	15.700	15.950
e	2.574 TYP	
F	3.470 REF	
y	3.200 REF	
h	0.000	0.800
L	28.780	28.900
L1	2.990	3.100

TO - 220F Packing Information



50PCS



20 Tube



5 Inner
Box

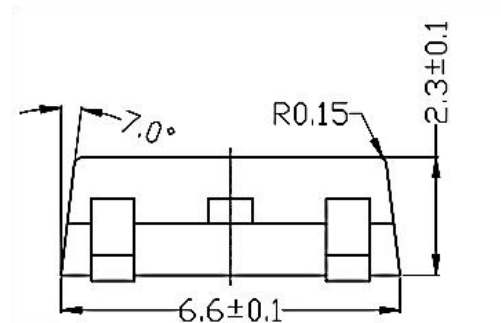
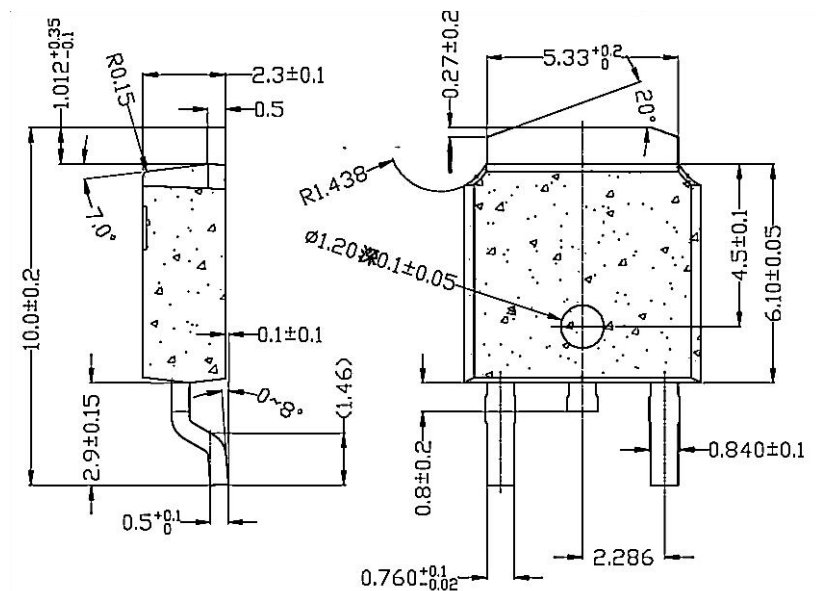


Outer Box

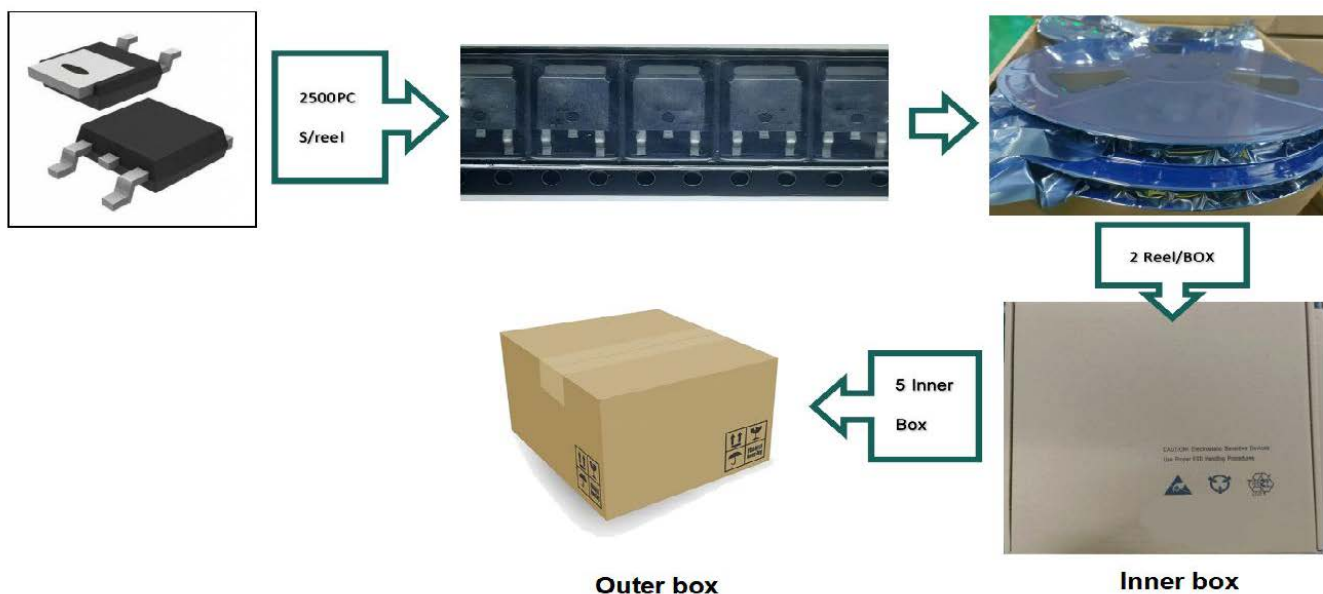
Inner Box

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

TO - 252 Package Outline Dimensions



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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