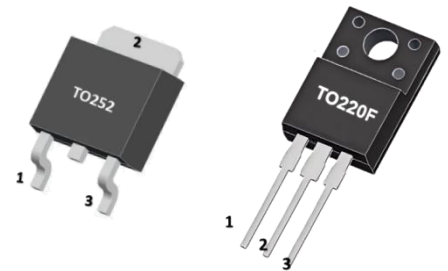


DESCRIPTION

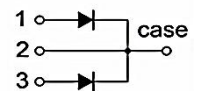
The MBR2045CS/CT meet the ROHS and Green Product requirement with full function reliability approved.

FEATURE

- * Low Power Loss, High Efficiency.
- * Guard Ring Die Construction for Transient Protection.
- * High Current Capability and Low Forward Voltage Drop.



1. ANODE
2. CATHODE
3. ANODE



MARKING



WPM : LOGO

MBR2045CT=Device Code(TO-220F)

MBR2045CS=Device Code(TO-252)

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

SYMBOL	PARAMETER		VALUE	UNIT
VRRM	Peak repetitive reverse voltage		45	V
VRWM	Working peak reverse voltage		45	V
VR	DC blocking voltage		45	V
VR(RMS)	RMS reverse voltage		31.5	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		150	$^{\circ}\text{C}$
Tstg	Storage temperature		-55~+150	$^{\circ}\text{C}$
R θ JA	Thermal Resistance from Junction to Ambient	TO-252	100	$^{\circ}\text{C/W}$
		TO-220F	58	
R θ JC	Thermal Resistance From Junction To Case	TO-252	5	$^{\circ}\text{C/W}$
		TO-220F	3	

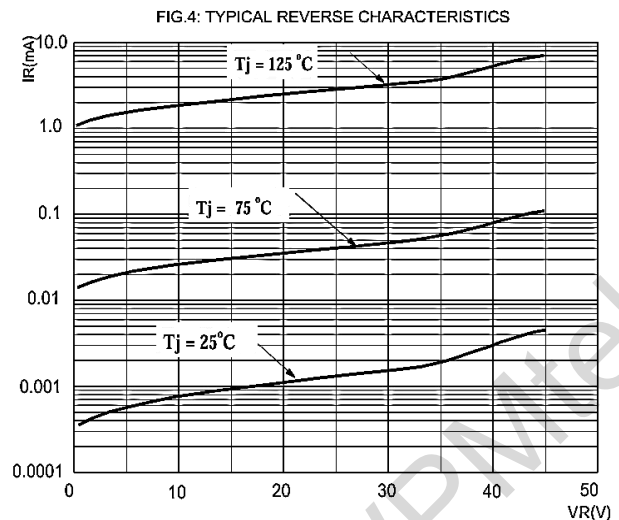
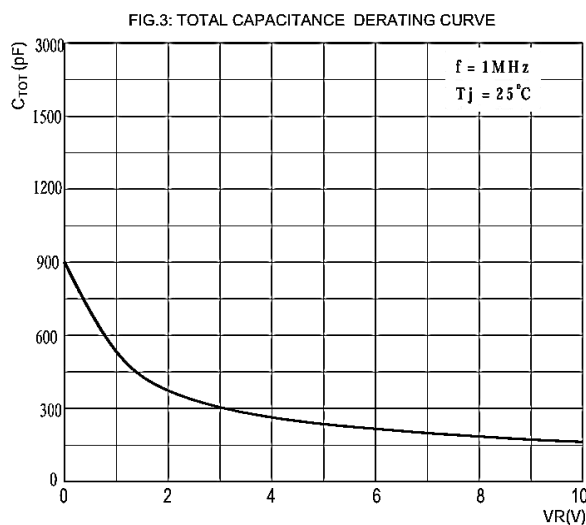
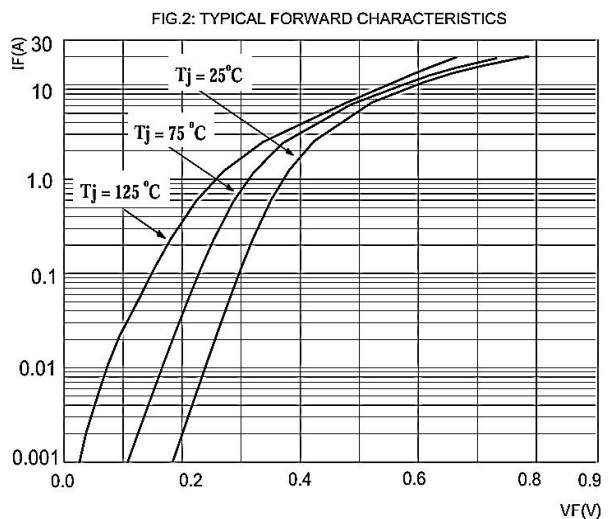
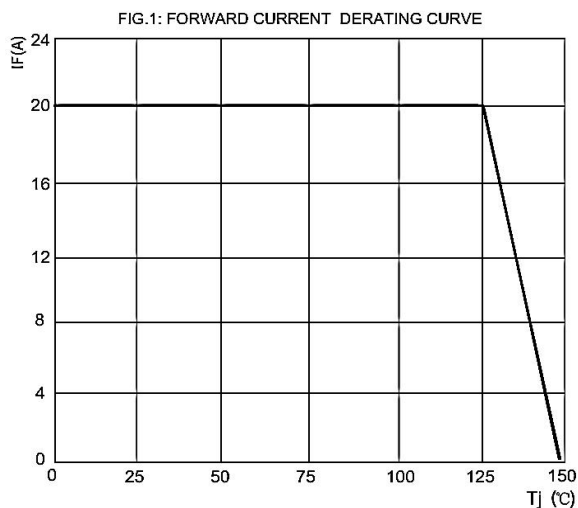
Notes: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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

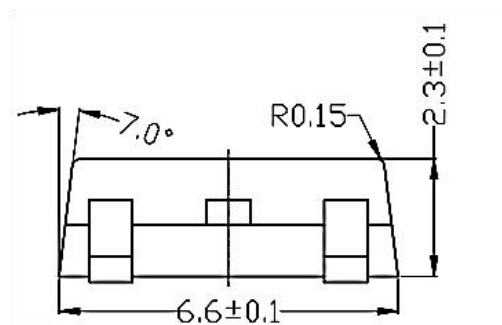
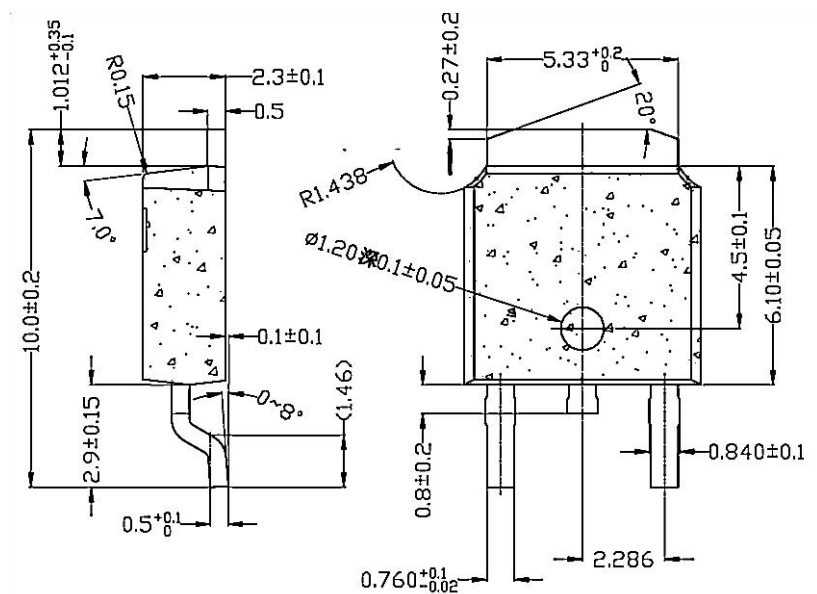
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse voltage	$V_{(BR)}$	$I_R=0.1\text{mA}$	45			V
Reverse current	I_R	$V_R=45\text{V}$		$T_J=25^\circ\text{C}$	40	μA
				$T_J=125^\circ\text{C}$	10	mA
Forward voltage	V_{F1}	$I_F=5\text{A}$	$T_J=25^\circ\text{C}$	0.5	0.55	V
			$T_J=125^\circ\text{C}$	0.44		V
	V_{F2}	$I_F=10\text{A}$	$T_J=25^\circ\text{C}$	0.60	0.64	V
			$T_J=125^\circ\text{C}$	0.56		V

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

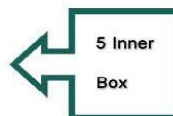
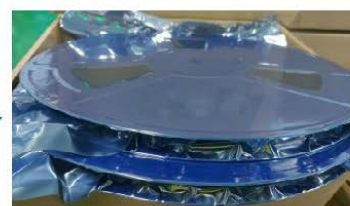
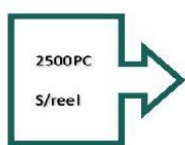
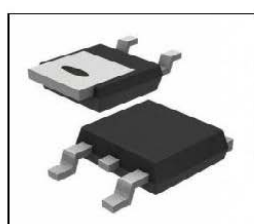
TYPICAL CHARACTERISTICS



TO - 252 Package Outline Dimensions



TO - 252 Packing Information

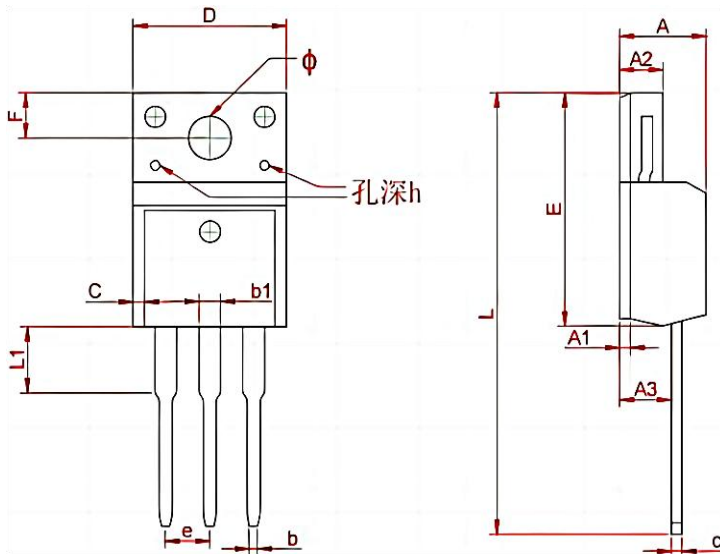


Outer box

Inner box

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

TO - 220F Package Outline Dimensions

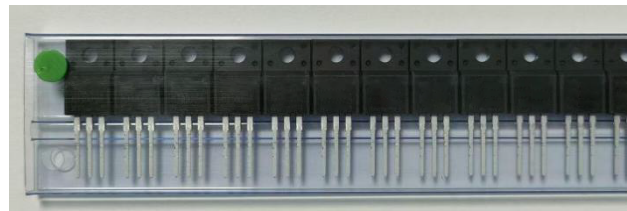


Symbol	Dimensions In Millimeters	
	Min	Max
A	4.300	4.750
A1	0.7 REF	
A2	2.300	2.850
A3	2.500	2.900
b	0.380	0.420
b1	1.220	1.280
C	1.08	1.200
c	0.480	0.520
D	10.15	10.450
E	15.700	15.950
e	2.574 TYP	
F	3.470 REF	
y	3.200 REF	
h	0.000	0.800
L	28.780	28.900
L1	2.990	3.100

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

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