

DESCRIPTION

The MBR4045CT is a 40A Schottky barrier rectifier, it uses our advanced technology to provide the customers with high surge capability, high efficiency, high current capability, low power loss and low forward voltage drop, etc. The MBR4045CT is suitable for free wheeling and polarity protection, etc.

FEATURE

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

MARKING



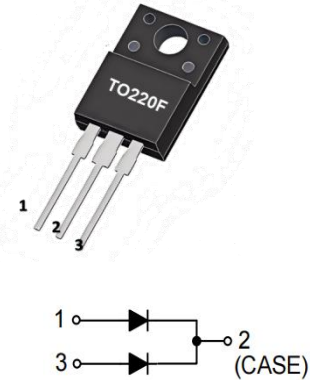
WPM : LOGO

MBR4045CT=Device Code

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			V
VR	DC blocking voltage			V
VR(RMS)	RMS reverse voltage		31.5	V
IO	Average rectified output current	Per Leg	20	A
	Tc=105°C	Total	40	
IFSM	Non-Repetitive peak forward surge current(8.3ms half sine wave)		300*2	A
Tj	Junction temperature		150	°C
Tstg	Storage temperature		-55~+150	°C
RθJA	Thermal Resistance fromJunction to Ambient		62.5	°C/W
RθJc	Thermal Resistance From Junction To Case		2	°C/W

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.



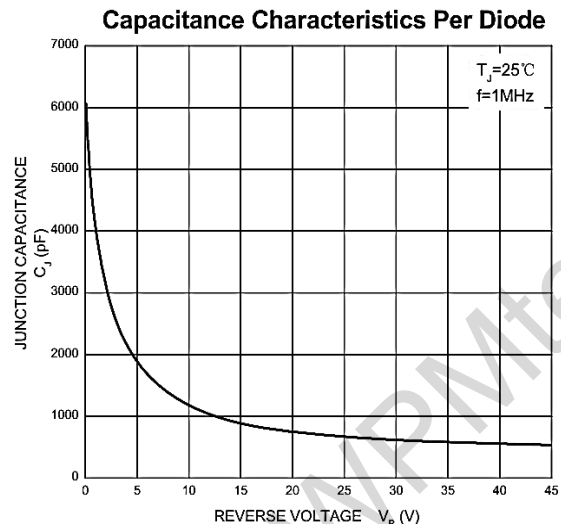
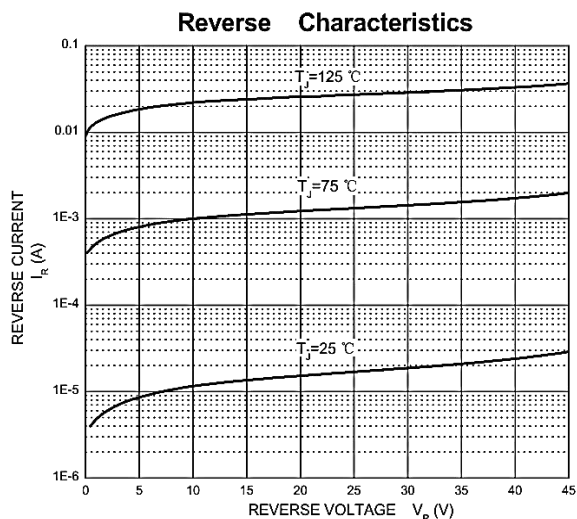
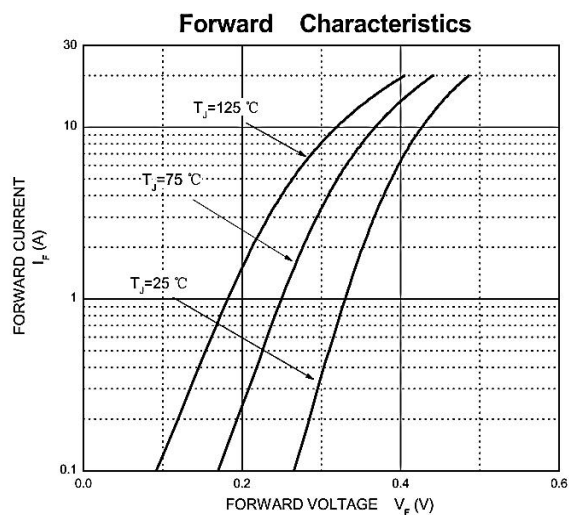
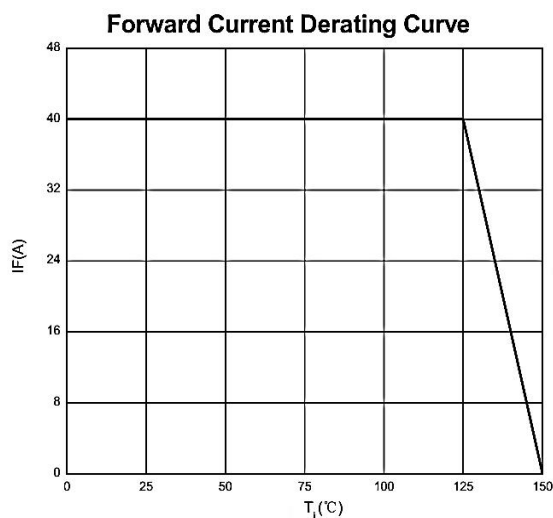
ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse voltage	$V_{(BR)}$	$I_R=1\text{mA}$	45			V
Reverse current	I_R	$V_R=60\text{V}$	$T_J=25^\circ\text{C}$	30	200	μA
			$T_J=125^\circ\text{C}$	37		mA
Forward voltage	V_F	$I_F=10\text{A}$	$T_J=25^\circ\text{C}$	0.43		V
			$T_J=125^\circ\text{C}$	0.32		V
		$I_F=20\text{A}$	$T_J=25^\circ\text{C}$	0.48	0.55	V
			$T_J=125^\circ\text{C}$	0.41		V

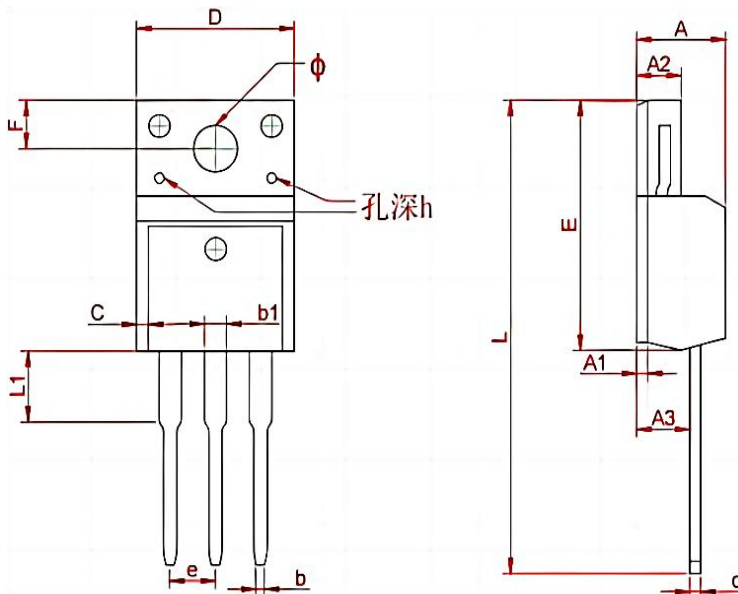
Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC

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

TYPICAL 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



50PCS



20 Tube



Outer Box

5 Inner
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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