MBRF10L45CT-T

Chip Integration Technology Corporation

10A Trench Schottky Rectifier

Main Product Characteristics

$I_{F(AV)}$	5A x 2
V_{RRM}	45V
T_J	150°C
$V_{F(Typ)}$	0.405V

■ Features

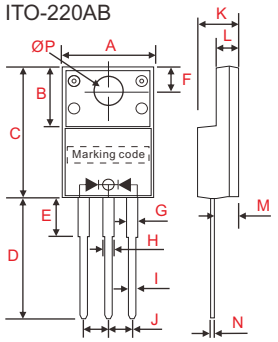
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical Data

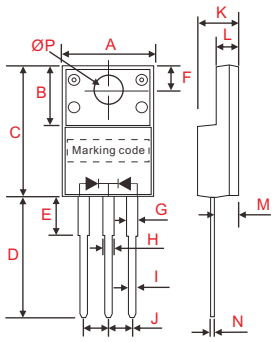
- Epoxy : UL94-V0 rated flame retardant.
- Case : JEDEC ITO-220AB molded plastic body.
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Weight : Approximated 2.25 gram.

■ Outline

ITO-220AB



symbol	Dimensions in inches(millimeters)	
	Min	Max
A	0.390(9.9)	0.408(10.36)
B	0.268(6.8)	0.283(7.2)
C	0.583(14.8)	0.598(15.2)
D	0.512(13.0)	0.543(13.8)
E	0.102(2.6)	0.150(3.8)
F	0.101(2.55)	0.112(2.85)
G	0.043(1.1)	0.053(1.35)
H	0.043(1.1)	0.053(1.35)
I	0.020(0.5)	0.028(0.7)
J	0.098(2.49)	0.102(2.59)
K	0.169(4.3)	0.185(4.7)
L	0.112(2.85)	0.128(3.25)
M	0.098(2.5)	0.114(2.9)
N	0.020(0.5)	0.028(0.7)
ØP	0.130(3.3)	0.134(3.5)



Alternate

symbol	Dimensions in inches(millimeters)	
	Min	Max
A	0.383(9.72)	0.404(10.27)
B	0.248(6.3)	0.272(6.9)
C	0.571(14.5)	0.610(15.5)
D	0.516(13.1)	0.547(13.9)
E	-	0.161(4.1)
F	0.094(2.4)	0.126(3.2)
G	0.039(1.0)	0.051(1.3)
H	0.039(1.0)	0.051(1.3)
I	0.020(0.5)	0.035(0.9)
J	0.095(2.41)	0.105(2.67)
K	0.169(4.3)	0.189(4.8)
L	0.055(1.4)	0.122(3.1)
M	0.091(2.3)	0.117(2.96)
N	0.014(0.35)	0.031(0.8)
ØP	0.122(3.1)	0.142(3.6)

Dimensions in inches and (millimeters)

■ Circuit Diagram

■ Maximum Ratings

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Condition	Symbol	MBRF10L45CT-T	UNIT
Working Peak Reverse Voltage		V_{RWM}	45	V
Forward Rectified Current (total device)		I_O	10	A
Forward Surge Current (per diode)	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	150	A
Peak Repetitive Reverse Surge Current (per diode)	Pulse width 2us, 1000Hz, square wave at T_A 25°C,10 cycles	I_{RRM}	1	A
Thermal Resistance (per diode)	Junction to case	$R_{\theta JC}$	2	°C/W
	Junction to ambient	$R_{\theta JA}$	50	
Storage Temperature		T_{STG}	-55 ~ +150	°C
Operating Junction Temperature		T_J	-55 ~ +150	°C

■ Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Condition	Symbol	MIN.	TYP.	MAX.	UNIT
Forward Voltage Drop (per diode)	I_F = 3A, T_J = 25°C	V_F		440		mV
	I_F = 5A, T_J = 25 °C			480	550	
	I_F = 5A, T_J = 125 °C			405		
Reverse Current (per diode)	V_R = V_{RWM} , T_J = 25°C	I_R		0.005	0.1	mA
	V_R = V_{RWM} , T_J = 125°C			3	20	
Reverse Breakdown Voltage (per diode)	I_R = 0.1mA, T_J = 25°C	V_{BR}	45			V

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■ Rating and Characteristic Curves

Fig. 1 - Forward Characteristics

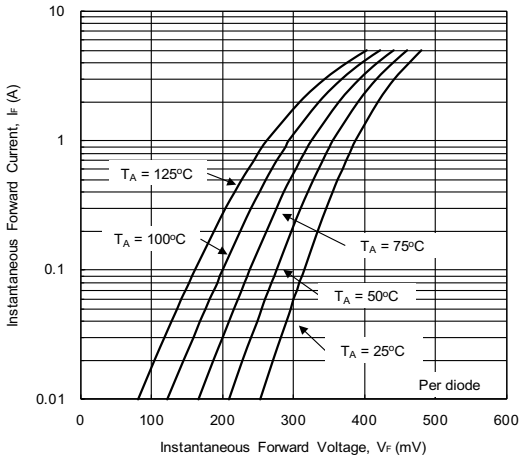


Fig. 2 - Reverse Characteristics

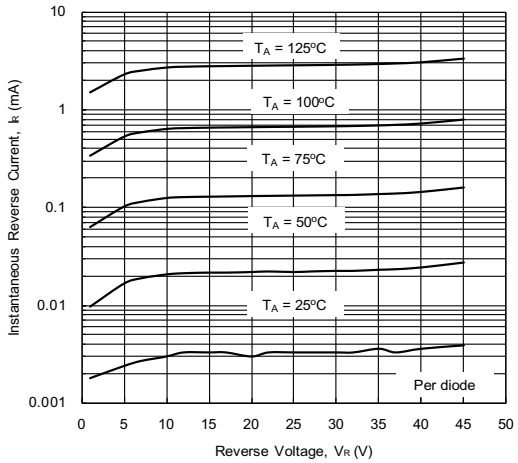


Fig. 3 - Forward Power Dissipation

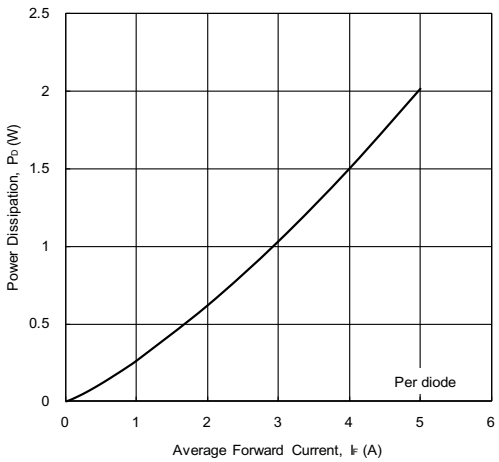


Fig. 4 - Forward Current Derating Curve

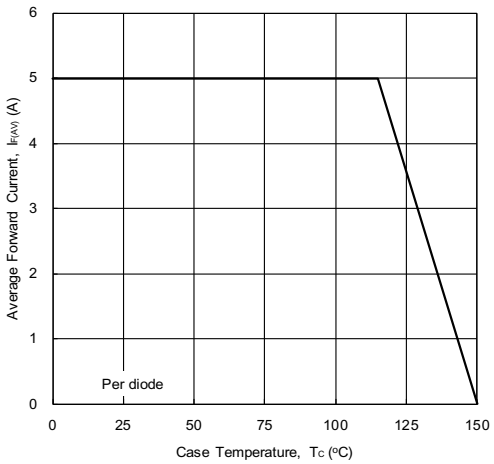
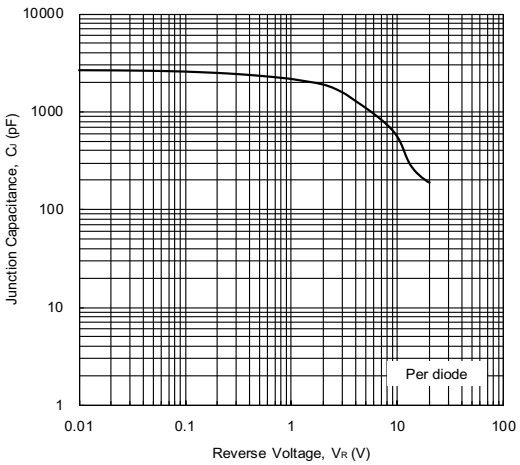
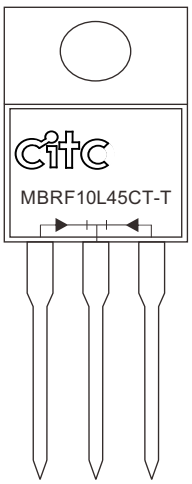


Fig. 5 - Junction Capacitance



■ Marking Information



MBRF10L45CT-T : Product type marking code

: CITC Logo

■ Ordering / Packing Information

Part number		Case	Q'TY/Tube (PCS)	Q'TY/Box (PCS)	Q'TY/Carton (PCS)
Pb Pb-Free	MBRF10L45CT-T	ITO-220AB	50	1000	5000
HF Halogen Free	MBRF10L45CTG-T				

Notes : 1. For packaging details please reference our website at http://www.citcorp.com.tw/tchinese/products/index.php

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