MBR10L100CT-T

Chip Integration Technology Corporation

10A Trench Schottky Rectifier

Main Product Characteristics

$I_{F(AV)}$	5 X 2A
V_{RRM}	100V
T_J	-55 to +150°C
$V_{F(Typ)}$	0.56V

■ Features

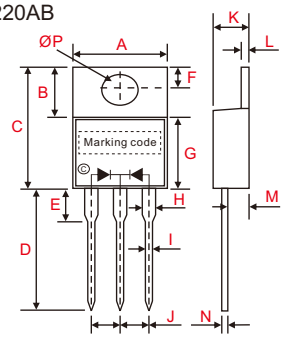
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

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

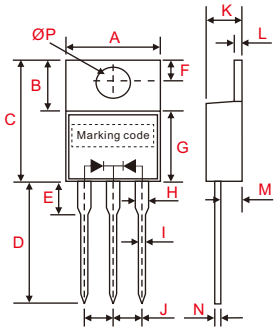
■ Outline

TO-220AB



symbol	Dimensions in inches(millimeters)	
	Min	Max
A	0.398(10.1)	0.406(10.3)
B	0.236(6.0)	0.252(6.4)
C	0.579(14.7)	0.594(15.1)
D	0.543(13.8)	0.551(14.0)
E	0.143(3.63)	0.159(4.03)
F	0.104(2.64)	0.112(2.84)
G	0.335(8.5)	0.350(8.9)
H	0.046(1.17)	0.054(1.37)
I	0.028(0.71)	0.036(0.91)
J	0.098(2.49)	0.102(2.59)
K	0.176(4.47)	0.184(4.67)
L	0.046(1.17)	0.054(1.37)
M	0.102(2.6)	0.110(2.8)
N	0.019(0.28)	0.021(0.48)
ØP	0.147(3.74)	0.155(3.94)

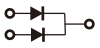
Alternate



symbol	Dimensions in inches(millimeters)	
	Min	Max
A	0.394(10.0)	0.413(10.5)
B	0.228(5.8)	0.268(6.8)
C	0.570(14.48)	0.625(15.87)
D	0.519(13.18)	0.558(14.18)
E	0.089(3.5)	0.099(3.9)
F	0.100(2.54)	0.120(3.04)
G	0.330(8.38)	0.350(8.9)
H	0.045(1.15)	0.060(1.52)
I	0.029(0.75)	0.037(0.95)
J	0.095(2.42)	0.105(2.66)
K	0.160(4.07)	0.190(4.82)
L	0.045(1.15)	0.055(1.39)
M	0.080(2.04)	0.110(2.8)
N	0.013(0.33)	0.019(0.52)
ØP	0.148(3.75)	0.156(3.95)

Dimensions in inches and (millimeters)

■ Circuit Diagram



■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Conditions	Symbol	MBR10L100CT-T	UNIT
Working peak reverse voltage		V_{RWM}	100	V
Forward rectified current (total device)		I_O	10	A
Peak Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	150	
Peak repetitive reverse surge current	2us-1Khz	I_{RRM}	1	
Typical Thermal resistance (per leg)	Junction to case	$R_{\theta JC}$	2	°C/W
	Junction to ambient	$R_{\theta JA}$	50	°C/W
Storage temperature		T_{STG}	-55 ~ +150	°C
Operating Junction temperature		T_J	-55 ~ +150	°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Instantaneous Forward voltage drop (per diode)	I_F = 3A, T_J = 25°C	V_F		550		mV
	I_F = 5A, T_J = 25°C			630	670	
	I_F = 5A, T_J = 125°C			560		
Instantaneous Reverse current (per diode)	V_R = 100V T_J = 25°C	I_R		3	50	uA
	V_R = 100V T_J = 125°C			3	25	mA
Reverse Breakdown Voltage (per diode)	I_R = 0.1mA, T_J = 25°C	V_{BR}	100			

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■ Rating and characteristic curves

Fig. 1 - Forward Characteristics

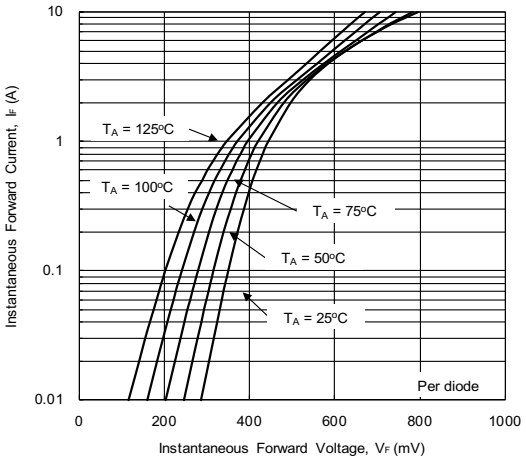


Fig. 2 - Reverse Characteristics

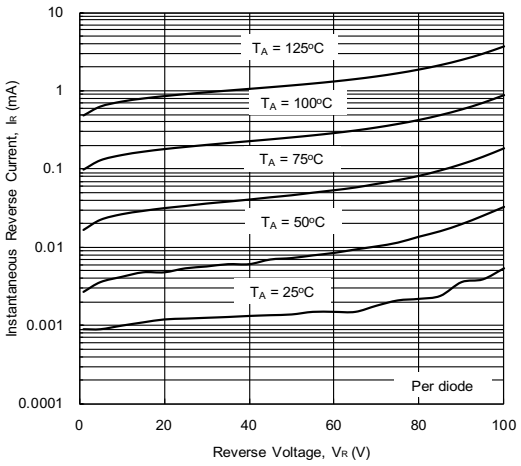


Fig. 3 - Forward Power Dissipation

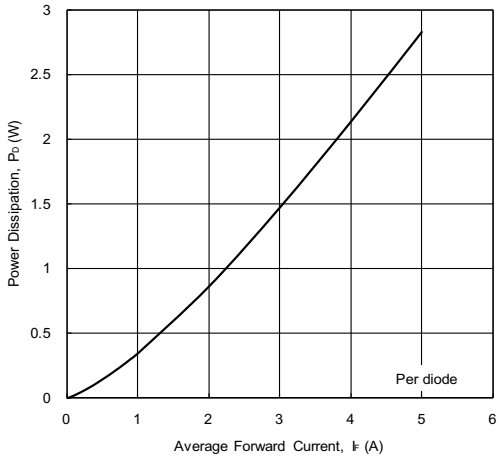


Fig. 4 - Forward Current Derating Curve

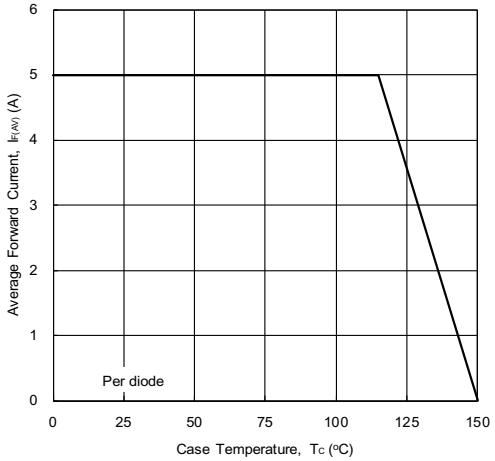
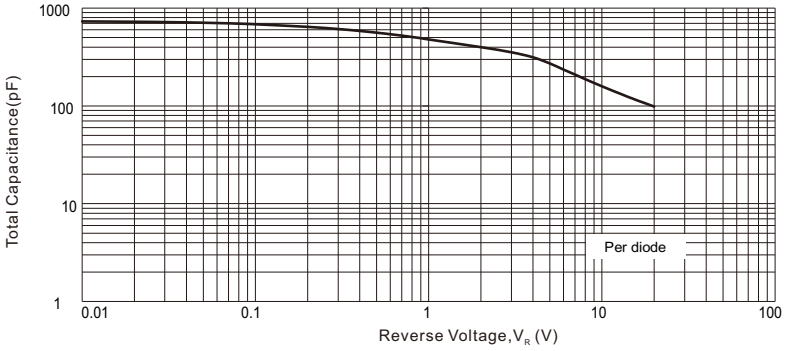
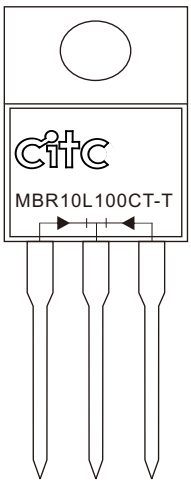


Fig. 5 - Total Capacitance VS. reverse voltage



■ Marking information



MBR10L100CT-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	MBR10L100CT-T	TO-220AB	50	1000	5000
HF Halogen Free	MBR10L100CTG-T				

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

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