Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

MBRF4080CT
MBRF4090CT
MBRF40100CT

Technical Data
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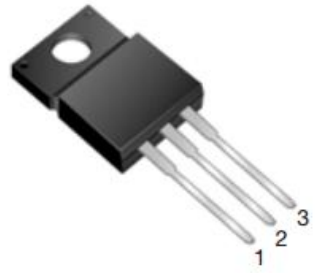
RoHS

MBRF4080CT/MBRF4090CT/MBRF40100CT
SCHOTTKY RECTIFIER

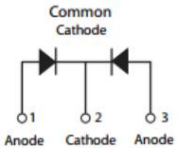


ITO-220AB

Features

- **150°C T_J operation**
- **Center tap configuration**
- **Low forward voltage drop**
- **High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance**
- **High frequency operation**
- **Guard ring for enhanced ruggedness and long term reliability**
- **This is a Pb − Free Device**
- **All SMC parts are traceable to the wafer lot**
- **Additional testing can be offered upon request**

Circuit Diagram



Applications

- **Switching power supply**
- **Converters**
- **Free-Wheeling diodes**
- **Reverse battery protection**

Maximum Ratings:

Characteristics	Symbol	Condition	Max.		Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	80 90 100	MBRF4080CT MBRF4090CT MBRF40100CT	V
Average Rectified Forward Current	$I_{F\ (AV)}$	50% duty cycle @Tc=135°C, rectangular wave form	20(Per Leg) 40(Per Device)		A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I_{FSM}	8.3ms, Half Sine pulse	280		A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V_{F1}	@ 10A, Pulse, T_J = 25 °C @ 20A, Pulse, T_J = 25 °C	0.70 0.80	0.80 0.88	V
	V_{F2}	@ 10A, Pulse, T_J = 125 °C @ 20A, Pulse, T_J = 125 °C	0.59 0.70	0.70 0.74	V
Reverse Current(Per Leg)*	I_{R1}	@V_R = rated V_R, T_J = 25 °C	0.009	1.0	mA
	I_{R2}	@V_R = rated V_R, T_J = 125 °C	6.4	20	mA
Junction Capacitance(Per Leg)	C_T	@V_R = 5V, T_C = 25 °C, f_{SIG} = 1MHz	363	800	pF
Series Inductance(Per Leg)	L_S	Measured lead to lead 5 mm from package body	8.0	-	nH
Voltage Rate of Change	dv/dt	-	-	10,000	V/µs
RSM Isolation Voltage (t = 1.0 second, R. H. < =30%, T_A = 25 °C)	V_{ISO}	Clip mounting, the epoxy body away from the heatsink edge by more than 0.110" along the lead direction.	-	4500	V
		Clip mounting, the epoxy body is inside the heatsink.	-	3500	

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RoHS

		Screw mounting, the epoxy body is inside the heatsink.	-	1500	

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	°C
Storage Temperature	T_{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	3.5	°C/W
Approximate Weight	wt	-	2	g
Case Style	ITO-220AB			

Ratings and Characteristics Curves

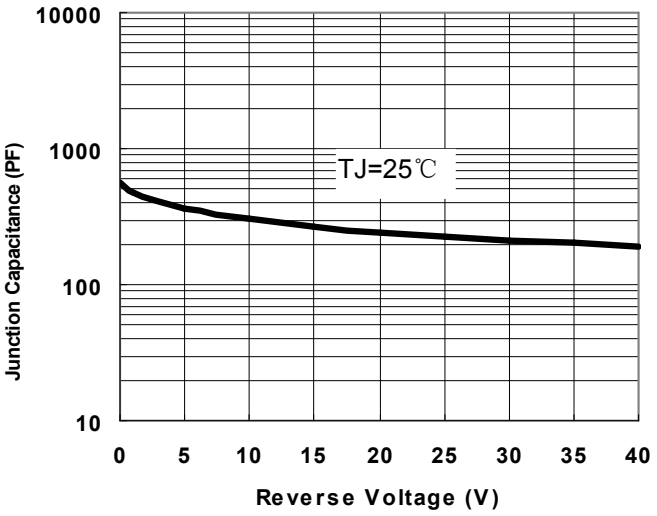

Fig.1-Typical Junction Capacitance

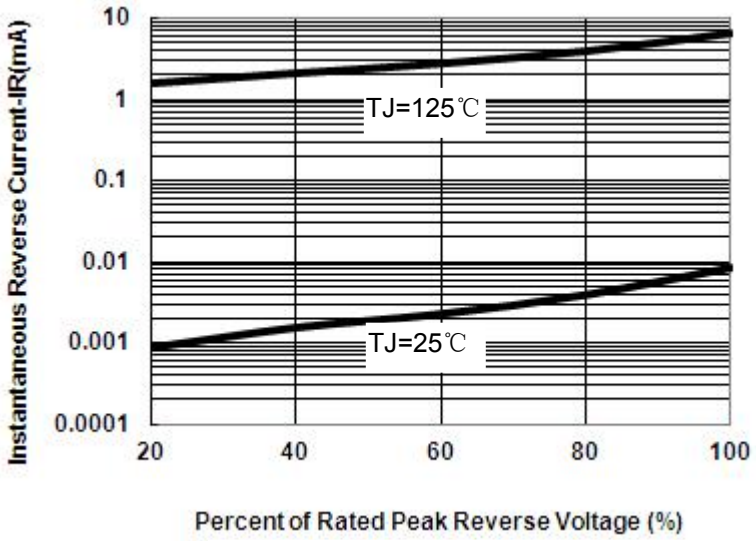

Fig.2-Typical Reverse Characteristics

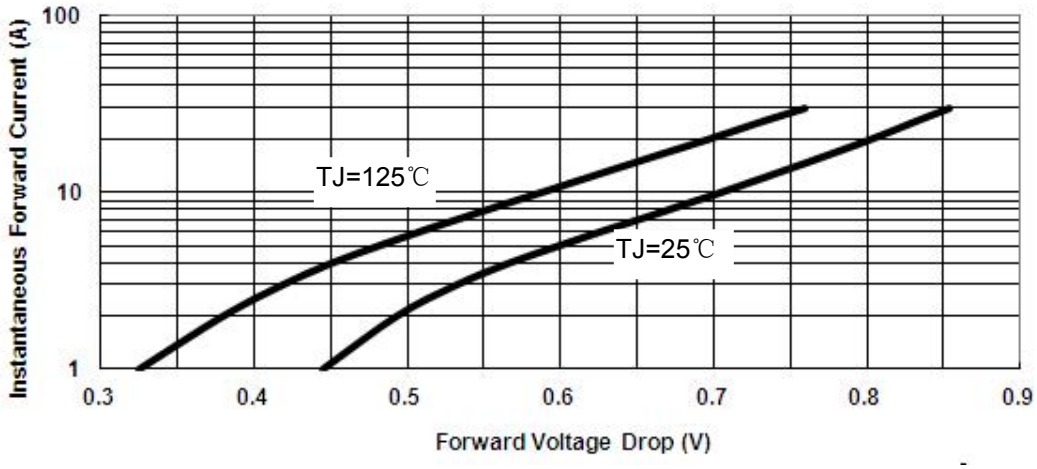

Fig.3-Typical Instantaneous Forward Voltage Characteristics

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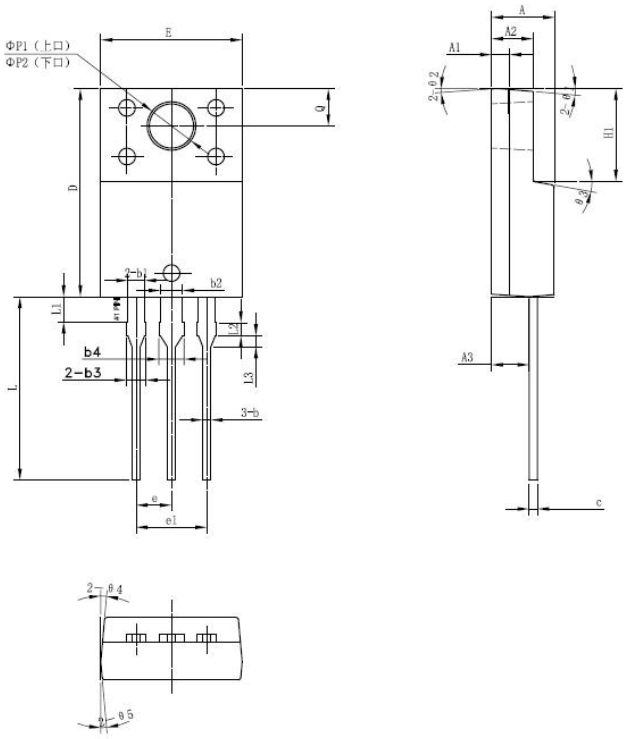
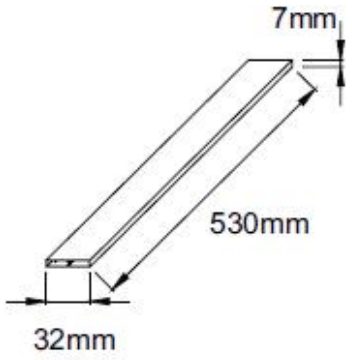
Mechanical Dimensions ITO-220AB

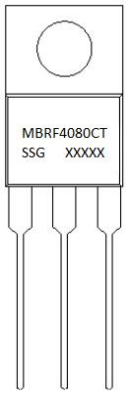


SYMBOL	Millimeters		
	MIN.	TYP.	MAX.
A	4.30	4.50	4.70
A1	1.10	1.30	1.50
A2	2.80	3.00	3.20
A3	2.50	2.70	2.90
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
b2	1.50	1.60	1.75
b3	1.20	1.30	1.45
b4	1.60	1.70	1.85
c	0.50	0.60	0.75
D	14.80	15.00	15.20
E	9.96	10.16	10.36
e		2.55	
e1		5.10	
H1	6.50	6.70	6.90
L	12.70	13.20	13.70
L1	1.60	1.80	2.00
L2	0.80	1.00	1.20
L3	0.60	0.80	1.00
ΦP1(上口)	3.30	3.50	3.70
ΦP2(下口)	2.99	3.19	3.39
Q	2.50	2.70	2.90
Θ1		5°	
Θ2		4°	
Θ3		10°	
Θ4		5°	
Θ5		5°	

Tube Specification



Marking Diagram



Where XXXXX is YYWWL

MBR	= Device Type
F	= Package type
40	= Forward Current (40A)
80	= Reverse Voltage (80V)
CT	= Configuration
SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Ordering Information

Device	Package	Shipping
MBRF4080-100CT	ITO-220AB (Pb-Free)	50 pcs/ tube

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

MBRF4080CT
MBRF4090CT
MBRF40100CT

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