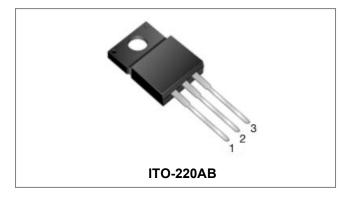


MBRF30100CT

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MBRF30100CT SCHOTTKY RECTIFIER



Circuit Diagram



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

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	-	100	V
Average Rectified Forward Current	I _{F (AV)}	50% duty cycle @Tc=133°C, rectangular wave form	15(Per Leg) 30(Per Device)	A
Peak Repetitive Forward Current(Per Leg)	I _{FRM}	Rated V _R square wave, 20KHz T _C = 133°C	20	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I _{FSM}	8.3ms, Half Sine pulse	200	А

Electrical Characteristics:

Characteristics	Symbol	Condition	Тур.	Max.	Units
Forward Voltage Drop(Per Leg)*	V _{F1}	@ 15A, Pulse, TJ = 25 °C	0.78	0.85	V
	V _{F2}	@ 15A, Pulse, T _J = 125 °C	0.68	0.70	V
Reverse Current(Per Leg)*	I _{R1}	@V _R = rated V _R , T _J = 25 °C	0.01	1.00	mA
	I _{R2}	@V _R = rated V _R , T _J = 125 °C	2	15.0	mA
Junction Capacitance(Per Leg)	Ст	@V _R = 5V, T _C = 25 °C, f _{SIG} = 1MHz		300	pF
Series Inductance(Per Leg)	Ls	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%, $T_A = 25 \ ^{\circ}C$)	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	
		Screw mounting, the epoxy body is inside the heatsink.	-	1500	

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

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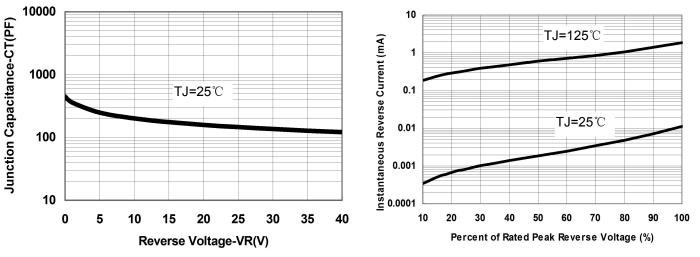
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RoHS 🗭

Thermal-Mechanical Specifications:

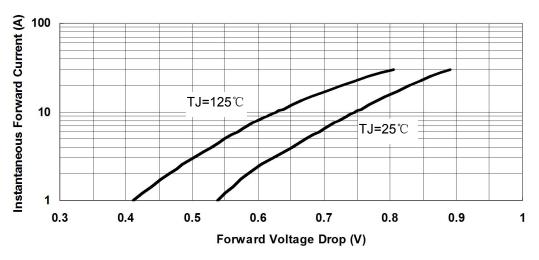
Characteristics	Symbol Condition		Specification	Units
Junction Temperature	TJ	-	-55 to +150	°C
Storage Temperature	T _{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case	R _{0JC}	DC operation	2.0	°C/W
Typical Thermal Resistance Junction to Ambient	$R_{ heta JA}$	DC operation	50	°C/W
TypicalThermal Resistance, Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased	0.50	°C/W
Approximate Weight	wt	-	2	g
Case Style	ITO-220AB			

Ratings and Characteristics Curves











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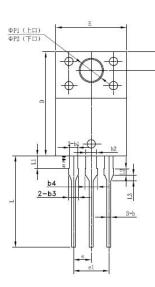
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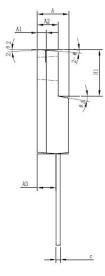
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Mechanical Dimensions ITO-220AB

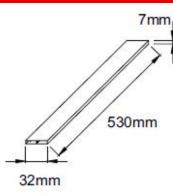
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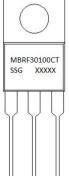


CYMPOL	Millimeters				
SYMBOL	MIN.	TYP.	MAX.		
Α	4.30	4.50	4.70		
A1	1.10	1.30	1.50		
A2	2.80	3.00	3.20		
A3	2.50	2.70	2.90		
b	0.50	0.60	0.75		
b1	1.10	1.20	1.35		
b2	1.50	1.60	1.75		
b3	1.20	1.30	1.45		
b4	1.60	1.70	1.85		
с	0.50	0.60	0.75		
D	14.80	15.00	15.20		
E	9.96	10.16	10.36		
e		2.55			
e1		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		
ΦΡ1(上口)	3.30	3.50	3.70		
ΦΡ2 (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

30

100

СТ

YY WW

L

SSG

- = Package type = Forward Current (30A)
- = Reverse Voltage (100V)
- = Configuration
- = SSG = Year
- = Year = Week
- = Lot Number

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

Ordering Information

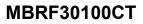
Device	Package	Shipping
MBRF30100CT	ITO-220AB (Pb-Free)	50 pcs/ tube

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

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