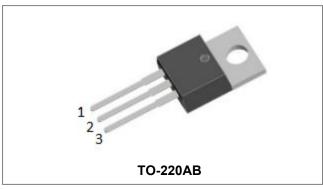






MBR2535CTL SCHOTTKY RECTIFIER



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	V_{RRM}			
Working Peak Reverse Voltage	V_{RWM}	-	35	V
DC Blocking Voltage	V_R			
Average Forward Current	I _{F(AV)}	50% duty cycle @T _C = 142°C,	12.5 (Per Leg)	^
		rectangular wave form	25 (Per Device)	Α
Peak Repetitive Forward Current	IFRM	Rated V _R , square wave,	25	Α
(Per Leg)	IFKW	20kHz,T _C =139°C	20	, ,
Peak Repetitive Reverse Surge Current	I _{RRM}	2.0μs, 1.0 kHz	1.0	Α
Peak One Cycle Non-Repetitive Surge	I _{FSM}	8.3 ms, half Sine pulse, T _c = 25 °C	150	Α
Current (Per Leg)	I-SM		150	^
Controlled Avalanche Energy	Waval	-	20	mJ

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

Electrical Characteristics:

Characteristics	Symbol	Condition	Тур.	Max.	Units
Forward Voltage Drop(Per Leg)*	V_{F1}	@ 12.5A, Pulse, T _J = 25 °C	0.45	0.47	V
	V_{F2}	@ 12.5A, Pulse, T _J = 125 °C	0.39	0.41	V
Reverse Current(Per Leg)*	I _{R1}	@V _R = rated V _R , T _J = 25 °C	0.2	1.0	mA
	I _{R2}	@V _R = rated V _R , T _J = 125 °C	50	500	mA
Voltage Rate of Change	dv/dt	-	-	10,000	V/μs

^{*} Pulse width < 300 µs, duty cycle < 2%

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

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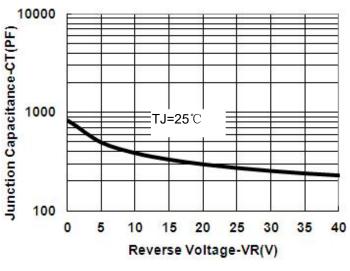
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature (Note 1)	TJ	-	-55 to +150	°C
Storage Temperature	T_{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case	Rejc	DC operation, Min. Pad	2.0	°C/W
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	DC operation, Min. Pad	75.0	°C/W
Approximate Weight	wt	-	2	g
Case Style	TO-220AB			

100

Note1. The heat generated must be less than the thermal conductivity from Junction-to-Ambient: dPD/dTJ < 1/R0JA.

Ratings and Characteristics Curves



TJ=125℃ Reverse Current (mA) 10 1 TJ=25°C 0.1 0.01 10 20 30 50 60 70 80 90 100 40 Reverse Voltage (%)

Fig.1-Typical Junction Capacitance

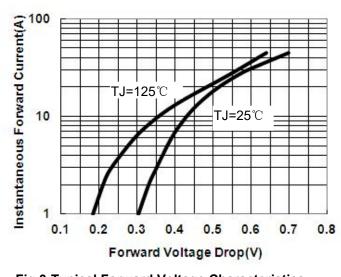


Fig.2-Typical Reverse Characteristics

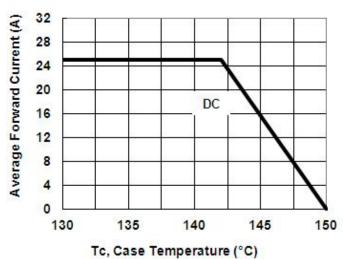


Fig.3-Typical Forward Voltage Characteristics

Fig.4-Forward Current Derating Curve

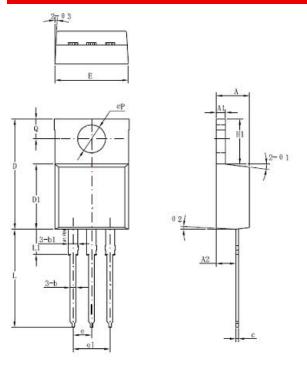
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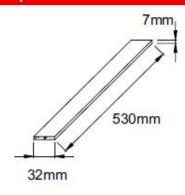


Mechanical Dimensions TO-220AB



Symbol	Dimensions in millimeters			
	Min	Typical	Max	
Α	3.56	-	4.83	
A1	0.51	-	1.40	
A2	2.03	-	2.92	
b	0.38	-	1.02	
b1	1.14	-	1.78	
С	0.31	-	0.61	
D	14.22	-	16.51	
D1	8.38	-	9.42	
E	9.65	-	10.67	
е	-	2.54	-	
e1	-	5.08	-	
H1	5.84	-	6.86	
L	12.70	-	14.73	
L1	-	-	6.35	
ФР	-	3.56	-	
Q	2.54	-	3.43	

Tube Specification



Marking Diagram



Where XXXXX is YYWWL

MBR = Device Type
25 = Forward Current (25A)
35 = Reverse Voltage(35V)
CTL = Configuration

CTL = Configuration
SSG = SSG
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin

Epoxy resin UL:94V-0

Ordering Information

Device	Package	Shipping	
MBR2535CTL	TO-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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