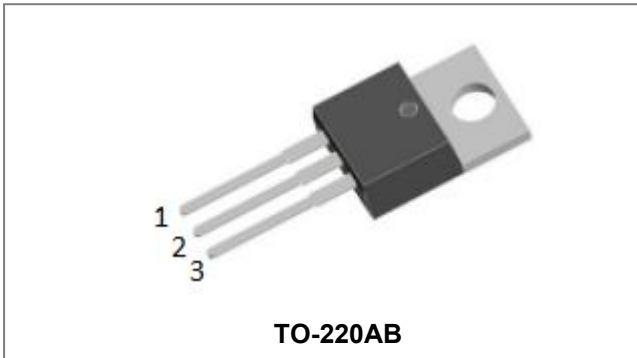


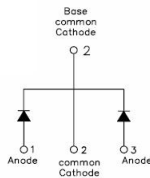
MBR2535CTL SCHOTTKY RECTIFIER



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}	-	35	V
Working Peak Reverse Voltage	V _{RWM}			
DC Blocking Voltage	V _R			
Average Forward Current	I _{F(AV)}	50% duty cycle @T _C = 142°C, rectangular wave form	12.5 (Per Leg) 25 (Per Device)	A
Peak Repetitive Forward Current (Per Leg)	I _{FRM}	Rated V _R , square wave, 20kHz, T _C =139°C	25	A
Peak Repetitive Reverse Surge Current	I _{RSM}	2.0μs, 1.0 kHz	1.0	A
Peak One Cycle Non-Repetitive Surge Current (Per Leg)	I _{FSM}	8.3 ms, half Sine pulse, T _C = 25 °C	150	A
Controlled Avalanche Energy	W _{aval}	-	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	Typ.	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.

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature (Note 1)	T _J	-	-55 to +150	°C
Storage Temperature	T _{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case	R _{θJC}	DC operation, Min. Pad	2.0	°C/W
Typical Thermal Resistance Junction to Ambient	R _{θJA}	DC operation, Min. Pad	75.0	°C/W
Approximate Weight	wt	-	2	g
Case Style	TO-220AB			

Note1. The heat generated must be less than the thermal conductivity from Junction-to-Ambient: $dPd/dT_J < 1/R_{\theta JA}$.

Ratings and Characteristics Curves

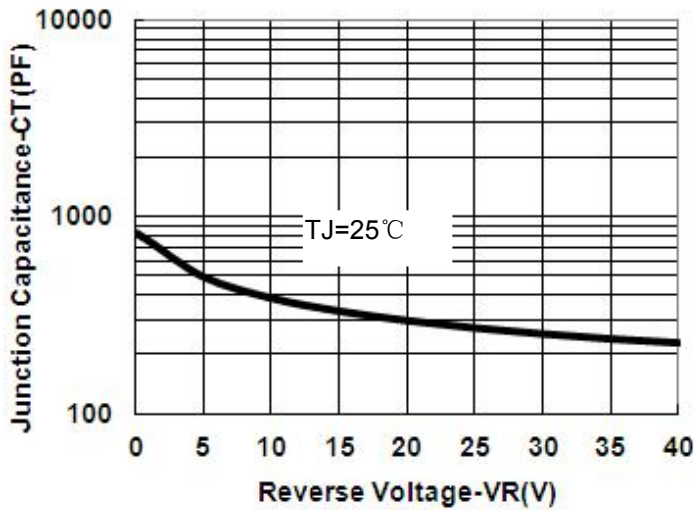


Fig.1-Typical Junction Capacitance

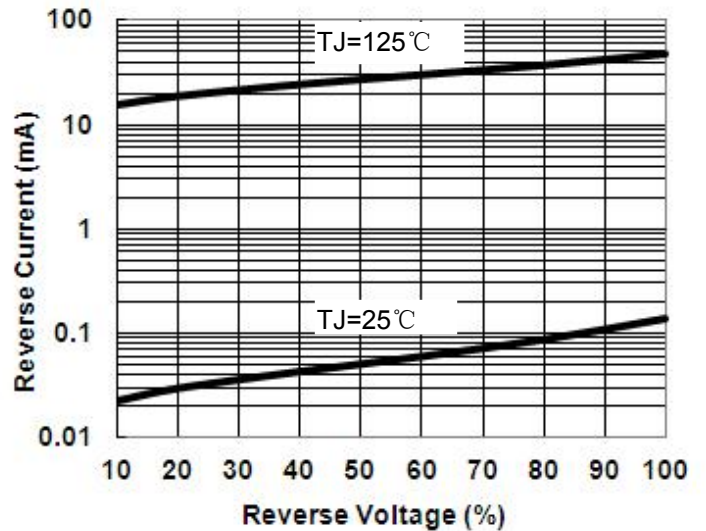


Fig.2-Typical Reverse Characteristics

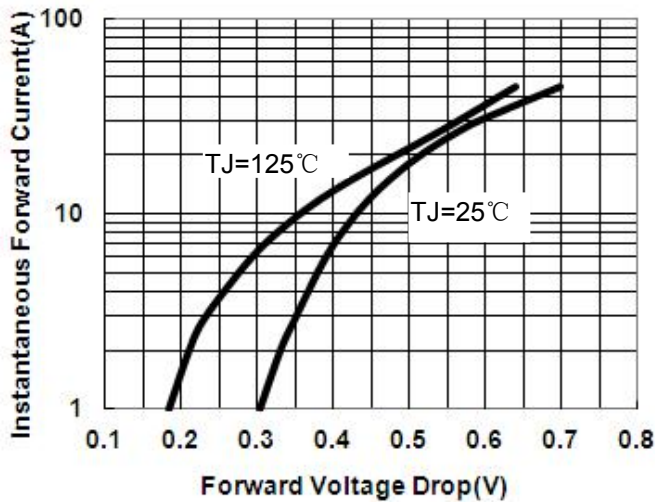


Fig.3-Typical Forward Voltage Characteristics

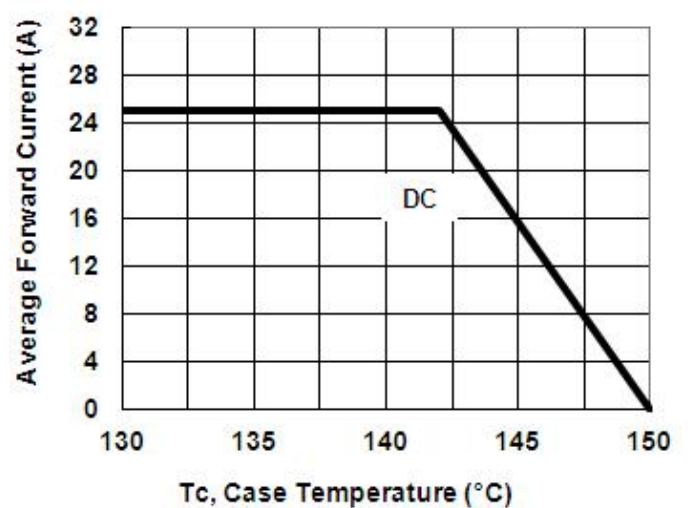
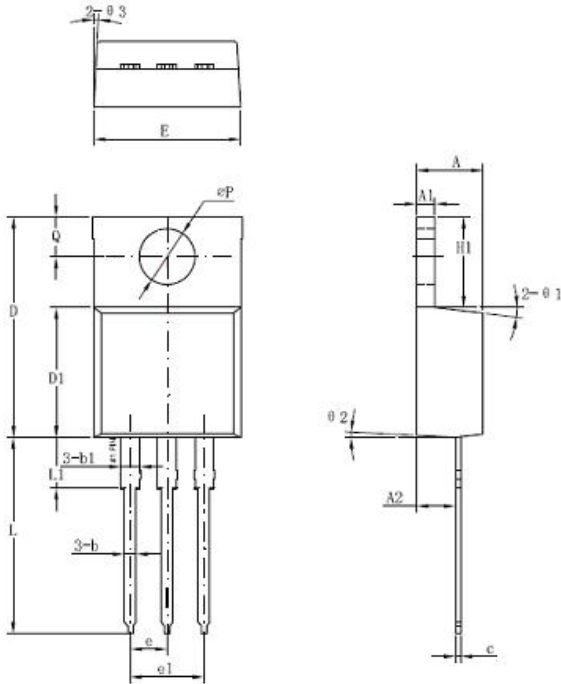


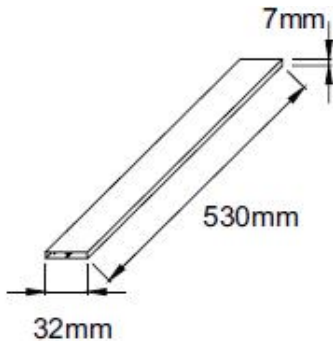
Fig.4-Forward Current Derating Curve

Mechanical Dimensions TO-220AB

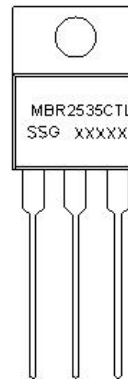


Symbol	Dimensions in millimeters		
	Min	Typical	Max
A	4.42	4.57	4.72
A1	1.17	1.27	1.37
A2	2.52	2.69	2.89
b	0.71	0.81	0.96
b1	1.17	1.27	1.37
c	0.31	0.38	0.61
D	14.94	15.24	15.54
D1	8.85	9.00	9.15
E	10.01	10.16	10.31
e		2.54	
e1	4.98	5.06	5.18
H1	6.04	6.24	6.44
L	12.7	13.56	13.80
L1	3.56	3.5	3.96
ΦP	3.74	3.84	4.04
Q	2.54	2.74	2.94
Θ1		7°	
Θ2		3°	
Θ3		4°	

Tube Specification



Marking Diagram



Where XXXXX is YYWWL

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