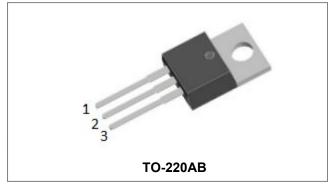


## MBR2535CTL

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# MBR2535CTL SCHOTTKY RECTIFIER



### Features

- 150°C T<sub>J</sub> 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:

**Circuit Diagram** 

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	-	35	V
Average Forward Current	I <sub>F(AV)</sub>	50% duty cycle @T <sub>c</sub> = 142°C, rectangular wave form	12.5 (Per Leg) 25 (Per Device)	A
Peak Repetitive Forward Current (Per Leg)	I <sub>FRM</sub>	Rated V <sub>R</sub> , square wave, 20kHz,T <sub>C</sub> =139°C	25	А
Peak Repetitive Reverse Surge Current	I <sub>RRM</sub>	2.0μs, 1.0 kHz	1.0	A
Peak One Cycle Non-Repetitive Surge Current (Per Leg)	I <sub>FSM</sub>	8.3 ms, half Sine pulse, $T_c$ = 25 °C	150	А
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 <sub>F1</sub>	@ 12.5A, Pulse, T <sub>J</sub> = 25 °C	0.45	0.47	V
	V <sub>F2</sub>	@ 12.5A, Pulse, T <sub>J</sub> = 125 °C	0.39	0.41	V
Reverse Current(Per Leg)*	I <sub>R1</sub>	$@V_R = rated V_{R,} T_J = 25 \ ^{\circ}C$	0.2	1.0	mA
	I <sub>R2</sub>	$@V_R = rated V_{R,} T_J = 125 \ ^{\circ}C$	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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## MBR2535CTL

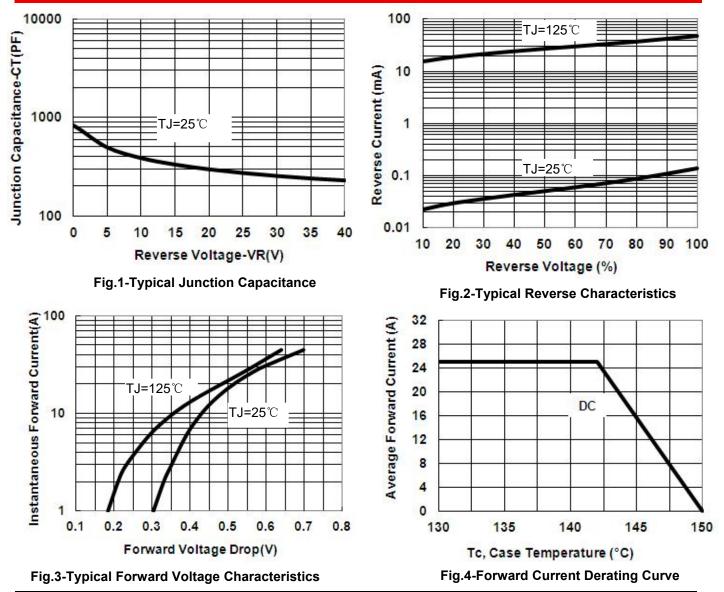
RoHS 🔗

**Thermal-Mechanical Specifications:** 

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature (Note 1)	TJ	-	-55 to +150	°C
Storage Temperature	T <sub>stg</sub>	-	-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 <sub>θJA</sub>	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/dTJ < 1/R0JA.

### **Ratings and Characteristics Curves**



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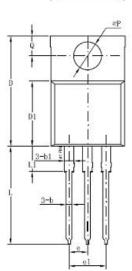
# MBR2535CTL

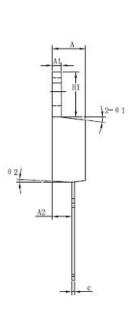
# RoHS

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### **Mechanical Dimensions TO-220AB**

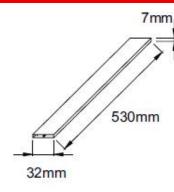






Symbol	Dimensions in millimeters		
	Min	Typical	Max
A	3.56	-	4.83
A1	0.51	-	1.40
A2	2.03	-	2.92
b	0.38	-	1.02
b1	1.14	-	1.78
С	0.31	-	0.61
D	14.22	-	16.51
D1	8.38	-	9.42
E	9.65	-	10.67
е	-	2.54	-
e1	-	5.08	-
H1	5.84	-	6.86
L	12.70	-	14.73
L1	-	-	6.35
ΦΡ	-	3.56	-
Q	2.54	-	3.43

### **Tube Specification**



### **Marking Diagram**



Where XXXXX is YYWWL

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

25 35

CTL SSG

YΥ

L

ww

- = Year = Week
  - = Lot Number

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

### **Ordering Information**

Device	Package	Shipping	
MBR2535CTL	TO-220AB (Pb-Free)	50 pcs/ tube	

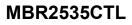
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

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