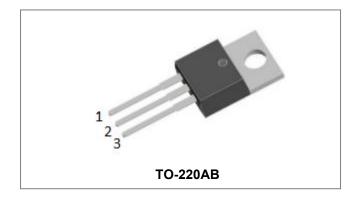


## **MBR40200CT**

Technical Data Data Sheet N0775, Rev. A



# **MBR40200CT 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:

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>	-	200	V
Average Rectified Forward Current	I <sub>F (AV)</sub>	50% duty cycle @Tc=110°C, rectangular wave form	20(Per Leg) 40(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> =133°C	20	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I <sub>FSM</sub>	8.3ms, Half Sine pulse, $T_C$ = 25 °C	396	А

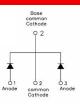
### **Electrical Characteristics:**

Characteristics	Symbol	Condition	Тур.	Max.	Units
Forward Voltage Drop(Per Leg)*	V <sub>F1</sub>	@ 20A, Pulse, T」 = 25 °C	0.85	0.90	V
	VF2	@ 20A, Pulse, T <sub>J</sub> = 125 °C	0.72	0.80	V
Reverse Current(Per Leg)*	I <sub>R1</sub>	$@V_R = rated V_{R,} T_J = 25 \ ^{\circ}C$	0.0001	1.0	mA
	I <sub>R2</sub>	$@V_R = rated V_R, T_J = 125 \degree C$	0.1	11	mA
Junction Capacitance(Per Leg)	Ст	@V <sub>R</sub> = 5V, T <sub>C</sub> = 25 °C f <sub>SIG</sub> = 1MHz	300	450	pF

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

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### **Circuit Diagram**





## **MBR40200CT**

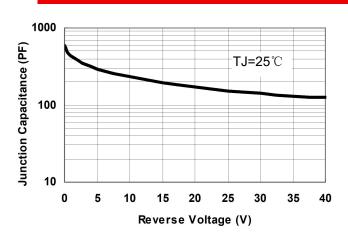
#### Technical Data Data Sheet N0775, Rev. A

RoHS 🔗

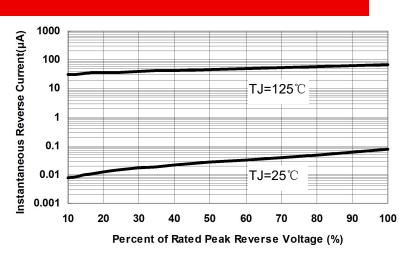
**Thermal-Mechanical Specifications:** 

Characteristics	acteristics Symbol Condition		Specification	Units
Junction Temperature	TJ	-	-55 to +150	°C
Storage Temperature	T <sub>stg</sub>	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case	$R_{ ext{ heta}JC}$	DC operation	2.0	°C/W
Typical Thermal Resistance Junction to Ambient	$R_{ heta JA}$	DC operation	50	°C/W
Typical Thermal Resistance, Case to Heat Sink	R <sub>0JS</sub>	Mounting surface, smooth and greased	0.50	°C/W
Approximate Weight	wt	-	2	g

#### **Ratings and Characteristics Curves**







#### Fig.2-Typical Reverse Characteristics

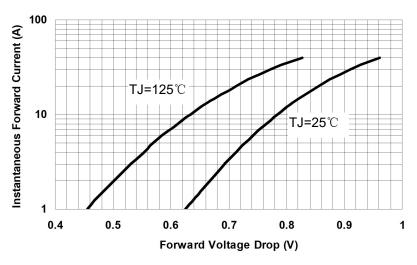


Fig.3-Typical Instantaneous Forward Voltage Characteristics

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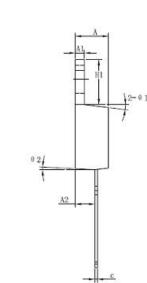
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#### Mechanical Dimensions TO-220AB



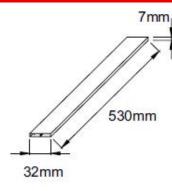
D1

3-b1

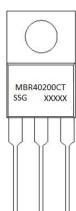


	1				
Symbol	Dimensions in millimeters				
Symbol	Min				
Α		Typical	-		
	4.42	4.57	4.72		
A1	1.17	1.27	1.37		
A2	2.52	2.69	2.89		
b	0.71	0.81	0.96		
b1	1.17	1.27	1.37		
С	0.31	0.38	0.61		
D	14.94	15.24	15.54		
D1	8.85	9.00	9.15		
E	10.01	10.16	10.31		
е		2.54			
e1	4.98	5.06	5.18		
H1	6.04	6.24	6.44		
L	12.7	13.56	13.80		
L1	3.56	3.5	3.96		
ΦΡ	3.74	3.84	4.04		
Q	2.54	2.74	2.94		
Θ1		<b>7</b> °			
Θ2		3°			
Θ3		<b>4</b> °			

#### **Tube Specification**



#### **Marking Diagram**



#### Where XXXXX is YYWWL

- = Device Type = Forward Current (40A)
- = Forward Current (40A) = Reverse Voltage(200V)
- = Configuration
- = SSG

MBR 40

200

СТ

YY

Т

ww

SSG

- = Year
- = Week
- = Lot Number

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

#### **Ordering Information**

Device	Package	Shipping	
MBR40200CT	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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