

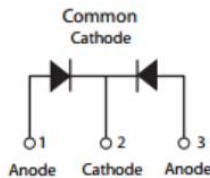
MBRF4080CTL SCHOTTKY RECTIFIER



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}	-	80	V
Working Peak Reverse Voltage	V _{RWM}			
DC Blocking Voltage	V _R			
Average Rectified Forward Current	I _{F(AV)}	50% duty cycle @T _c =80°C, rectangular wave form	20(Per Leg) 40(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I _{FSM}	8.3ms, Half Sine pulse	400	A

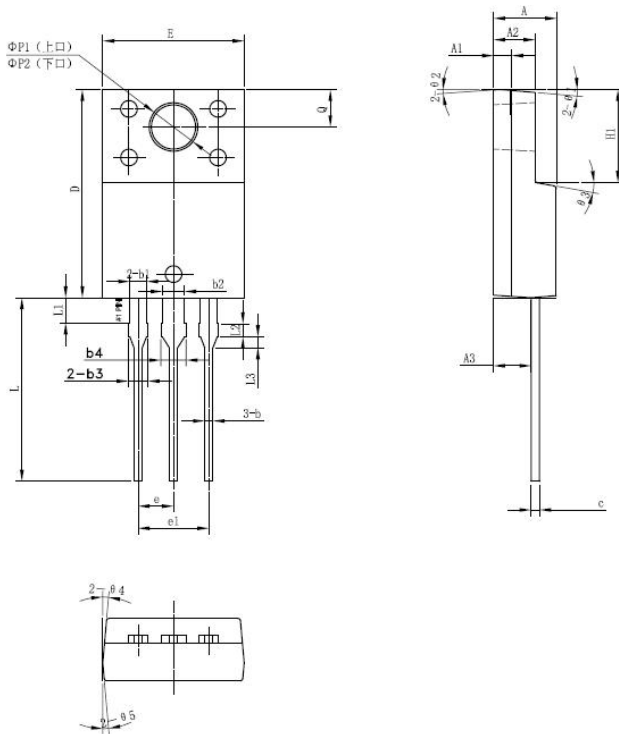
Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V _{F1}	@20A, Pulse, T _J = 25 °C	-	0.75	V
Reverse Current(Per Leg)*	I _{R1}	@V _R = rated V _R , T _J = 25 °C	-	1.0	mA
Junction Capacitance(Per Leg)	C _T	@V _R = 5V, T _C = 25 °C, f _{sig} = 1MHz	-	900	pF
Series Inductance(Per Leg)	L _S	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 °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%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-55 to +150	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Case	$R_{\theta\text{JC}}$	DC operation	2.3	$^{\circ}\text{C/W}$
Typical Thermal Resistance, Case to Heat Sink	$R_{\theta\text{CS}}$	Mounting surface, smooth and greased(only for TO-220)	0.50	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	2	g
Case Style	ITO-220AB			

Mechanical Dimensions ITO-220AB


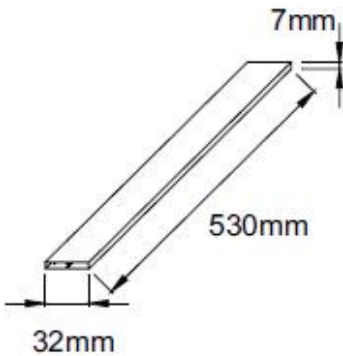
SYMBOL	Millimeters		
	MIN.	TYP.	MAX.
A	4.30	4.50	4.70
A1	1.10	1.30	1.50
A2	2.80	3.00	3.20
A3	2.50	2.70	2.90
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
b2	1.50	1.60	1.75
b3	1.20	1.30	1.45
b4	1.60	1.70	1.85
c	0.50	0.60	0.75
D	14.80	15.00	15.20
E	9.96	10.16	10.36
e		2.55	
e1		5.10	
H1	6.50	6.70	6.90
L	12.70	13.20	13.70
L1	1.60	1.80	2.00
L2	0.80	1.00	1.20
L3	0.60	0.80	1.00
ΦP1 (上口)	3.30	3.50	3.70
ΦP2 (下口)	2.99	3.19	3.39
Q	2.50	2.70	2.90
Θ1		5 $^{\circ}$	
Θ2		4 $^{\circ}$	
Θ3		10 $^{\circ}$	
Θ4		5 $^{\circ}$	
Θ5		5 $^{\circ}$	

Ordering Information

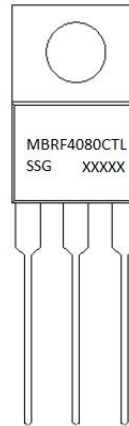
Device	Package	Shipping
MBRF4080CTL	ITO-220AB (Pb-Free)	50 pcs/ tube

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

Tube Specification



Marking Diagram



Where XXXXX is YYWWL

MBR = Device Type
 F = Package type
 40 = Forward Current (40A)
 80 = Reverse Voltage (80V)
 CTL = Configuration
 SSG = SSG
 YY = Year
 WW = Week
 L = Lot Number

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

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