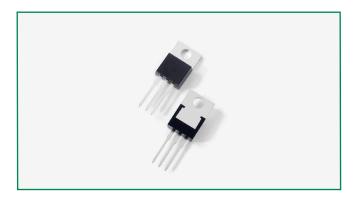
Schottky Barrier Rectifier MBR10100CT, 2x 5A, 100V, TO-220AB, Common Cathode

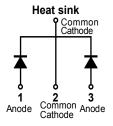
MBR10100CT







Pin out



Description

Littelfuse MBR series Schottky Barrier Rectifier is designed to meet the general requirements of commercial applications by providing high temperature, low leakage and low V_F products.

It is suitable for high frequency switching mode power supply, free-wheeling diodes and polarity protection diodes.

Features

- High junction temperature capability
- Guard ring for enhanced ruggedness and long term reliability
- Low forward voltage drop
- High frequency operation
- Common cathode configuration in TO-220AB package

Applications

- Switching mode power supply
- Free-wheeling diodes
- DC/DC converters
- Polarity protection diodes

Maximum Ratings

Parameters	Symbol	Test Conditions	Max	Unit
Peak Inverse Voltage	V _{RWM}	-	100	V
Average Forward Current	I _{F(AV)}	50% duty cycle @T _C =100°C, rectangular wave form	5 (per leg)	А
			10 (total device)	
Peak One Cycle Non-Repetitive Surge Current (per leg)	I _{FSM}	8.3 ms, half Sine pulse	120	А

Electrical Characteristics

Parameters	Symbol	Test Conditions	Max	Unit	
Forward Voltage Drop*	V _{F1}	@3A, Pulse, T _J = 25 °C	0.78		
		@5A, Pulse, T _J = 25 °C	0.85	\/	
	V _{F2}	@3A, Pulse, T _J = 125 °C	0.65	V	
		@5A, Pulse, T _J = 125 °C	0.75		
Reverse Current (per leg)*	I _{R1}	$@V_R = rated V_R T_J = 25 °C$	1.0	mA	
	I _{R2}	$@V_R = rated V_R T_J = 125 ^{\circ}C$	15] '''A	
Junction Capacitance (per leg)	C _T	$@V_R = 5V, T_C = 25 ^{\circ}C f_{SIG} = 1MHz$	300	pF	
Typical 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	

^{*} Pulse Width < 300µs, Duty Cycle <2%



Thermal-Mechanical Specifications

Parameters	Symbol	Test Conditions	Max	Unit
Junction Temperature	T _J		-55 to +150	°C
Storage Temperature	T _{stg}		-55 to +150	°C
Maximum Thermal Resistance Junction to Case	R _{thJC}	DC operation	2.0	°C/W
Typical Thermal Resistance Case to Heat Sink	R _{thCS}	Mounting surface, smooth and greased (only for TO-220)	0.5	°C/W
Approximate Weight	wt		2	g
Case Style	TO-220AB			

Figure 1: Typical Forward Characteristics

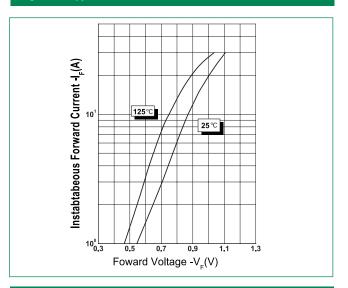


Figure 3: Typical Junction Capacitance

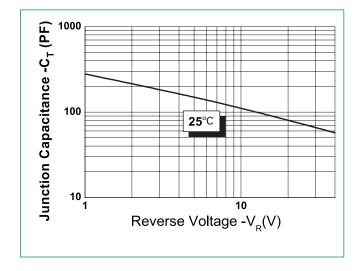
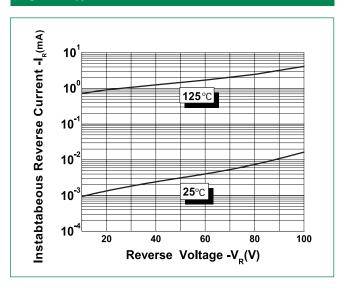
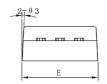


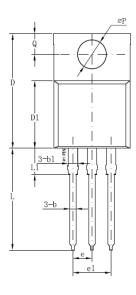
Figure 2: Typical Reverse Characteristics

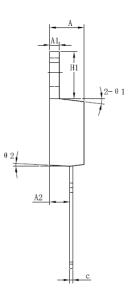


Schottky Barrier Rectifier MBR10100CT, 2x 5A, 100V, TO-220AB, Common Cathode

Dimensions-TO-220AB







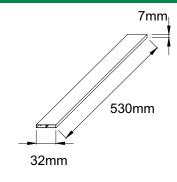
Symbol	Millimeters		
	Min	Max	
Α	3.56	4.83	
A1	0.51	1.40	
A2	2.03	2.92	
b	0.38	1.02	
b1	1.14	1.78	
С	0.31*	0.61	
D	14.22	16.51	
D1	8.38	9.15*	
Е	9.65	10.67	
е	2.54	-	
e1	4.98*	-	
H1	5.84	6.86	
L	12.70	14.73	
L1	-	6.35	
øΡ	3.53	4.09	
Q	2.54	3.43	

Footnote *: The spec. does not comply with JEDEC spec.

Packing Options

Part Number	Marking	Packing Mode	M.O.Q	
MBR10100CT	MBR10100CT	50pcs / Tube	1000	

Tube Specification



Part Numbering and Marking System



MBR = Device Type
10 = Forward Current (10A)
100 = Reverse Voltage (100V)
CT = Configuration
LF = Littelfuse Logo
YY = Year
WW = Week
L = Lot Number