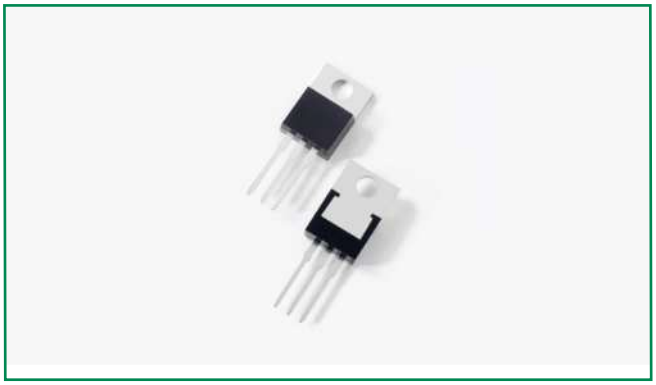
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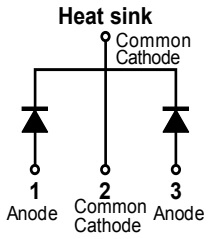
Schottky Barrier Rectifier
MBR2060CT, 2x 10A, 60V, TO-220AB, Common Cathode

MBR2060CT

RoHS



Pin out



Description

The Littelfuse MBR2060CT Schottky Barrier Rectifier is designed to comply with the general requirements of commercial applications for high temperature environments with low leakage and low VF parameters.

It is suitable for high frequency switching mode power supply applications with high inductive loads. This Schottky Barrier diode pair can be used as free-wheeling or flyback diodes to suppress abrupt changes across an inductive load.

Features

- High junction temperature capability
- Low forward voltage drop
- High frequency operation
- Common cathode configuration in TO-220AB package

Applications

- Switching mode power supply
- Free-wheeling diodes (also known as snubber diodes)
- DC/DC converters
- Polarity protection diodes

Maximum Ratings

Parameters	Symbol	Test Conditions	Max	Unit
Peak Inverse Voltage	V_{RWM}	-	60	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @T_C =100°C, rectangular wave form	10 (per leg)	A
			20 (total device)	
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	180	A

Electrical Characteristics

Parameters	Symbol	Test Conditions	Max	Unit
Forward Voltage Drop	V_{F1}	@10A, Pulse, T_J = 25 °C	0.80	V
		@20A, Pulse, T_J = 25 °C	0.95	
	V_{F2}	@10A, Pulse, T_J = 125 °C	0.70	
		@20A, Pulse, T_J = 125 °C	0.85	
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 °C	150	
Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C, $_{fSI}$G = 1MHz	400	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%

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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	$R_{\theta JC}$	DC operation	2.3	°C/W
Typical Thermal Resistance Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased	0.5	°C/W
Approximate Weight	wt	-	2	g
Case Style	TO-220AB			

Figure 1: Typical Forward Characteristics

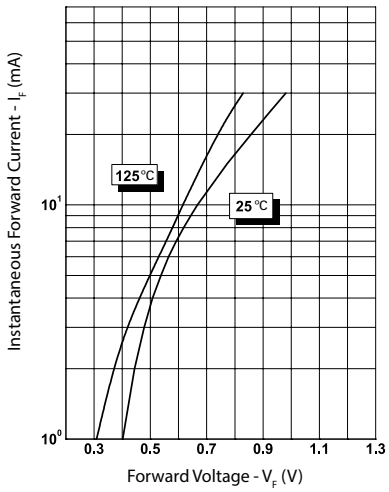


Figure 2: Typical Reverse Characteristics

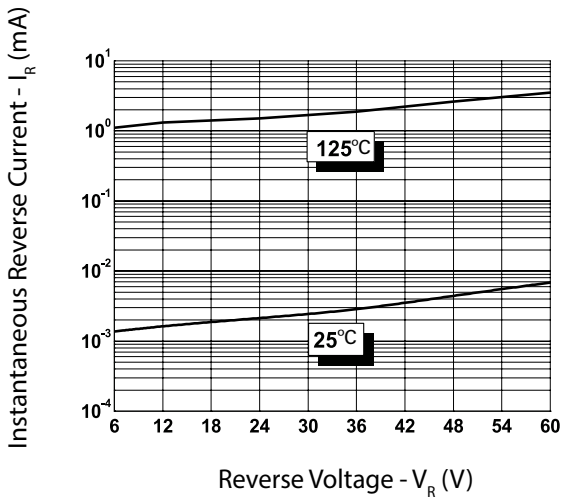
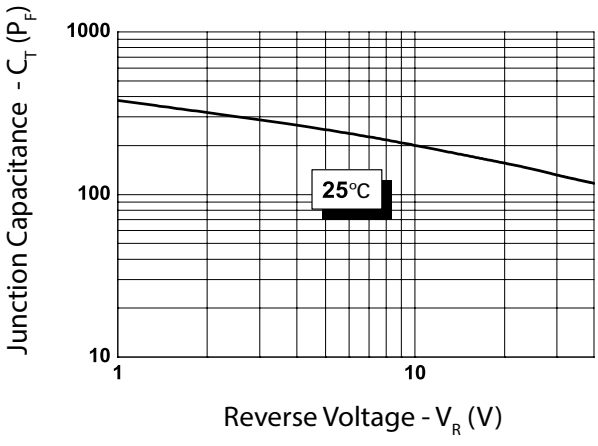


Figure 3: Typical Junction Capacitance

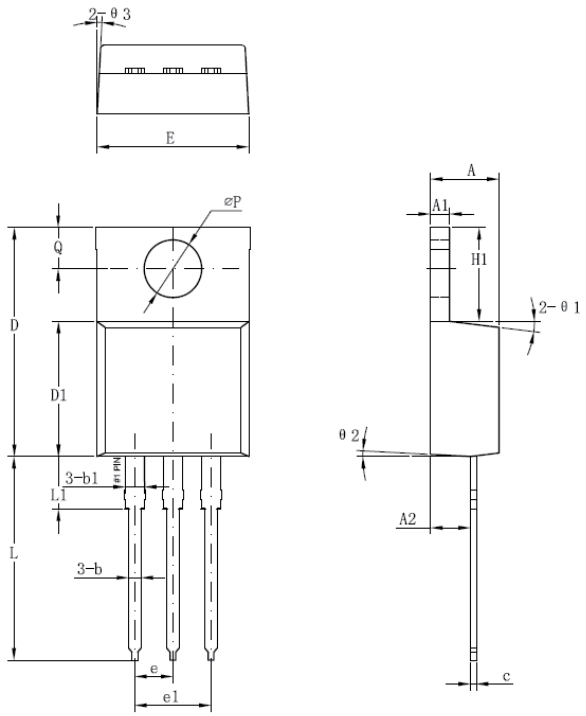


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Dimensions- TO-220AB



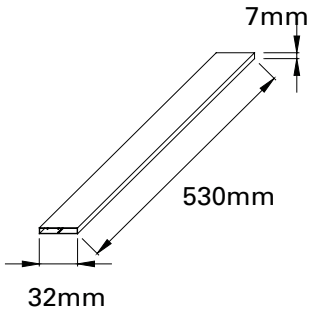
Symbol	Millimeters	
	Min	Max
A	3.56	4.83
A1	0.51	1.40
A2	2.03	2.92
b	0.38	1.02
b1	1.14	1.78
c	0.31*	0.61
D	14.22	16.51
D1	8.38	9.15*
E	9.65	10.67
e	2.54	-
e1	4.98*	-
H1	5.84	6.86
L	12.70	14.73
L1	-	6.35
øP	3.53	4.09
Q	2.54	3.43

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

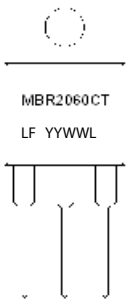
Packing Options

Part Number	Marking	Packing Mode	M.O.Q.
MBR2060CT	MBR2060CT	50pcs / Tube	1000

Tube Specification



Part Numbering and Marking System



MBR	=Component Type
B	=Package Type
20	=Forward Current (20A)
60	=Reverse Voltage (60V)
CT	=Configuration
LF	=Littelfuse
YY	=Year
WW	=Week
L	=Lot Number

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