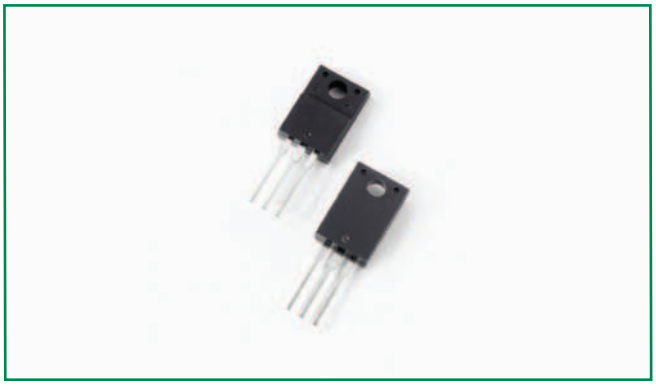
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Schottky Barrier Rectifier
MBRF1060CTL 2x 5A, 60V, ITO-220AB Common Cathode

MBRF1060CTL

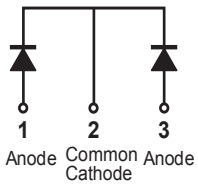
RoHS



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.

Pin out



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 electrically isolated ITO-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}	-	60	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @T_C = 75°C, rectangular wave form	5 (per leg)	A
			10 (total device)	
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3ms,half Sine pulse	125	A

Electrical Characteristics

Parameters	Symbol	Test Conditions	Max	Unit
Forward Voltage Drop (per leg) *	V_{F1}	@ 5A, Pulse, T_J = 25 °C	0.60	V
	V_{F2}	@ 5A, Pulse, T_J = 100 °C	0.55	
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 = 100 °C	15	
Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	220	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
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 < 300µs, Duty Cycle <2%

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Thermal-Mechanical Specifications

Parameters	Symbol	Test Conditions	Max	Unit
Junction Temperature	T_J		-55 to +125	°C
Storage Temperature	T_{stg}		-55 to +125	°C
Maximum Thermal Resistance Junction to Case (per leg)	R_{thJC}	DC operation	3.5	°C/W
Maximum Thermal Resistance Case to Heat Sink	R_{thJS}	DC operation	60	°C/W
Approximate Weight	wt		2	g
Case Style	ITO-220AB			

Figure 1: Typical Forward Characteristics

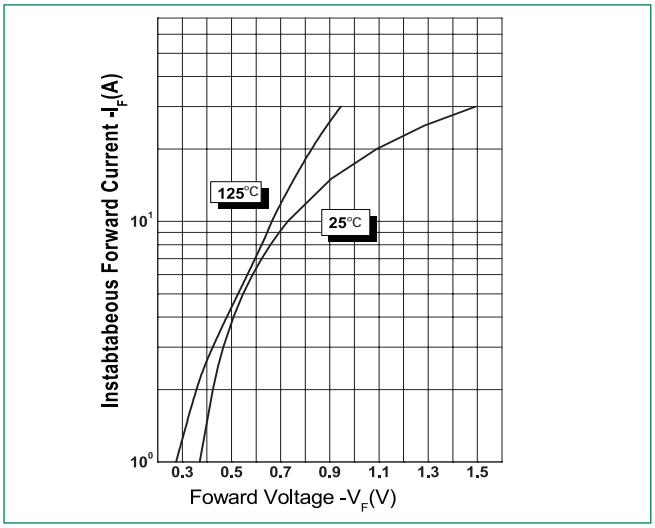


Figure 2: Typical Reverse Characteristics

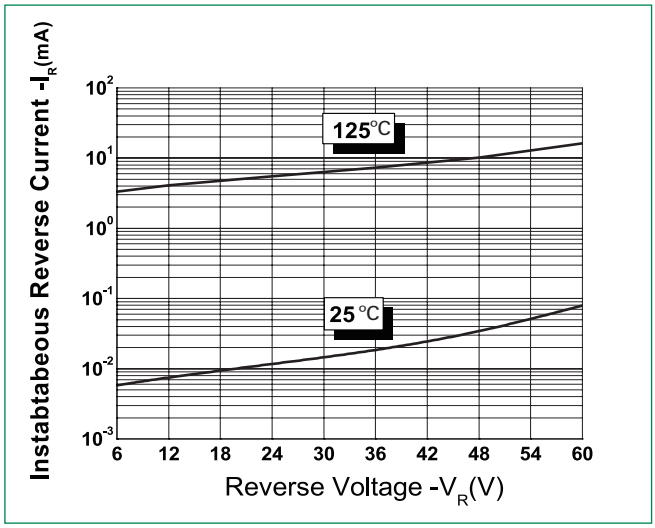
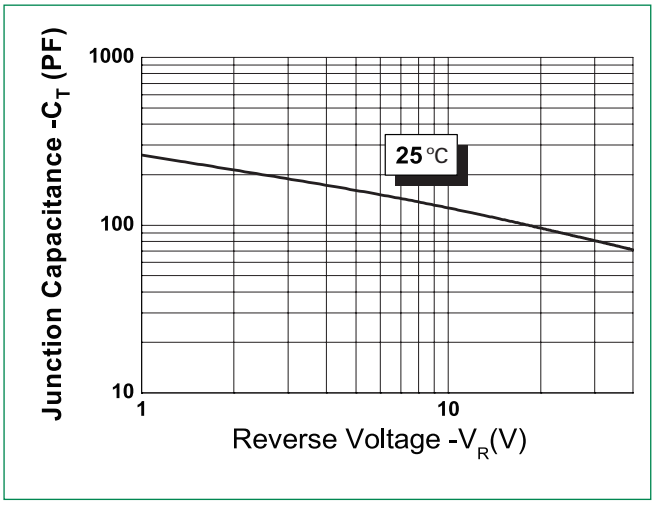


Figure 3: Typical Junction Capacitance

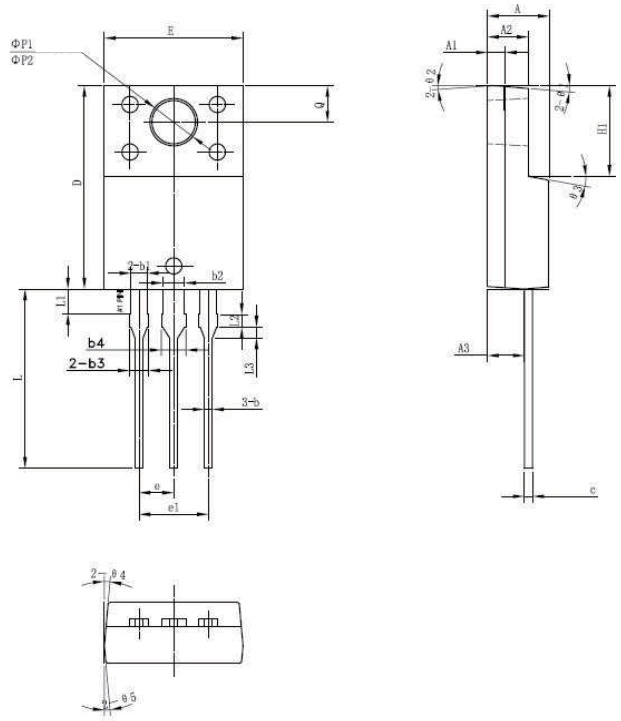


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Schottky Barrier Rectifier
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Dimensions- ITO-220AB

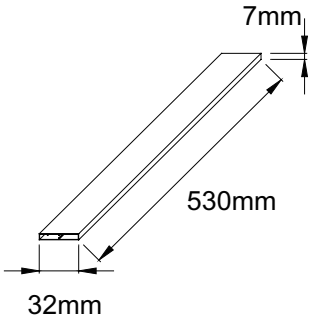


Symbol	Millimeters		
	Min	Typ	Max
A	4.30	4.50	4.70
A1	1.10	1.30	1.50
A2	2.80	3.00	3.20
A3	2.50	2.70	2.90
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
b2	1.50	1.60	1.75
b3	1.20	1.30	1.45
b4	1.60	1.70	1.85
c	0.55	0.60	0.75
D	14.80	15.00	15.20
E	9.96	10.16	10.36
e	-	2.55	-
e1	-	5.10	-
H1	6.50	6.70	6.90
L	12.70	13.20	13.70
L1	1.60	1.80	2.00
L2	0.80	1.00	1.20
L3	0.60	0.80	1.00
ØP1	3.30	3.50	3.70
ØP2	2.99	3.19	3.39
Q	2.50	2.70	2.90
θ1	-	5°	-
θ2	-	4°	-
θ3	-	10°	-
θ4	-	5°	-
θ5	-	5°	

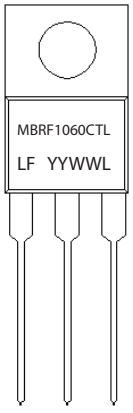
Packing Options

Part Number	Marking	Packing Mode	M.O.Q
MBRF1060CTL	MBRF1060CTL	50pcs / Tube	1000

Tube Specification



Part Numbering and Marking System



MBR	= Device Type
F	= Package Type
10	= Forward Current (10A)
60	= Reverse Voltage (60V)
CTL	= Configuration
LF	= Littelfuse
YY	= Year
WW	= Week
L	= Lot Number

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