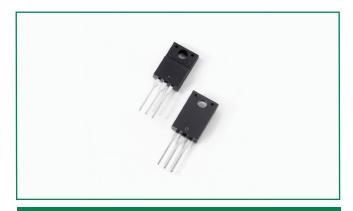
Schottky Barrier Rectifier MBRF30150CT, 2x 15A, 150V, ITO-220AB, Common Cathode

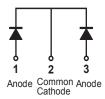
MBRF30150CT







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 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}	-	150	V
Average Forward Current	I _{F(AV)}	50% duty cycle @T _C = 133°C, rectangular wave form	15 (per leg)	А
			30 (total device)	
Peak Repetitive Forward Current(per leg)	I _{FRM}	Rated V_R square wave, 20KHz T_C = 133°C	20	А
Peak One Cycle Non-Repetitive Surge Current (per leg)	I _{FSM}	Surge applied at rated load conditions halfwave, single phase,60Hz	150	А

Electrical Characteristics

Parameters	Symbol	Test Conditions	Max	Unit
Forward Voltage Drop (per leg) *	V _{F1}	@ 15A, Pulse, T _J = 25 °C	1.00	V
Forward voltage Drop (per leg) "	V _{F2}	@ 15A, Pulse, T _J = 125 °C	0.80	V
Reverse Current (per leg) *	I _{R1}	$@V_R = rated V_R T_J = 25 °C$	1.0	mA
neverse current (per leg)	I _{R2}	$@V_R = rated V_R T_J = 125 ^{\circ}C$	6.0	
Junction Capacitance (per leg)	C _T	$@V_R = 5V, T_C = 25 ^{\circ}C f_{SIG} = 1MHz$	400	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	RSM Isolation Voltage I.0 second, R. H. $< =30\%$, V_{ISO} $T_A = 25 ^{\circ}\text{C}$	Clip mounting, the epoxy body away from the heatsink edge by more than 0.110" along the lead direction.	4500	
(t = 1.0 second, R. H. < =30%,		Clip mounting, the epoxy body is inside the heatsink.	3500	V
		Screw mounting, the epoxy body is inside the heatsink.	1500	

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

Schottky Barrier Rectifier MBRF30150CT, 2x 15A, 150V, ITO-220AB, Common Cathode

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
Maximum Thermal Resistance, Case to Heat Sink	R _{thJA}	DC operation	60	°C/W
Maximum Thermal Resistance, Case to Heat Sink	R _{thCS}	Mounting surface, smooth and greased	0.5	°C/W
Approximate Weight	wt		2	g
Case Style	ITO-220AB			

Figure 1: Typical Forward Characteristics

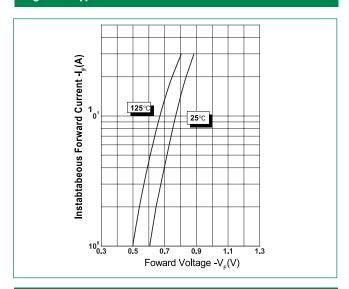


Figure 3: Typical Junction Capacitance

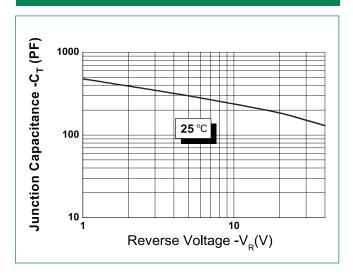
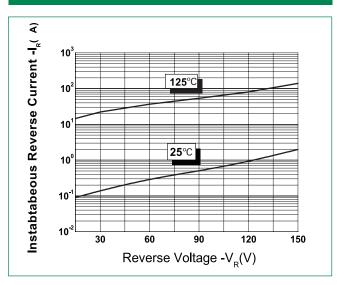
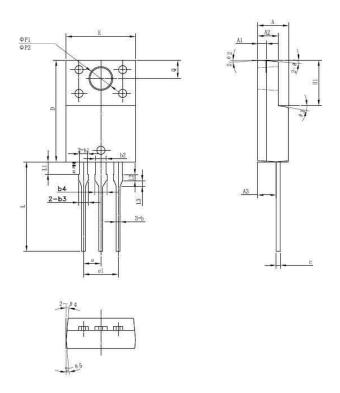


Figure 2: Typical Reverse Characteristics



Schottky Barrier Rectifier MBRF30150CT, 2x 15A, 150V, ITO-220AB, Common Cathode

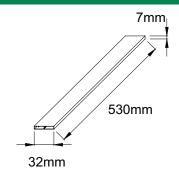
Dimensions-ITO-220AB



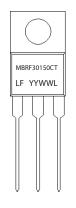
Min Typ Max A 4.30 4.50 4.70 A1 1.10 1.30 1.50 A2 2.80 3.00 3.20 A3 2.50 2.70 2.90 b 0.50 0.60 0.75 b1 1.10 1.20 1.35 b2 1.50 1.60 1.75 b3 1.20 1.30 1.45 b4 1.60 1.70 1.85 c 0.55 0.60 0.75 D 14.80 15.00 15.20 E 9.96 10.16 10.36 e 2.55 10.16 10.36 e 2.55 10.16 10.36 e 2.55 13.70 13.20 13.70 L 12.70 13.20 13.70 L1 1.60 1.80 2.00 L2 0.80 1.00 1.20 L3 0.	Symbol	Millimeters				
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 13.20 13.70 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° 6 70 2.90 <th< th=""><th>Зуппрог</th><th colspan="2">Min</th><th>Max</th></th<>	Зуппрог	Min		Max		
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° 6 70 2.90 θ1 5° 70 <th>Α</th> <th>4.30</th> <th>4.50</th> <th>4.70</th>	Α	4.30	4.50	4.70		
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 e e1 5.10 13.20 13.70 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° 4° θ3	A1	1.10	1.30	1.50		
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° 62 θ2 4° 4° θ3 10°	A2	2.80	3.00	3.20		
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°	А3	2.50	2.70	2.90		
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 13.20 13.70 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° 62 θ3 10°	b	0.50	0.60	0.75		
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°	b1	1.10	1.20	1.35		
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° 6 θ2 4° 4° θ3 10°	b2	1.50	1.60	1.75		
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°	b3	1.20	1.30	1.45		
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°	b4	1.60	1.70	1.85		
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°	С	0.55	0.60	0.75		
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°		14.80	15.00	15.20		
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°	E	9.96		10.36		
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°						
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° 4° θ2 4° 4° θ3 10°	e1		5.10			
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° 9 θ2 4° 4° θ3 10° 10°						
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°						
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°						
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°						
ØP2 2.99 3.19 3.39 Q 2.50 2.70 2.90 θ1 5° θ2 4° θ3 10°	L3					
Q 2.50 2.70 2.90 θ1 5° θ2 4° θ3 10°	ØP1	3.30		3.70		
θ1 5° θ2 4° θ3 10°	ØP2	2.99	3.19	3.39		
θ2 4° θ3 10°	Q	2.50	2.70	2.90		
θ 3 10°	θ1		5°			
00	θ2		4°			
A4 5°	θ3		10°			
04	θ 4		5°			
θ 5 5°	θ 5		5°			

Packing OptionsPart NumberMarkingPacking ModeM.O.QMBRF30150CTMBRF30150CT50pcs / Tube1000

Tube Specification



Part Numbering and Marking System



 MBR
 = Device Type

 F
 = Package type

 30
 = Forward Current (30A)

 150
 = Reverse Voltage (150V)

 CT
 = Configuration

 LF
 = Littelfuse

LF = Littelfuse
YY = Year
WW = Week
L = Lot Number

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

<u>Littelfuse</u>: MBRF30150CT