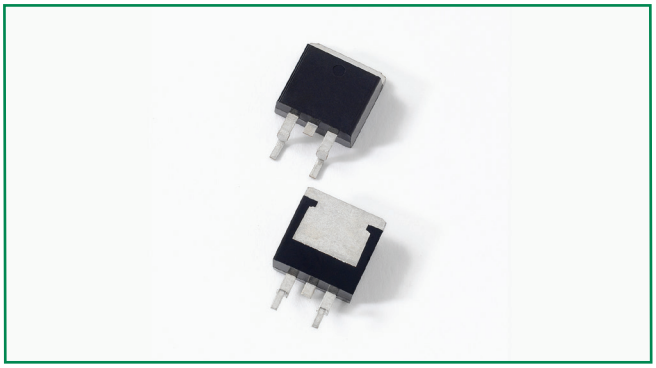
Littelfuse
Expertise Applied | Answers Delivered

Schottky Barrier Rectifier
MBRB20100CT 2x 10A, 100V, TO-263 Common Cathode

MBRB20100CT

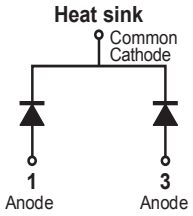
RoHS



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 surface mount TO-263 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 = 105°C, rectangular wave form	10 (per leg)	A
			20 (total device)	
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3ms,half Sine pulse	150	A

Electrical Characteristics

Parameters	Symbol	Test Conditions	Max	Unit
Forward Voltage Drop (per leg) *	V_{F1}	@ 5A, Pulse, T_J = 25 °C	0.80	V
		@ 10A, Pulse, T_J = 125 °C	0.90	
	V_{F2}	@ 5A, Pulse, T_J = 25 °C	0.70	
		@ 10A, Pulse, T_J = 125 °C	0.80	
Reverse Current at DC condition (per leg)	I_{R1}	@V_R = rated V_R T_J = 25 °C	1.0	mA
Reverse Current (per leg) *	I_{R2}	@V_R = rated V_R T_J = 125 °C	6.0	
Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	250	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

* Pulse Width < 300µs, Duty Cycle <2%

Revised:11/09/15

Schottky Barrier Rectifier
MBRB20100CT 2x 10A, 100V, TO-263 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 (per leg)	R_{thJC}	DC operation	2.0	°C/W
Approximate Weight	wt		1.41	g
Case Style	D^2PAK (TO-263)			

Figure 1: Typical Forward Characteristics

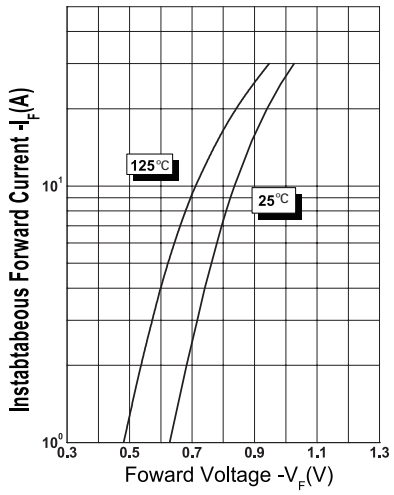


Figure 2: Typical Reverse Characteristics

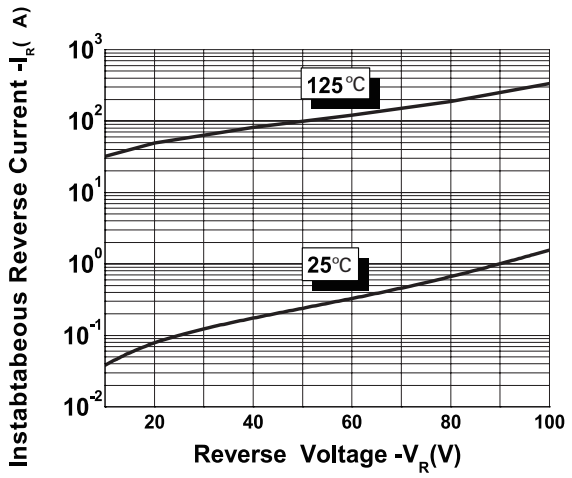
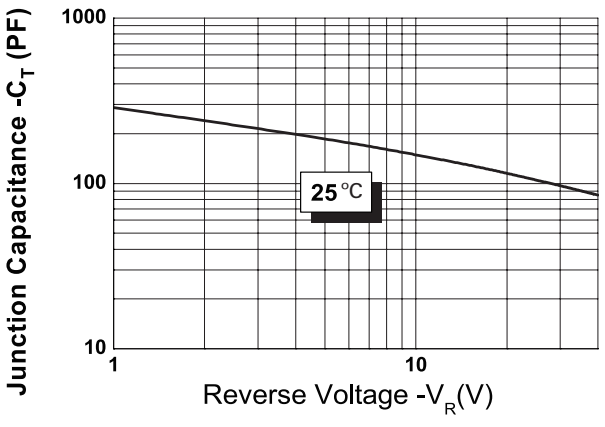


Figure 3: Typical Junction Capacitance

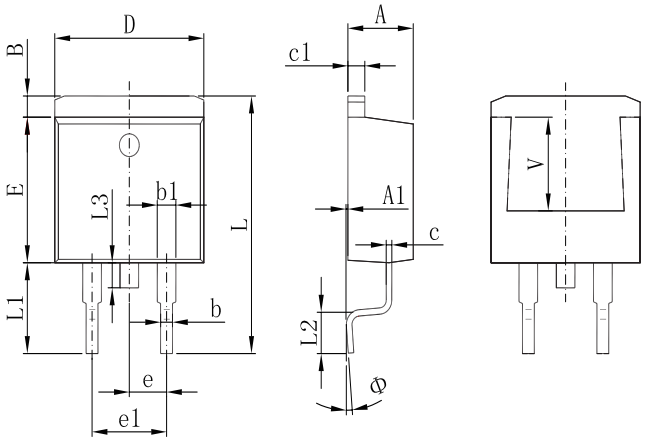


Revised:11/09/15

Littelfuse
Expertise Applied | Answers Delivered

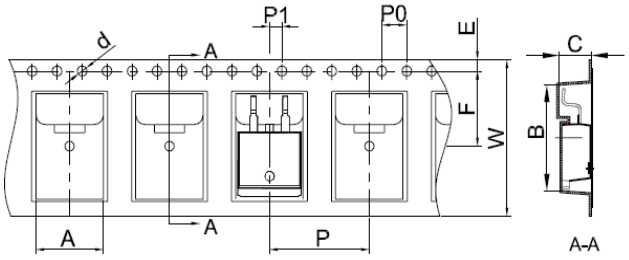
Schottky Barrier Rectifier
MBRB20100CT 2x 10A, 100V, TO-263 Common Cathode

Dimensions-D²PAK(TO-263)



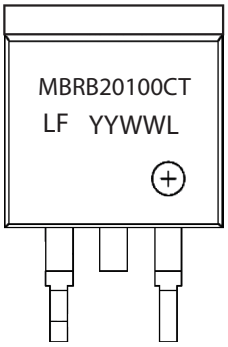
Symbol	Millimeters	
	Min	Max
A	4.47	4.67
A1	0	0.15
B	1.12	1.42
b	0.71	0.91
b1	1.17	1.37
c	0.31	0.53
c1	1.17	1.37
D	10.01	10.31
E	8.50	8.90
e	2.54 TYP	
e1	4.98	5.18
L	14.94	15.5
L1	4.95	5.45
L2	2.34	2.74
L3	1.30	1.7
ø	0°	8°
V	5.60 REF	

Carrier Tape & Reel Specification



Symbol	Millimeters	
	Min	Max
A	10.70	10.90
B	16.03	16.23
C	5.11	5.31
d	ø1.45	ø1.65
E	1.65	1.85
F	11.40	11.60
P0	3.90	4.10
P	15.90	16.10
P1	1.90	2.10
W	23.90	24.30

Part Numbering and Marking System



MBR = Device Type
B = Package type
20 = Forward Current (20A)
100 = Reverse Voltage (100V)
CT = Configuration
LF = Littelfuse
YY = Year
WW = Week
L = Lot Number

Packing Options

Part Number	Marking	Packing Mode	M.O.Q
MBRB20100CT	MBRB20100CT	800pcs / reel	800

Revised:11/09/15