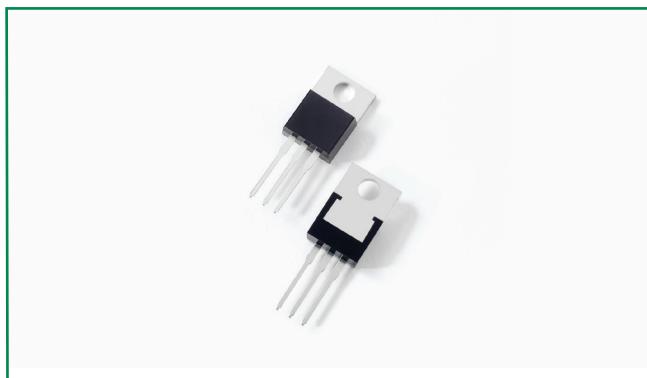
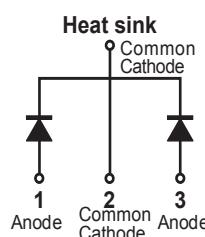


### MBR20100CTP

#### 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
- DC/DC converters
- Polarity protection diodes
- Free-wheeling 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 @ $T_c = 105^\circ C$ rectangular wave form	10 (per leg)	A
			20 (total device)	
Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	150	A

#### Electrical Characteristics

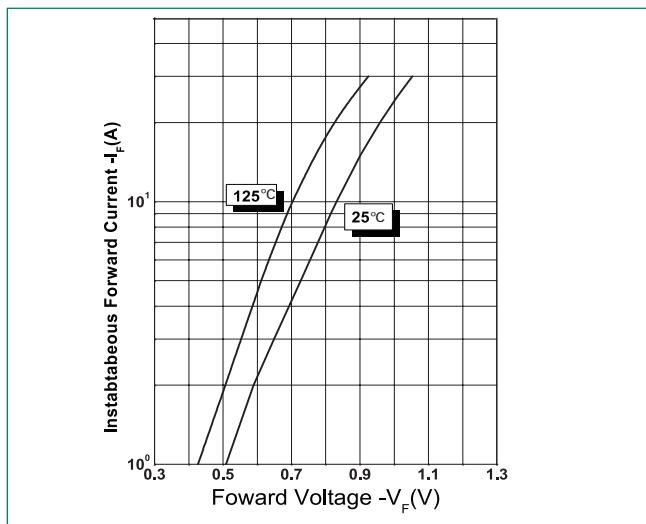
Parameters	Symbol	Test Conditions	Max	Unit
Forward Voltage Drop (per leg) *	$V_{F1}$	@ 10A, Pulse, $T_j = 25^\circ C$	0.90	V
	$V_{F2}$	@10A, Pulse, $T_j = 125^\circ C$	0.80	
Reverse Current at DC condition (per leg)	$I_{R1}$	@ $V_R$ = rated $V_R$ $T_j = 25^\circ C$	1.0	mA
			6.0	
Junction Capacitance (per leg)	$C_T$	@ $V_R = 5V$ , $T_c = 25^\circ C$ , $f_{SI}G = 1MHz$	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%

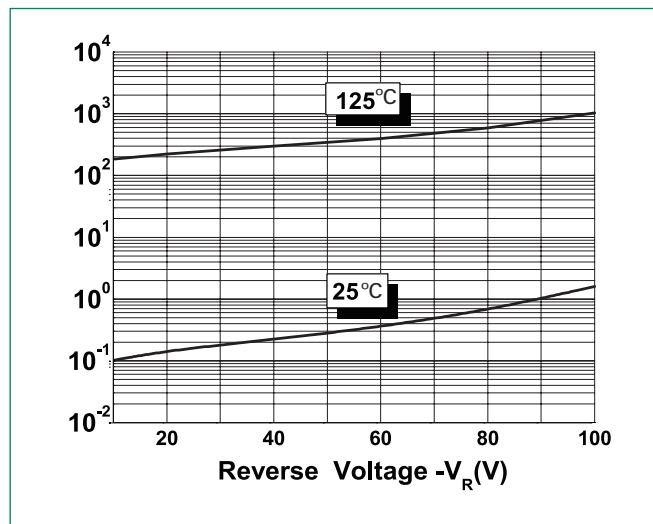
### Thermal-Mechanical Specifications

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 (per leg)	$R_{thJC}$	DC operation	3.5	°C/W
Approximate Weight	wt		2	g
Case Style		TO-220AB		

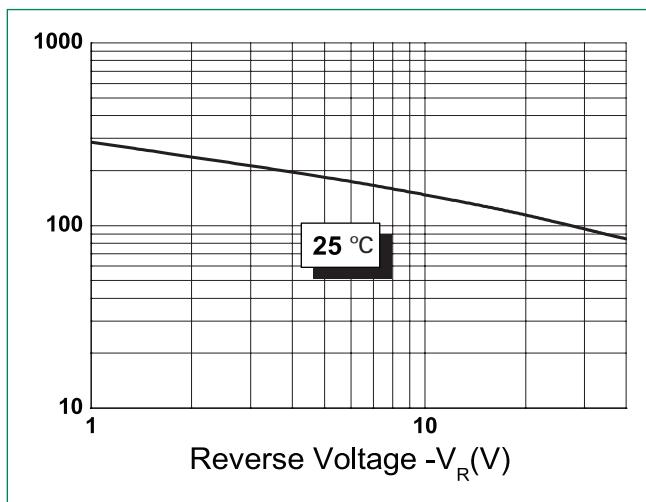
**Figure 1: Typical Forward Characteristics**



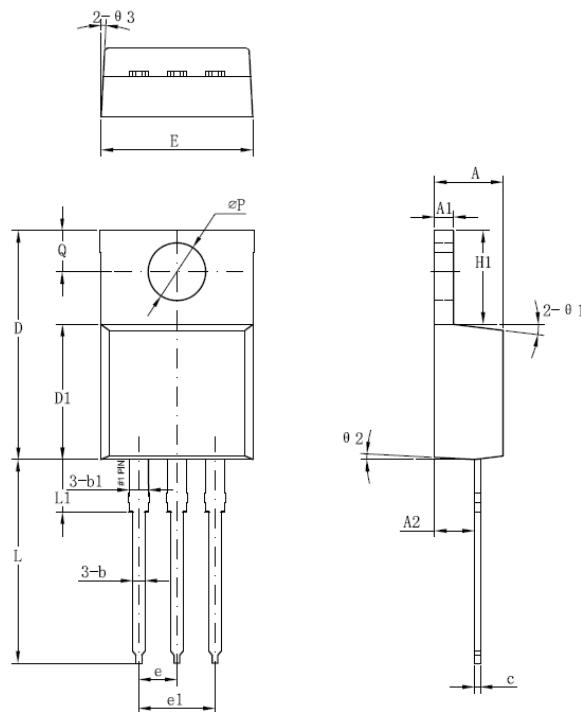
**Figure 2: Typical Reverse Characteristics**



**Figure 3: Typical Junction Capacitance**



### Dimensions- TO-220AB



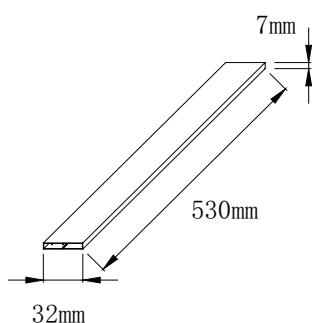
Symbol	Millimeters	
	Min	Max
<b>A</b>	3.56	4.83
<b>A1</b>	0.51	1.40
<b>A2</b>	2.03	2.92
<b>b</b>	0.38	1.02
<b>b1</b>	1.14	1.78
<b>c</b>	0.31*	0.61
<b>D</b>	14.22	16.51
<b>D1</b>	8.38	9.15*
<b>E</b>	9.65	10.67
<b>e</b>	2.54	-
<b>e1</b>	4.98*	-
<b>H1</b>	5.84	6.86
<b>L</b>	12.70	14.73
<b>L1</b>	-	6.35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

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

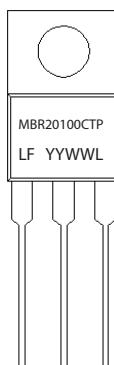
### Packing Options

Part Number	Marking	Packing Mode	M.O.Q
MBR20100CTP	MBR20100CTP	50pcs /Tube	1000

### Tube Specification



### Part Numbering and Marking System



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