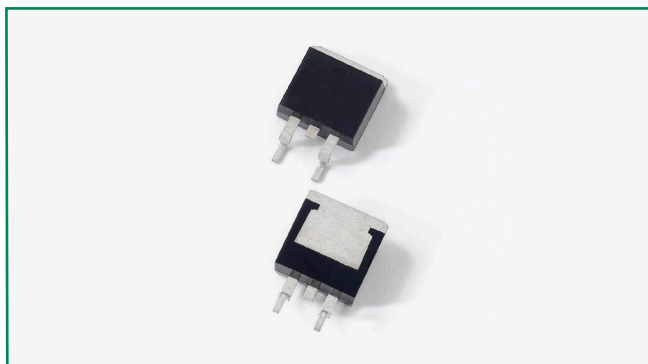
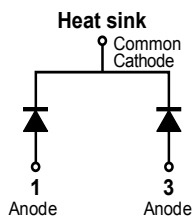


### MBRB2060CT



#### 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 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	$V_{RWM}$	-	60	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 105^\circ\text{C}$ , rectangular wave form	10 (per leg) 20 (total device)	A
RMS Forward Current	$I_{F(RMS)}$	-	22.2	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	180	A

#### Electrical Characteristics

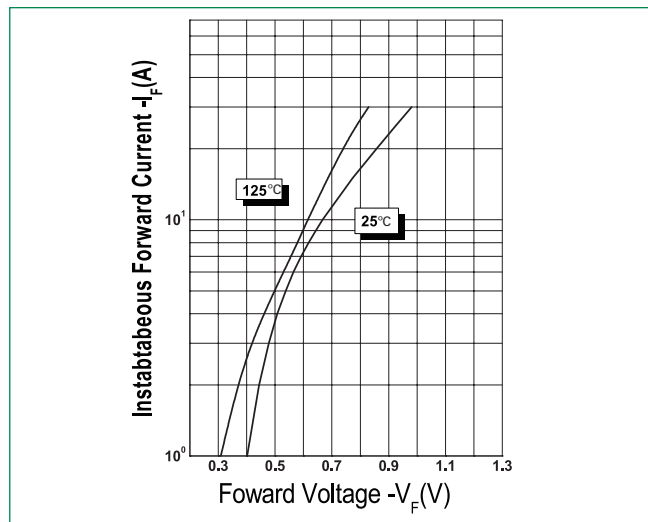
Parameters	Symbol	Test Conditions	Max	Unit
Forward Voltage Drop (per leg) *	$V_{F1}$	@ 10A, Pulse, $T_J = 25^\circ\text{C}$	0.80	V
Reverse Current (per leg) *	$I_{R1}$	@ $V_R = \text{rated } V_R$ Pulse, $T_J = 25^\circ\text{C}$	1.0	mA
Junction Capacitance (per leg)	$C_T$	@ $V_R = 4\text{V}$ , $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	400	pF
Voltage Rate of Change	dv/dt		10,000	V/ $\mu\text{s}$

\*Pulse Width < 300 $\mu\text{s}$ , Duty Cycle < 2%

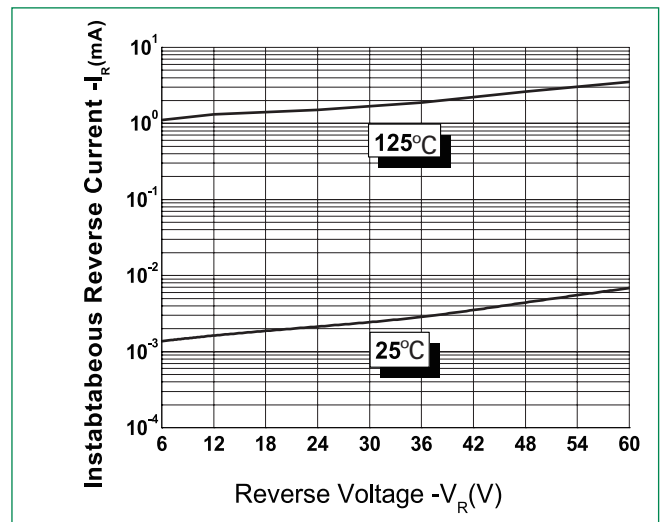
**Thermal-Mechanical Specifications**

Parameters	Symbol	Test Conditions	Max	Unit
Max. Junction Temperature	$T_J$		-55 to +150	°C
Max. Storage Temperature	$T_{stg}$		-55 to +150	°C
Maximum Thermal Resistance Junction to Case	$R_{thJC}$	DC operation	2.3	°C/W
Typical Thermal Resistance	$R_{thcs}$	Mounting surface, smooth and greased	0.5	°C/W
Approximate Weight	wt		1.85	g
Case Style		D <sup>2</sup> PAK (TO-263)		

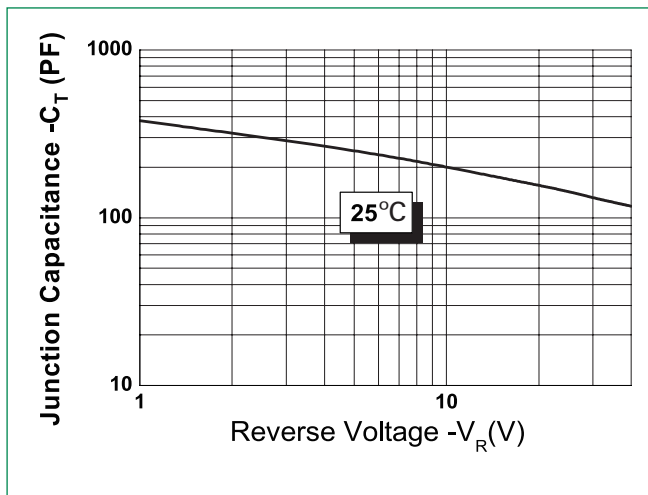
**Figure 1: Typical Forward Characteristics**



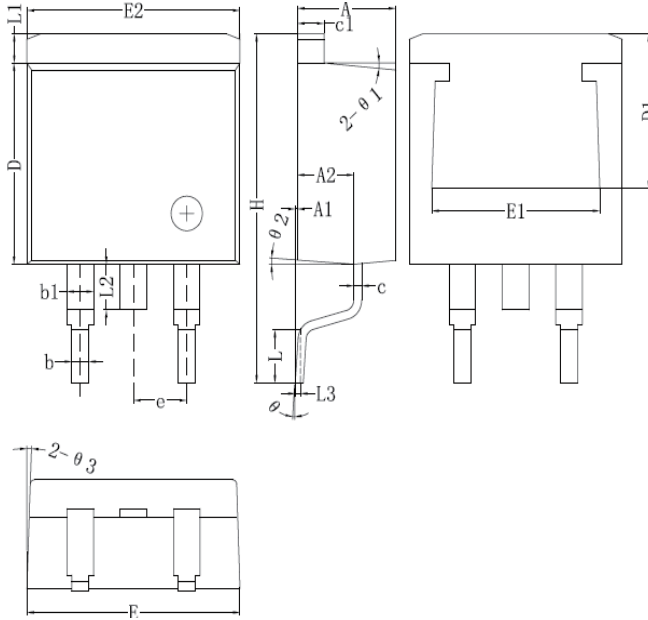
**Figure 2: Typical Reverse Characteristics**



**Figure 3: Typical Junction Capacitance**



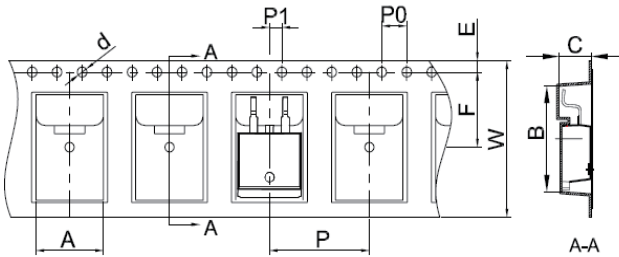
### Dimensions-D<sup>2</sup>PAK(TO-263)



	Millimeters	
	Min	Max
<b>A</b>	4.06	4.83
<b>A1</b>	0.00	0.25
<b>b</b>	0.51	0.99
<b>b1</b>	1.14	1.78
<b>c</b>	0.31*	0.74
<b>c1</b>	1.14	1.65
<b>D</b>	8.38	9.65
<b>D1</b>	6.40*	-
<b>E</b>	9.65	10.67
<b>E1</b>	6.22	-
<b>E2</b>	9.65	10.67
<b>e</b>	2.54 BSC	
<b>H</b>	14.60*	15.88
<b>L</b>	1.78	2.79
<b>L1</b>	-	1.68
<b>L2</b>	-	1.78
<b>L3</b>	0.254 BSC	

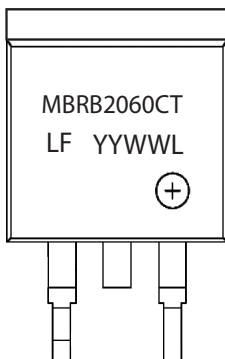
Footnote \*: The spec. does not comply with JEDEC spec.

### Carrier Tape & Reel Specification



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

### Part Numbering and Marking System



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

### Packing Options

Part Number	Marking	Packing Mode	M.O.Q
MBRB2060CT	MBRB2060CT	800pcs / reel	800