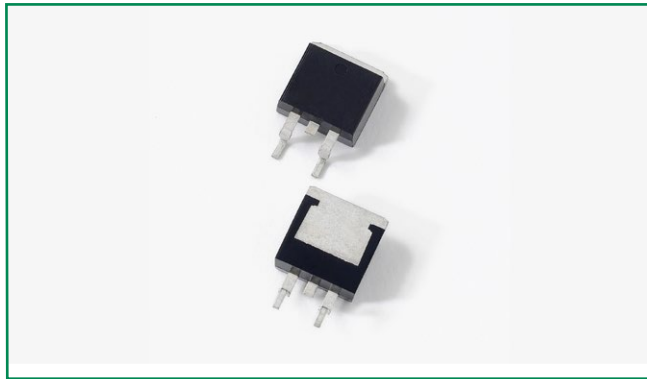
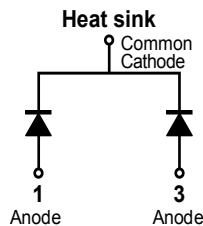


### DSTB30200C



#### Pin out



#### Description

Littelfuse DST series Ultra Low  $V_F$  Schottky Barrier Rectifier is designed to meet the general requirements of commercial and industry applications by providing high temperature, low leakage and low  $V_F$  products.

It is suitable for high frequency switching mode power supply applications, as free-wheeling and polarity protection diodes.

#### Features

- Ultra low forward voltage drop
- High frequency operation
- High junction temperature capability
- Guard ring for enhanced ruggedness and long term reliability
- Common cathode configuration in TO-263 package

#### Applications

- Switching mode power supply
- DC/DC converters
- Free-Wheeling diodes
- Polarity Protection Diodes

#### Maximum Ratings

Parameters	Symbol	Test Conditions	Max	Unit
Peak Inverse Voltage	$V_{RWM}$	-	200	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 100^\circ\text{C}$ rectangular wave form	15 (per leg)	A
			30 (total device)	
Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	200	A

#### Electrical Characteristics

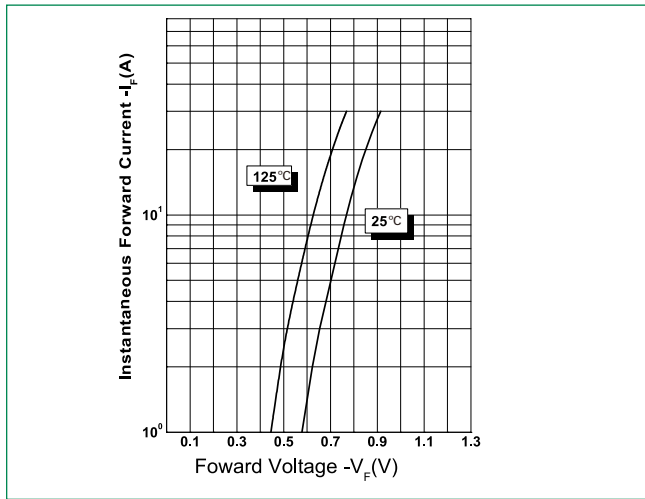
Parameters	Symbol	Test Conditions	Type	Max	Units
Forward Voltage Drop (per leg)*	$V_{F1}$	@15A, Pulse, $T_J = 25^\circ\text{C}$	0.81	1.10	V
	$V_{F2}$	@15A, Pulse, $T_J = 125^\circ\text{C}$	0.68	0.72	V
Reverse Current (per leg)*	$I_{R1}$	@ $V_R = \text{rated } V_R, T_J = 25^\circ\text{C}$	0.0005	0.16	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R, T_J = 125^\circ\text{C}$	1	12	mA
Junction Capacitance	$C_T$	@ $V_R = 5\text{V}, T_C = 25^\circ\text{C}, F_{SIG} = 1\text{MHz}$	300	-	pF

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

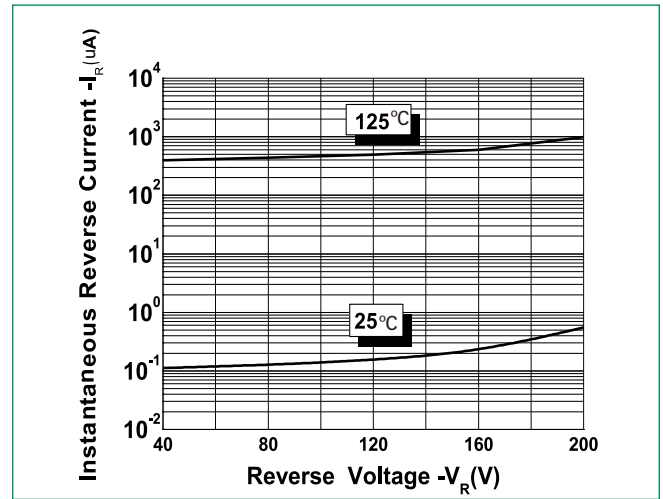
### Thermal-Mechanical Specifications

Parameters	Symbol	Test Conditions	Max	Unit
Junction Temperature	$T_J$		-55 to +150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C
Typical Thermal Resistance Junction to Case(per leg)	$R_{\theta JC}$	DC operation	2.0	°C/W
Approximate Weight	wt		1.85	g
Case Style	D <sup>2</sup> PAK (TO-263)			

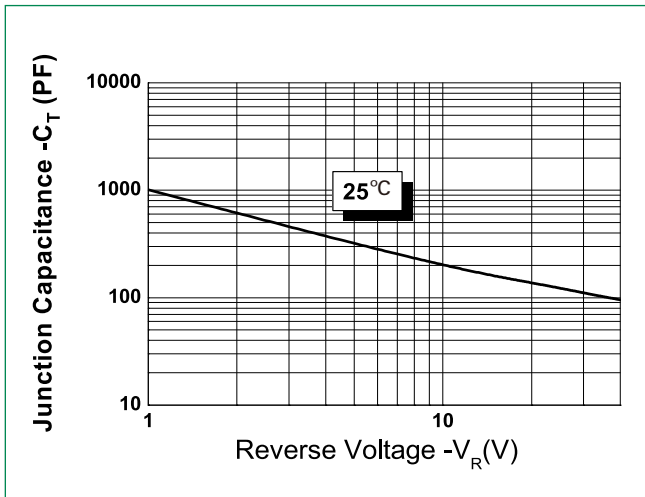
**Figure 1: Typical Forward Characteristics**



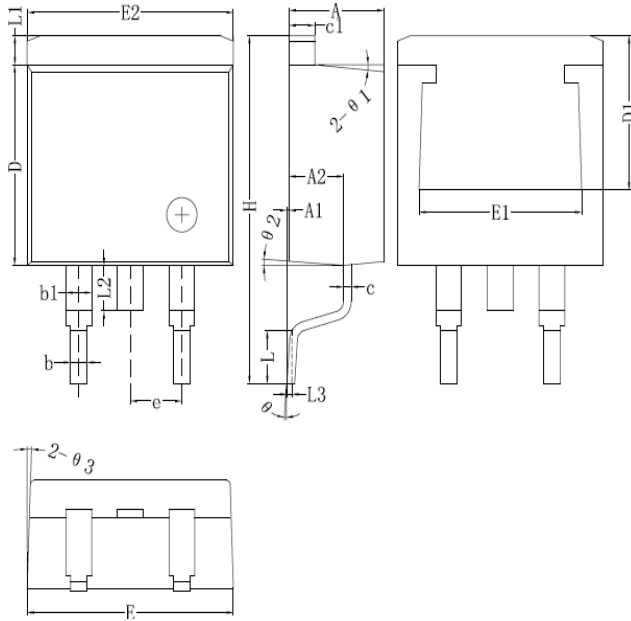
**Figure 2: Typical Reverse Characteristics**



**Figure 3: Typical Junction Capacitance**

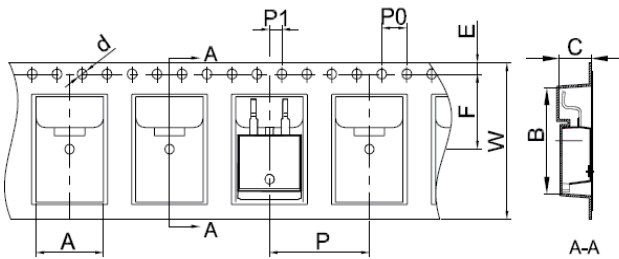


**Dimensions-D<sup>2</sup>PAK(TO-263)**



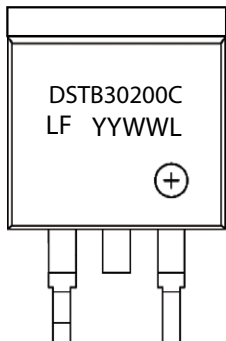
Symbol	Dimensions in Millimeters		
	Min	Typical	Max
<b>A</b>	4.55	4.70	4.85
<b>A1</b>	0	0.10	0.25
<b>A2</b>	2.59	2.69	2.89
<b>b</b>	0.71	0.81	0.96
<b>b1</b>	-	1.27	-
<b>c</b>	0.36	0.38	0.61
<b>c1</b>	1.17	1.27	1.37
<b>D</b>	8.55	8.70	8.85
<b>D1</b>	6.40	-	-
<b>E</b>	10.01	10.16	10.31
<b>E1</b>	7.6	-	-
<b>E2</b>	9.98	10.08	10.18
<b>e</b>	-	2.54	-
<b>H</b>	14.6	15.1	15.6
<b>L</b>	2.00	2.30	2.70
<b>L1</b>	1.17	1.27	1.40
<b>L2</b>	-	-	2.20
<b>L3</b>	-	0.25BSC	-
<b>e3</b>	-	4°	-

**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**



DST = Component Type  
 B = Package Type  
 30 = Forward Current (30A)  
 200 = Reverse Voltage (200V)  
 C = Configuration  
 LF = Littelfuse  
 YY = Year  
 WW = Week  
 L = Lot Number

**Packing Options**

Part Number	Marking	Packing Mode	M.O.Q
DSTB30200C	DSTB30200C	800pcs / reel	800