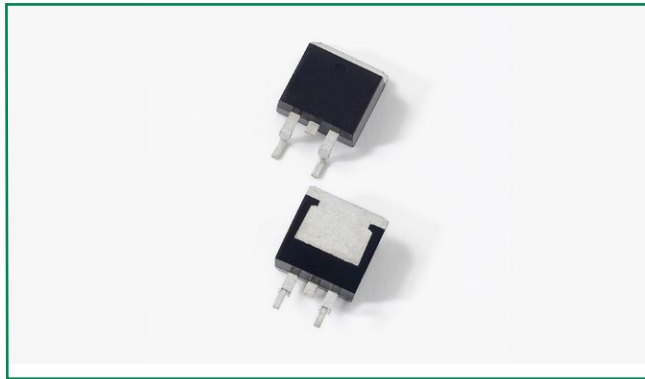
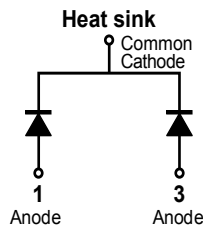


DSTB30200C



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 μs , 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 ² PAK (TO-263)			

Figure 1: Typical Forward Characteristics

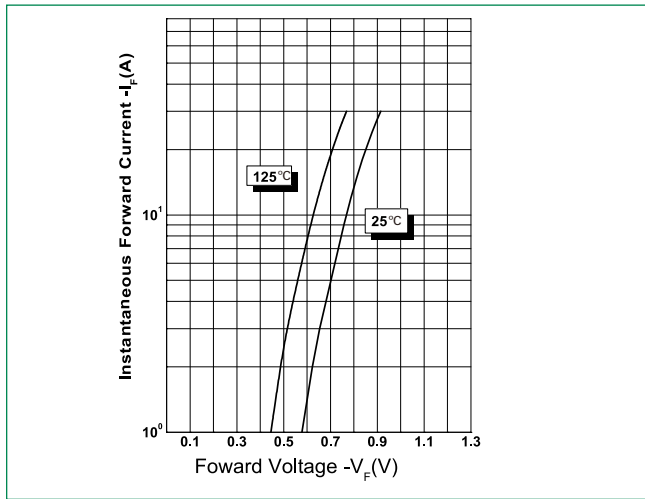


Figure 2: Typical Reverse Characteristics

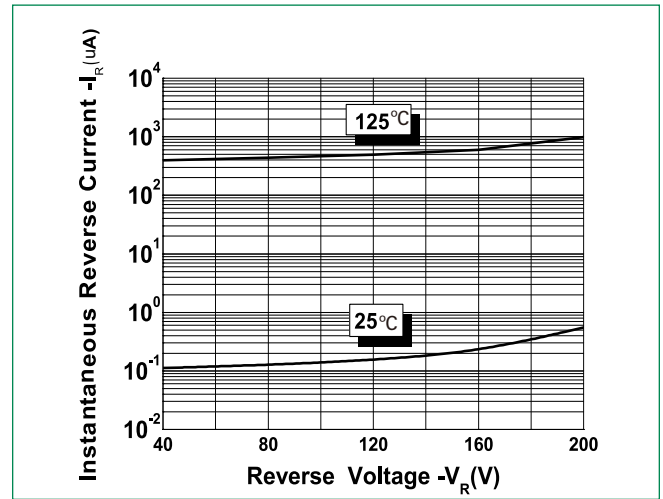
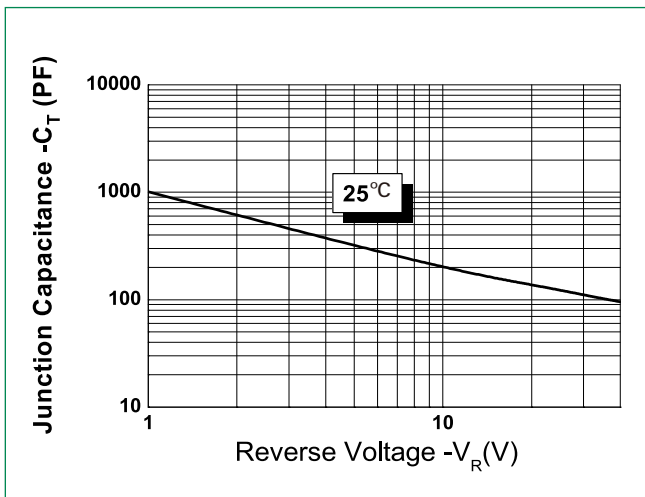
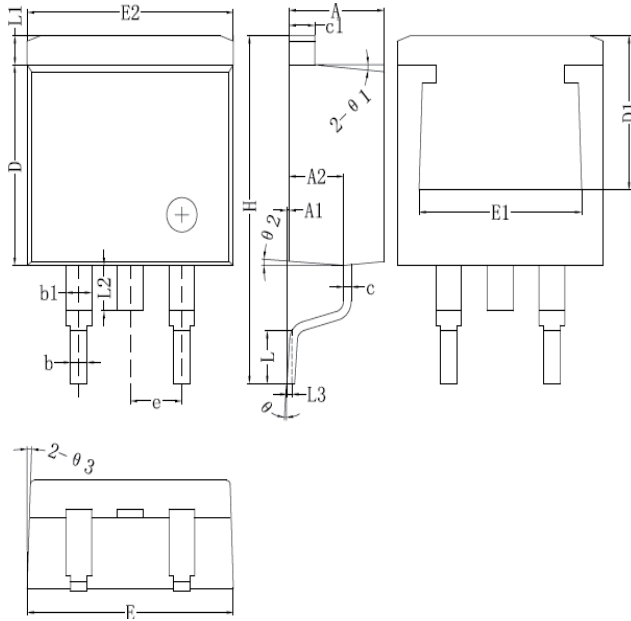


Figure 3: Typical Junction Capacitance

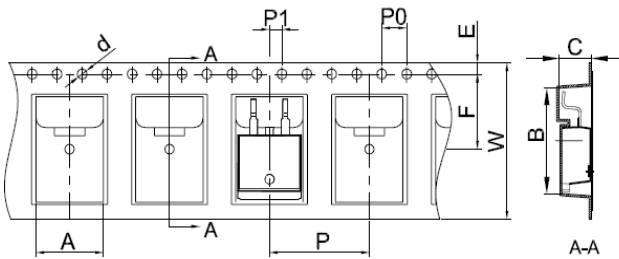


Dimensions-D²PAK(TO-263)



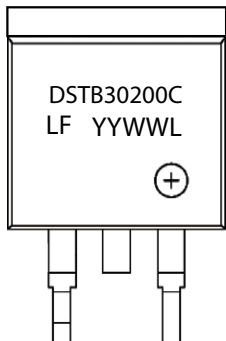
Symbol	Dimensions in Millimeters		
	Min	Typical	Max
A	4.55	4.70	4.85
A1	0	0.10	0.25
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1	-	1.27	-
c	0.36	0.38	0.61
c1	1.17	1.27	1.37
D	8.55	8.70	8.85
D1	6.40	-	-
E	10.01	10.16	10.31
E1	7.6	-	-
E2	9.98	10.08	10.18
e	-	2.54	-
H	14.6	15.1	15.6
L	2.00	2.30	2.70
L1	1.17	1.27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

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



- 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