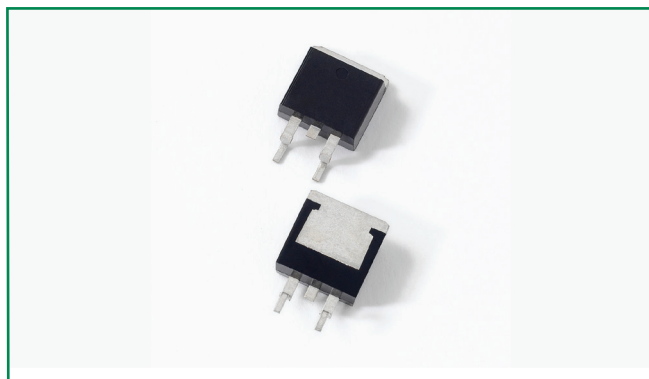
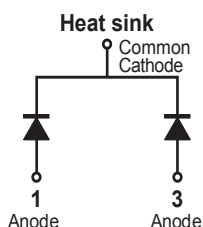


DSTB60100C



### 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 lower  $V_F$  products.

It is suitable for high frequency switching mode power supply, free-wheeling diodes 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	$V_{RWM}$	-	100	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 105^\circ\text{C}$ rectangular wave form	30 (per leg)	A
			60 (total device)	
Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	300	A

### Electrical Characteristics

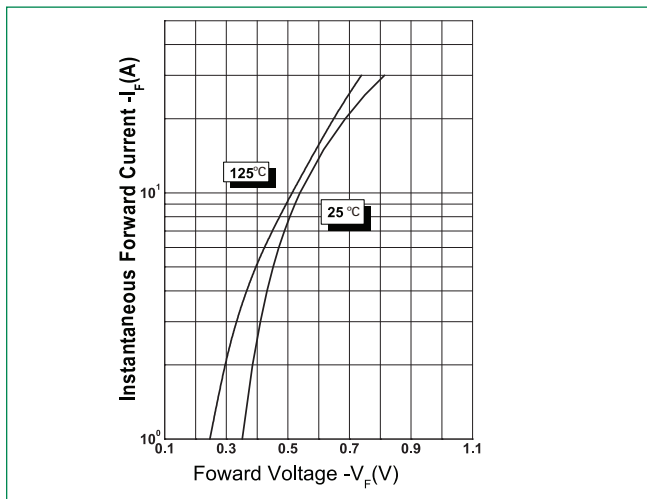
Parameters	Symbol	Test Conditions	Typ	Max	Unit
Forward Voltage Drop (per leg) *	$V_{F1}$	@5A, Pulse, $T_J = 25^\circ\text{C}$	0.47	-	V
		@10A, Pulse, $T_J = 25^\circ\text{C}$	0.54	-	
		@15A, Pulse, $T_J = 25^\circ\text{C}$	0.61	0.68	
		@20A, Pulse, $T_J = 25^\circ\text{C}$	0.68	-	
	$V_{F2}$	@5A, Pulse, $T_J = 125^\circ\text{C}$	0.38	-	
		@10A, Pulse, $T_J = 125^\circ\text{C}$	0.51	-	
		@15A, Pulse, $T_J = 125^\circ\text{C}$	0.58	0.65	
		@20A, Pulse, $T_J = 125^\circ\text{C}$	0.64	-	
Reverse Current (per leg) *	$I_{R1}$	@ $V_R = 70\text{V}$ , $T_J = 25^\circ\text{C}$	0.012	-	mA
		@ $V_R = 100\text{V}$ , $T_J = 25^\circ\text{C}$	0.030	1	
	$I_{R2}$	@ $V_R = 70\text{V}$ , $T_J = 125^\circ\text{C}$	10	-	
		@ $V_R = 100\text{V}$ , $T_J = 125^\circ\text{C}$	15	75	
Junction Capacitance (per leg)	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25^\circ\text{C}$ , $f_{SIG} = 1\text{MHz}$	845	-	pF

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

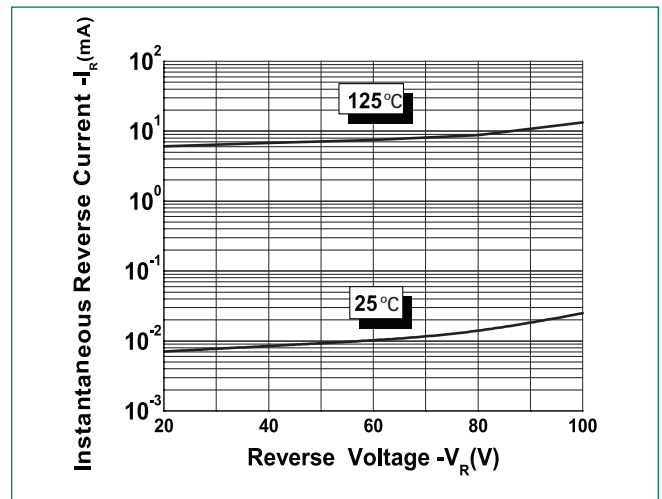
**Thermal-Mechanical Specifications**

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)	$R_{thJC}$	DC operation	2.0	°C/W
Approximate Weight	wt		1.8	g
Case Style	D <sup>2</sup> PAK (TO-263)			

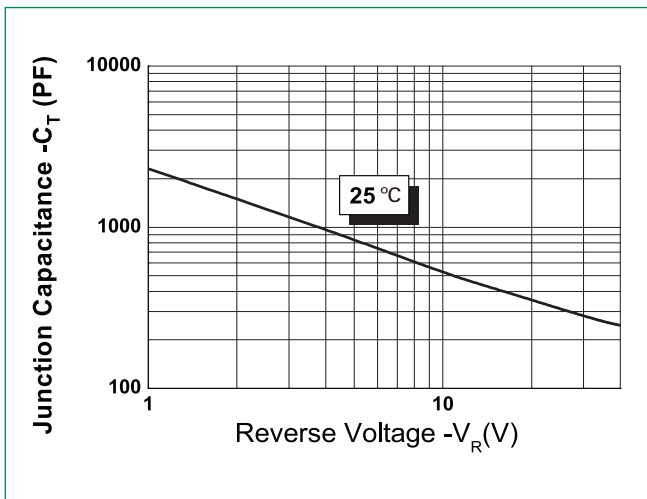
**Figure 1: Typical Forward Characteristics**



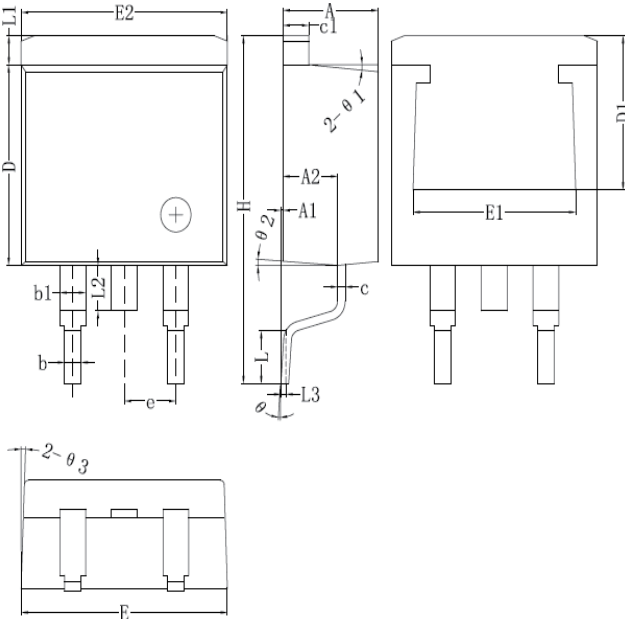
**Figure 2: Typical Reverse Characteristics**



**Figure 3: Typical Junction Capacitance**



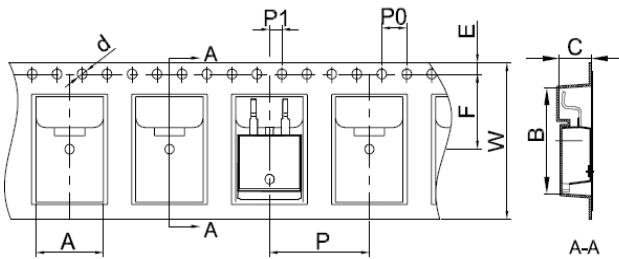
### Dimensions-D<sup>2</sup>PAK(TO-263)



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

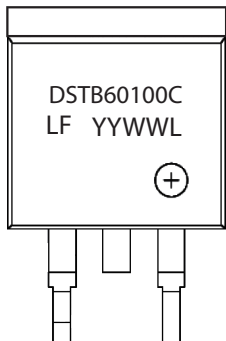
Footnote \*: The spec. does not comply with JEDEC spec.

### 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 = Device Type
- B = Package type
- 60 = Forward Current (60A)
- 100 = Reverse Voltage (100V)
- C = Configuration
- LF = Littelfuse
- YY = Year
- WW = Week
- L = Lot Number

### Packing Options

Part Number	Marking	Packing Mode	M.O.Q
DSTB60100C	DSTB60100C	800pcs / reel	800