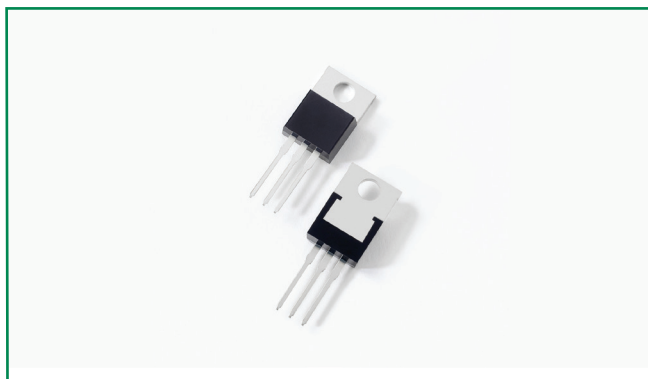
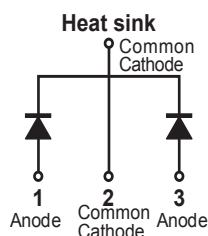


DST2045C



### 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-220AB 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	$V_{RWM}$	-	45	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 80^\circ\text{C}$ 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

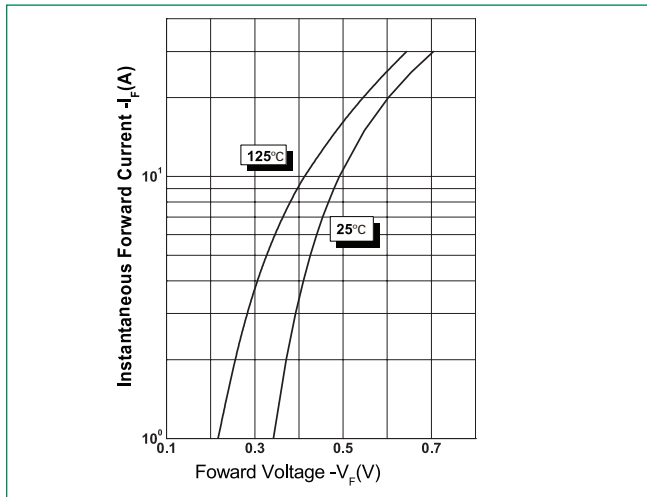
Parameters	Symbol	Test Conditions	Max	Unit
Forward Voltage Drop (per leg) *	$V_{F1}$	@10A, Pulse, $T_J = 25^\circ\text{C}$	0.58	V
	$V_{F2}$	@10A, Pulse, $T_J = 125^\circ\text{C}$	0.52	
Reverse Current (per leg) *	$I_{R1}$	@ $V_R = \text{rated } V_R$ , $T_J = 25^\circ\text{C}$	2	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R$ , $T_J = 125^\circ\text{C}$	30	

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

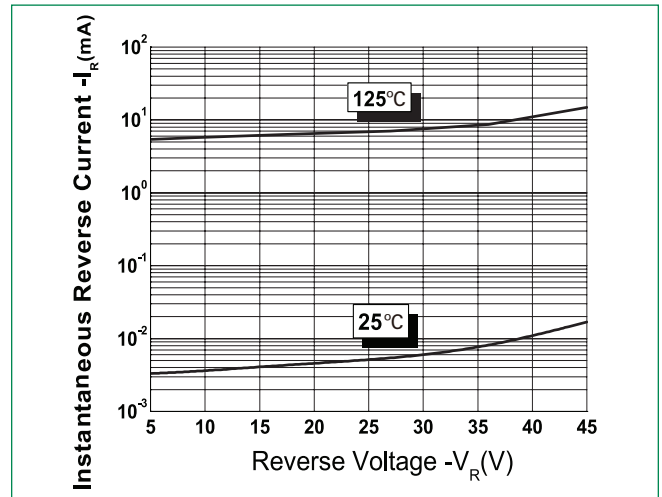
**Thermal-Mechanical Specifications**

Parameters	Symbol	Test Conditions	Max	Unit
Junction Temperature	$T_J$		-55 to +150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C
Thermal Resistance Junction to Case (per leg)	$R_{thJC}$	DC operation	3.0	°C/W
Approximate Weight	wt		1.8	g
Case Style		TO-220AB		

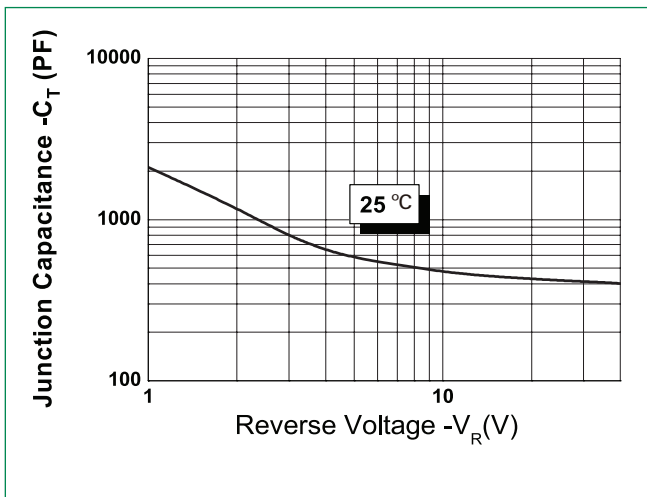
**Figure 1: Typical Forward Characteristics**



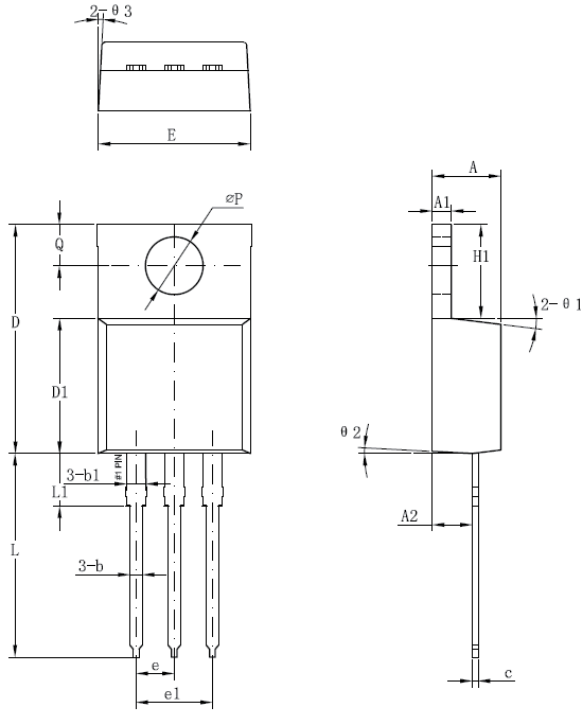
**Figure 2: Typical Reverse Characteristics**



**Figure 3: Typical Junction Capacitance**



### Dimensions- TO-220AB



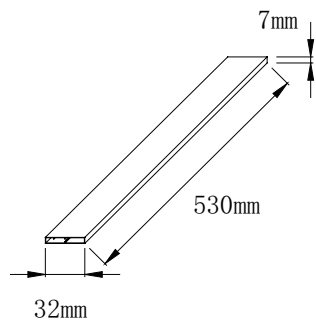
Symbol	Millimeters	
	Min	Max
<b>A</b>	3.56	4.83
<b>A1</b>	0.51	1.40
<b>A2</b>	2.03	2.92
<b>b</b>	0.38	1.02
<b>b1</b>	1.14	1.78
<b>c</b>	0.31*	0.61
<b>D</b>	14.22	16.51
<b>D1</b>	8.38	9.15*
<b>E</b>	9.65	10.67
<b>e</b>	2.54	-
<b>e1</b>	4.98*	-
<b>H1</b>	5.84	6.86
<b>L</b>	12.70	14.73
<b>L1</b>	-	6.35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

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

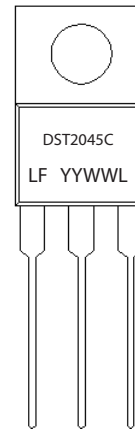
### Packing Options

Part Number	Marking	Packing Mode	M.O.Q
DST2045C	DST2045C	50pcs / Tube	1000

### Tube Specification



### Part Numbering and Marking System



DST = Device Type  
 20 = Forward Current (20A)  
 45 = Reverse Voltage (45V)  
 C = Configuration  
 LF = Littelfuse  
 YY = Year  
 WW = Week  
 L = Lot Number