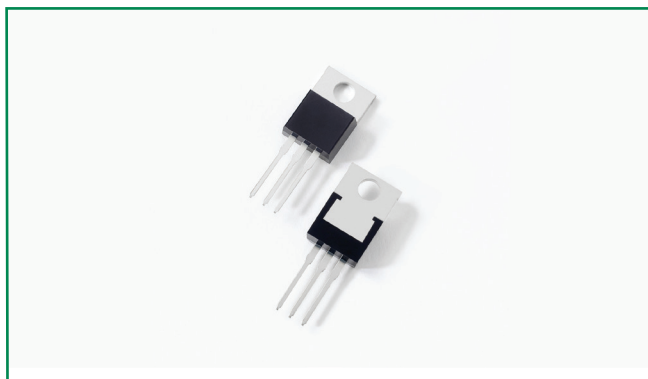
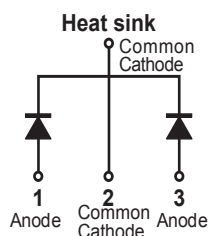


DST3080C



### 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	$V_{RWM}$	-	80	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_c = 100^\circ\text{C}$ rectangular wave form	15 (per leg) 30 (total device)	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	150	A

### Electrical Characteristics

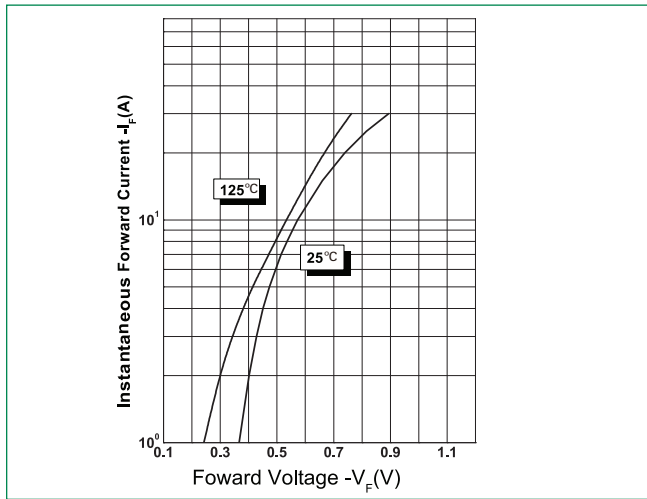
Parameters	Symbol	Test Conditions	Typ	Max	Unit
Forward Voltage Drop (per leg) *	$V_{F1}$	@5A, Pulse, $T_J = 25^\circ\text{C}$	0.47	-	V
		@7.5A, Pulse, $T_J = 25^\circ\text{C}$	0.52	-	
		@15A, Pulse, $T_J = 25^\circ\text{C}$	0.66	0.82	
	$V_{F2}$	@5A, Pulse, $T_J = 125^\circ\text{C}$	0.42	-	
		@7.5A, Pulse, $T_J = 125^\circ\text{C}$	0.48	-	
		@15A, Pulse, $T_J = 125^\circ\text{C}$	0.61	0.70	
Reverse Current (per leg) *	$I_{R1}$	@ $V_R = \text{rated } V_R, T_J = 25^\circ\text{C}$	0.009	0.7	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R, T_J = 125^\circ\text{C}$	6.4	35	

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

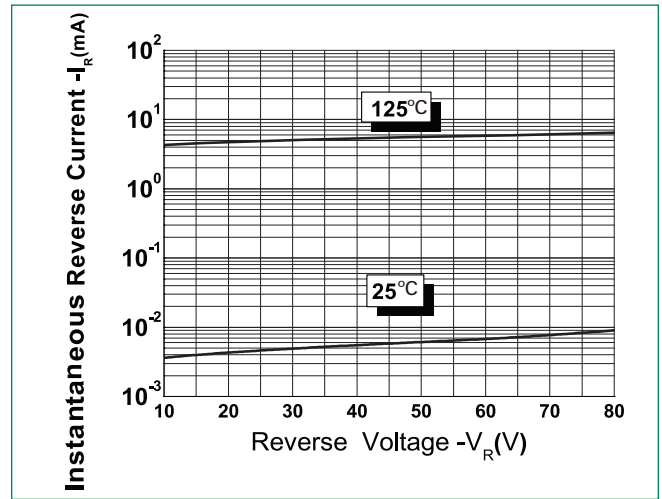
### Thermal-Mechanical Specifications

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	2.5	°C/W
Approximate Weight	wt		2	g
Case Style		TO-220AB		

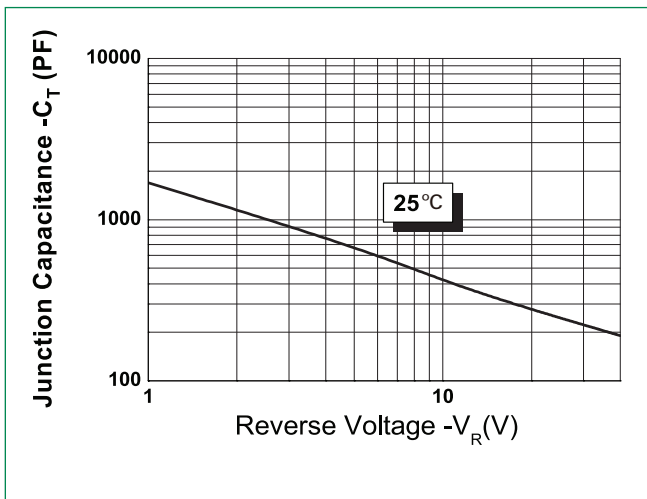
**Figure 1: Typical Forward Characteristics**



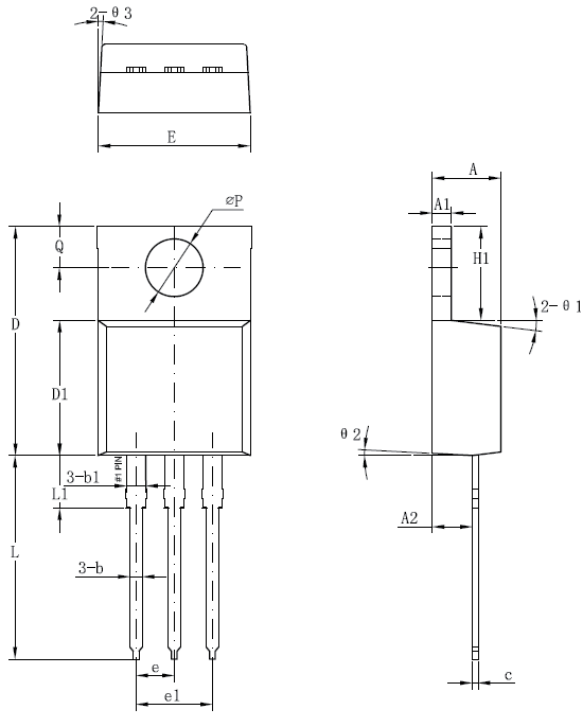
**Figure 2: Typical Reverse Characteristics**



**Figure 3: Typical Junction Capacitance**



### Dimensions- TO-220AB



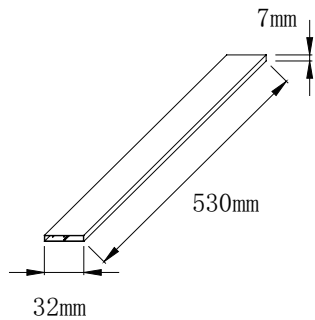
Symbol	Millimeters	
	Min	Max
A	3.56	4.83
A1	0.51	1.40
A2	2.03	2.92
b	0.38	1.02
b1	1.14	1.78
c	0.31*	0.61
D	14.22	16.51
D1	8.38	9.15*
E	9.65	10.67
e	2.54	-
e1	4.98*	-
H1	5.84	6.86
L	12.70	14.73
L1	-	6.35
$\theta$ P	3.53	4.09
Q	2.54	3.43

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

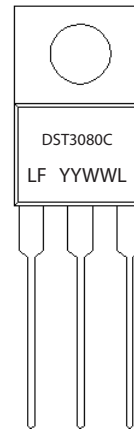
### Packing Options

Part Number	Marking	Packing Mode	M.O.Q
DST3080C	DST3080C	50pcs / Tube	1000

### Tube Specification



### Part Numbering and Marking System



DST = Device Type  
 30 = Forward Current (30A)  
 80 = Reverse Voltage (80V)  
 C = Configuration  
 LF = Littelfuse  
 YY = Year  
 WW = Week  
 L = Lot Number