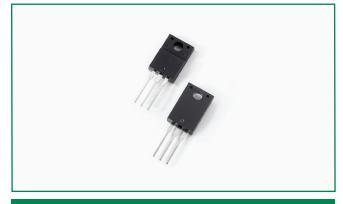
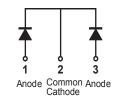
DSTF30120C

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# 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

RoHS PO

 Common cathode configuration in ITO-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 <sub>RWM</sub>	-	120	V
Average Forward Current	I <sub>F(AV)</sub>	50% duty cycle @T <sub>c</sub> =80°C rectangular wave form	15 (per leg)	- A
			30 (total device)	
Peak One Cycle Non-Repetitive Surge Current (per leg)	I <sub>FSM</sub>	8.3 ms, half Sine pulse	300	A

## **Electrical Characteristics**

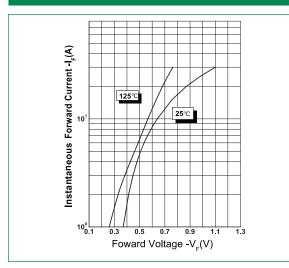
Parameters	Symbol	Test Conditions	Max	Unit
Forward Voltage Drop (per leg) *	V <sub>F1</sub>	@15A, Pulse, T <sub>J</sub> = 25 °C	0.97	V
Forward voltage Drop (per leg)	V <sub>F2</sub>	@15A, Pulse, T <sub>J</sub> = 125 °C	0.76	
Reverse Current (per leg) *	I <sub>R1</sub>	$@V_{R} = rated V_{R}T_{J} = 25 °C$	0.8	mA
neverse current (per leg)	I <sub>R2</sub>	$@V_{R} = rated V_{R}T_{J} = 125 \text{ °C}$	50	
RSM Isolation Voltage		Clip mounting, the epoxy body away from the heatsink edge by more than 0.110" along the lead direction.	4500	
$(t = 1.0 \text{ second}, \text{ R. H.} < =30\%, T_A = 25 ^{\circ}\text{C})$	V <sub>ISO</sub>	Clip mounting, the epoxy body is inside the heatsink.	3500	V
		Screw mounting, the epoxy body is inside the heatsink.	1500	

\* Pulse Width < 300µs, Duty Cycle <2%

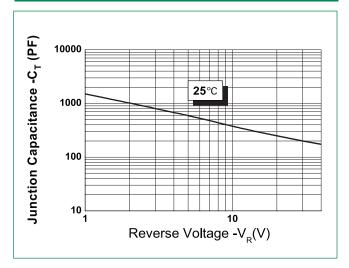
# **Thermal-Mechanical Specifications**

Parameters	Symbol	Test Conditions	Max	Unit
Junction Temperature	TJ		-55 to +150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C
Thermal Resistance Junction to Case (per leg)	R <sub>thJC</sub>	DC operation	4.5	°C/W
Approximate Weight	wt		2	g
Case Style	ITO-220AB			

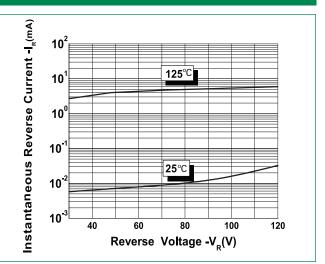
# Figure 1: Typical Forward Characteristics



# Figure 3: Typical Junction Capacitance

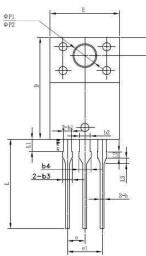


# Figure 2: Typical Reverse Characteristics

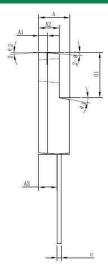




# **Dimensions- ITO-220AB**



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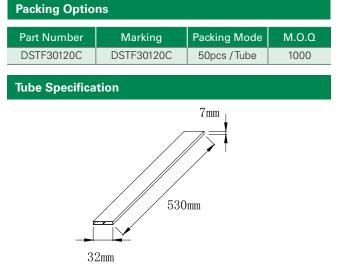
Symbol	Millimeters				
Symbol	Min	Тур	Max		
Α	4.30	4.50	4.70		
A1	1.10	1.30	1.50		
A2	2.80	3.00	3.20		
A3	2.50	2.70	2.90		
b	0.50	0.60	0.75		
b1	1.10	1.20	1.35		
b2	1.50	1.60	1.75		
b3	1.20	1.30	1.45		
b4	1.60	1.70	1.85		
С	0.55	0.60	0.75		
D	14.80	15.00	15.20		
E	9.96	10.16	10.36		
е		2.55			
e1		5.10			
H1	6.50	6.70	6.90		
L	12.70	13.20	13.70		
L1	1.60	1.80	2.00		
L2	0.80	1.00	1.20		
L3	0.60	0.80	1.00		
ØP1	3.30	3.50	3.70		
ØP2	2.99	3.19	3.39		
٥	2.50	2.70	2.90		
θ1		5°			
θ <b>2</b>		4°			
θ <b>3</b>		10°			
θ <b>4</b>		5°			
θ <b>5</b>		5°			

# Part Numbering and Marking System

DST F

F 30 120 C LF YY WW

L





= Device Type = Package type = Forward Current (30A) = Reverse Voltage (120V)

= Configuration = Littelfuse

= Year = Week = Lot Number

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