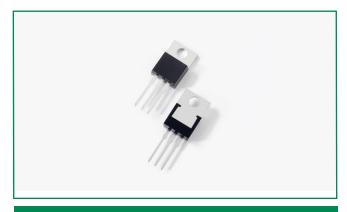
# **Schottky Barrier Rectifier** DST20100C, 20A (2 x 10A), 100V,T)-220AB, common cathode

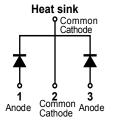
# DST20100C







#### Pin out



#### **Description**

The Littelfuse DST series Ultra Low V<sub>F</sub> Schottky Barrier Rectifier is designed to meet the general requirements of commercial and industry applications by providing high temperature, low leakage and low V<sub>F</sub> products.

It is suitable for high frequency switching mode power supply, free-wheeling diodes and polarity protection diodes.

#### **Features**

- Ultra low forward voltage
- High frequency operation
- High junction temperature capability
- Guard ring for enhanced ruggedness and long term reliability
- Common cathode configuration in TO-220AB package
- Lead-free and RoHS compliant

#### **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>	-	100	V
Average Forward Current	I <sub>F(AV)</sub>	50% duty cycle @T <sub>c</sub> =120°C rectangular wave form	10 (per leg)	_
Average Forward Current			20 (total device)	
Peak One Cycle Non-Repetitive Surge Current (per leg)	I <sub>FSM</sub>	8.3 ms, half Sine pulse	150	А

#### **Electrical Characteristics**

Parameters	Symbol	ool Test Conditions		Max	Unit	
Forward Voltage Drop (per leg) *	V <sub>F1</sub>	@5A, Pulse, T <sub>J</sub> = 25°C	0.54	0.55		
		@10A, Pulse, T <sub>J</sub> = 25°C	0.69	0.75	V	
	V <sub>F2</sub>	@5A, Pulse, T <sub>J</sub> = 125°C	0.48	0.53		
		@10A, Pulse, T <sub>J</sub> = 125°C	0.59	0.70		
Reverse Current (per leg) *	I <sub>R1</sub>	$@V_R = rated V_R T_J = 25 °C$	18	300	μΑ	
	I <sub>R2</sub>	$@V_R = rated V_R T_J = 100 °C$	-	12	mA	
	I <sub>R3</sub>	$@V_R = rated V_R T_J = 125 °C$	7.8	36	1 IIIA	
Junction Capacitance (per leg)	C <sub>T</sub>	$@V_R = 5V, T_C = 25  ^{\circ}C, f_{SIG} = 1MHz$	462	-	pF	

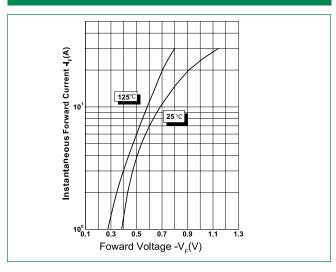
<sup>\*</sup> Pulse Width < 300µs, Duty Cycle <2%



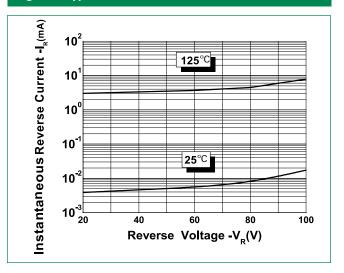
### **Thermal-Mechanical Specifications**

Parameters	Symbol	Test Conditions	Max	Unit
Junction Temperature	T <sub>J</sub>		-55 to +150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C
Thermal Resistance Junction to Case (per leg)	R <sub>euc</sub>	DC operation	2.8	°C/W
Approximate Weight	wt		2	g
Case Style		TO-220AB		

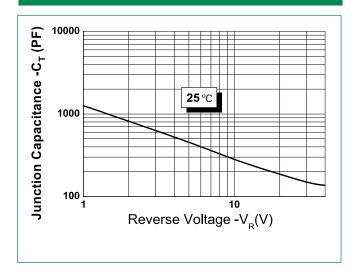
# **Figure 1: Typical Forward Characteristics**



**Figure 2: Typical Reverse Characteristics** 

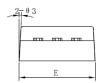


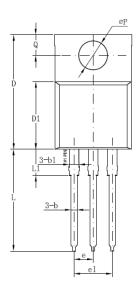
**Figure 3: Typical Junction Capacitance** 

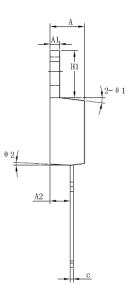


# Schottky Barrier Rectifier DST20100C, 20A (2 x 10A), 100V,T)-220AB, common cathode

## **Dimensions-TO-220AB**







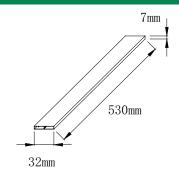
Symbol	Millimeters			
Syrribor	Min	Max		
Α	3.56	4.83		
A1	0.51	1.40		
A2	2.03	2.92		
b	0.38	1.02		
b1	1.14	1.78		
С	0.31*	0.61		
D	14.22	16.51		
D1	8.38	9.15*		
E	9.65	10.67		
е	2.54	-		
e1	4.98*	-		
H1	5.84	6.86		
L	12.70	14.73		
L1	-	6.35		
ØΡ	3.53	4.09		
Q	2.54 3.43			

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

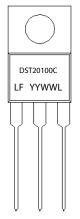
# **Packing Options**

Part Number	Marking	Packing Mode	M.O.Q	
DST20100C	DST20100C	50pcs / Tube	1000	

#### **Tube Specification**



# **Part Numbering and Marking System**



DST = DeviceType 20 = Forward Cur

20 = Forward Current (20A) 100 = Reverse Voltage (100V)

C = Configuration
LF = Littelfuse
YY = Year
WW = Week
L = Lot Number