Schottky Barrier Rectifier DST2045C, 2x10A, 45V, TO-220AB, Common Cathode

DST2045C

ittelfuse

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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 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°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	А

Electrical Characteristics

Parameters	Symbol	Test Conditions	Max	Unit
Forward Voltage Drop (per leg) *	V _{F1}	@10A, Pulse, T _J = 25 °C	0.58	- V
	V _{F2}	@10A, Pulse, T _J = 125 °C	0.52	
Reverse Current (per leg) *	I _{R1}	$@V_{R} = rated V_{R}T_{J} = 25 \text{ °C}$	2	- mA
	I _{B2}	$@V_{B} = rated V_{B}T_{J} = 125 \text{ °C}$	30]

* 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 _{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 3: Typical Junction Capacitance



Figure 2: Typical Reverse Characteristics





Dimensions-TO-220AB





Symbol	Millimeters		
Symbol	Min	Max	
А	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	
е	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.





32mm

Part Numbering and Marking System

DST

20

45 C

LF

YY WW

L



= Device Type

- = Forward Current (20A)
- = Reverse Voltage (45V) = Configuration
- = Configuration = Littelfuse
- = Year
- = Week
- = Lot Number