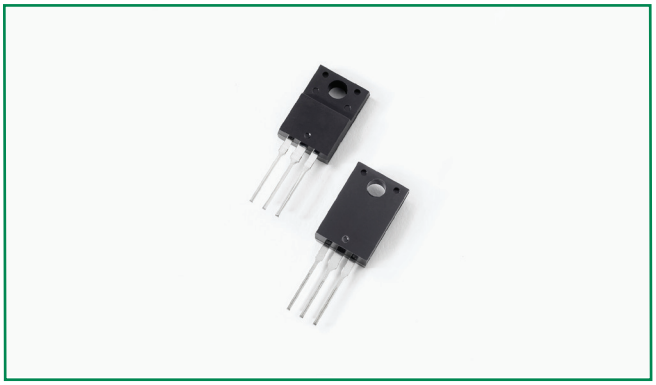
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Schottky Barrier Rectifier
DSTF4045C, 2x 20A, 45V, ITO-220AB, Common Cathode

DSTF4045C

RoHS

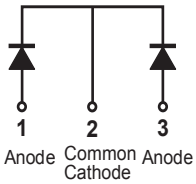


Description

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.

Pin out



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 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_{RWM}	-	45	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @T_C =90°C rectangular wave form	20 (per leg)	A
			40 (total device)	
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	240	A

Electrical Characteristics

Parameters	Symbol	Test Conditions	Typ	Max	Unit
Forward Voltage Drop (per leg) *	V_{F1}	@5A, Pulse, T_J = 25 °C	0.41	0.47	V
		@10A, Pulse, T_J = 25 °C	0.46	0.52	
		@20A, Pulse, T_J = 25 °C	0.53	0.58	
	V_{F2}	@5A, Pulse, T_J = 125 °C	0.31	-	
		@10A, Pulse, T_J = 125 °C	0.39	-	
		@20A, Pulse, T_J = 125 °C	0.51	-	
Reverse Current (per leg) *	I_{R1}	@V_R = rated V_R T_J = 25 °C	0.028	3.0	mA
	I_{R2}	@V_R = rated V_R T_J = 125 °C	14	150	
Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C, f_{SIG} = 1MHz	840	-	pF

* Pulse Width < 300µs, Duty Cycle <2%

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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	5.0	°C/W
Approximate Weight	wt		2	g
Case Style	ITO-220AB			

Figure 1: Typical Forward Characteristics

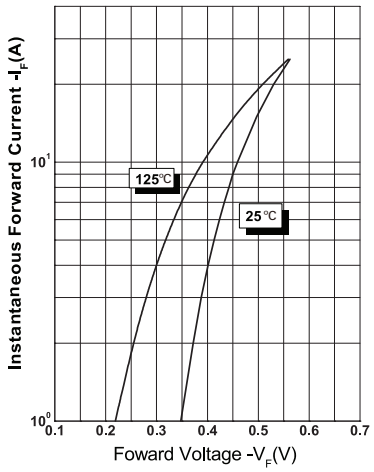


Figure 2: Typical Reverse Characteristics

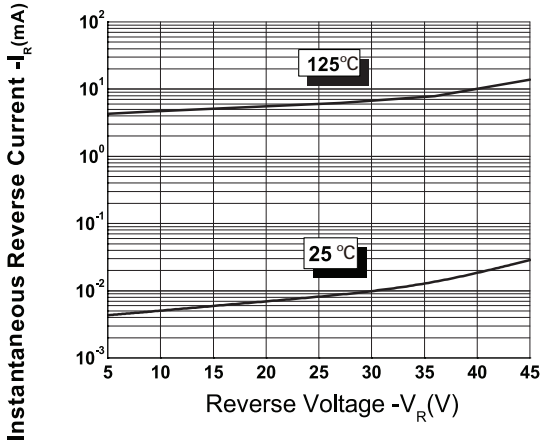
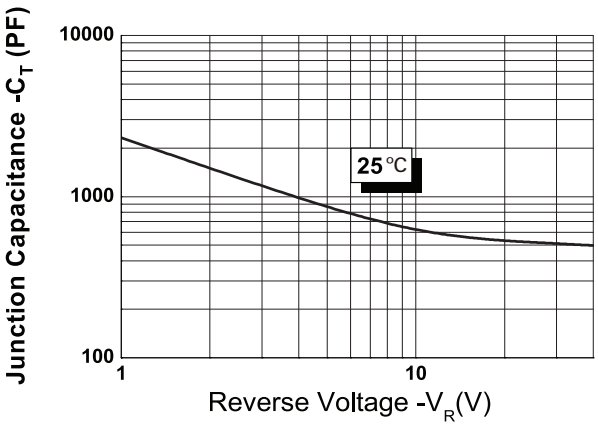


Figure 3: Typical Junction Capacitance

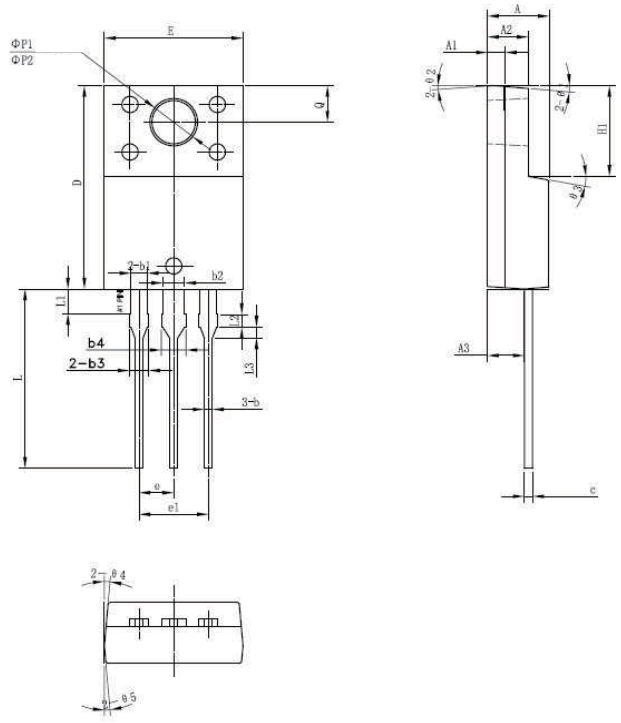


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Schottky Barrier Rectifier
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Dimensions- ITO-220AB

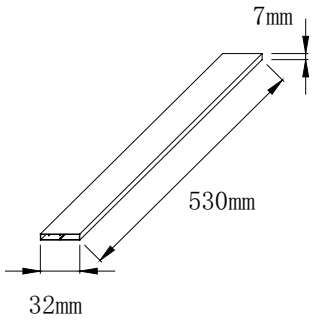


Symbol	Millimeters		
	Min	Typ	Max
A	4.30	4.50	4.70
A1	1.10	1.30	1.50
A2	2.80	3.00	3.20
A3	2.50	2.70	2.90
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
b2	1.50	1.60	1.75
b3	1.20	1.30	1.45
b4	1.60	1.70	1.85
c	0.55	0.60	0.75
D	14.80	15.00	15.20
E	9.96	10.16	10.36
e		2.55	
e1		5.10	
H1	6.50	6.70	6.90
L	12.70	13.20	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
Q	2.50	2.70	2.90
θ1		5°	
θ2		4°	
θ3		10°	
θ4		5°	
θ5		5°	

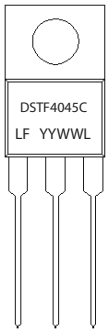
Packing Options

Part Number	Marking	Packing Mode	M.O.Q
DSTF4045C	DSTF4045C	50pcs / Tube	1000

Tube Specification



Part Numbering and Marking System



DST	= Device Type
F	= Package type
40	= Forward Current (40A)
45	= Reverse Voltage (45V)
C	= Configuration
LF	= Littelfuse
YY	= Year
WW	= Week
L	= Lot Number

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