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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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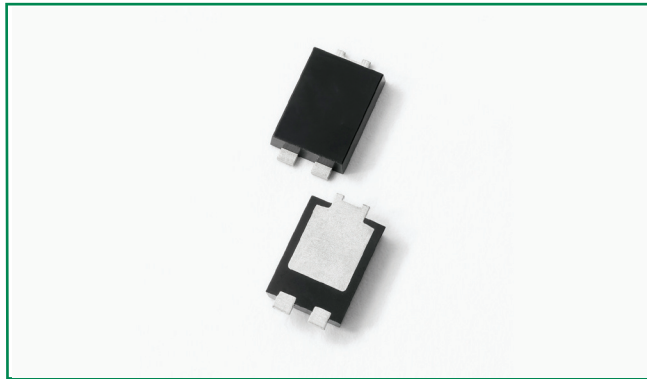
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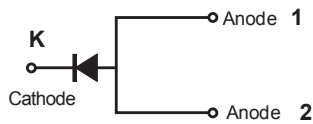
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DST1040S



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
- Single die in TO-277B 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 (per device) *	$I_{F(AV)}$	50% duty cycle @ $T_M = 121^\circ\text{C}$ rectangular wave form	10	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	150	A

* Mounted on 30 mm x 30 mm pad areas aluminum PCB

Electrical Characteristics

Parameters	Symbol	Test Conditions	Typ	Max	Unit
Forward Voltage Drop (per leg) *	V_{F1}	@5A, Pulse, $T_J = 25^\circ\text{C}$	0.43	-	V
		@10A, Pulse, $T_J = 25^\circ\text{C}$	0.49	0.57	
	V_{F2}	@5A, Pulse, $T_J = 125^\circ\text{C}$	0.33	-	
		@10A, Pulse, $T_J = 125^\circ\text{C}$	0.41	-	
Reverse Current (per leg) *	I_{R1}	@ $V_R = \text{rated } V_R, T_J = 25^\circ\text{C}$	0.017	0.80	mA
	I_{R2}	@ $V_R = \text{rated } V_R, T_J = 125^\circ\text{C}$	15	100	
Junction Capacitance (per leg)	C_T	@ $V_R = 5V, T_C = 25^\circ\text{C}, f_{SIG} = 1\text{MHz}$	639	-	pF

* Pulse Width < 300 μs , 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
Typical Thermal Resistance	R_{thJM}	DC operation	4	°C/W
Approximate Weight	wt		0.08	g
Case Style		TO-277B		

Mounted on 30 mm x 30 mm aluminum PCB; thermal resistance R_{thJM} - junction to mount

Figure 1: Typical Forward Characteristics

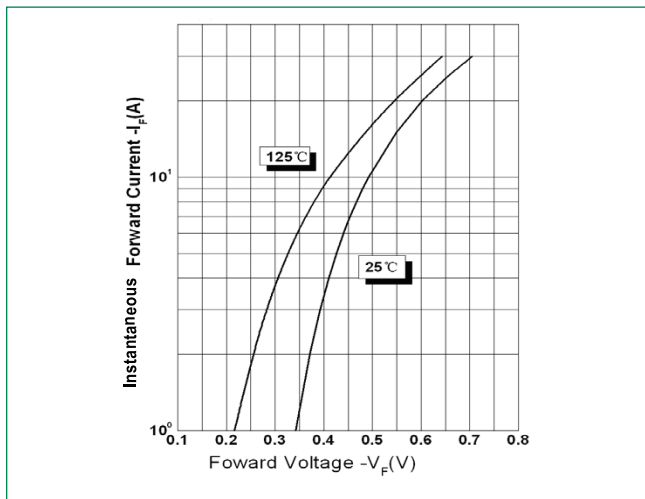


Figure 2: Typical Reverse Characteristics

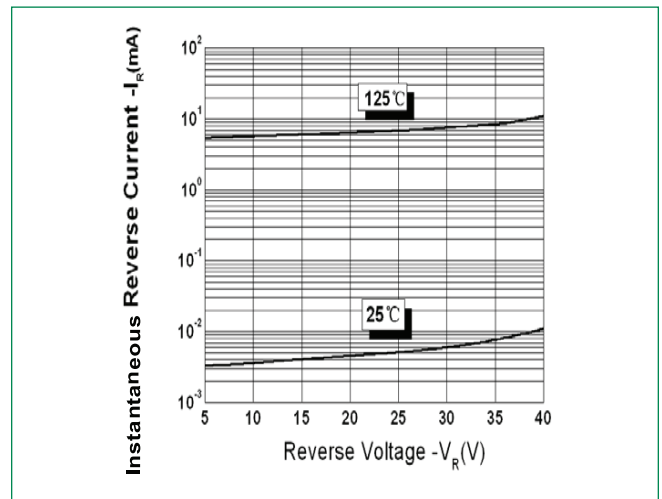
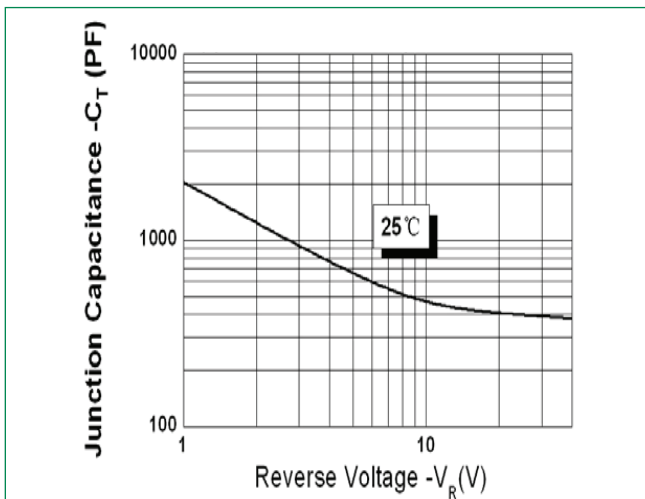
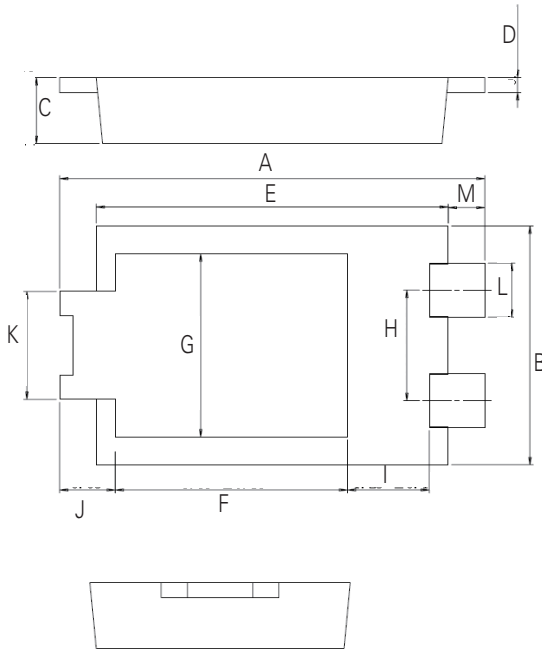


Figure 3: Typical Junction Capacitance

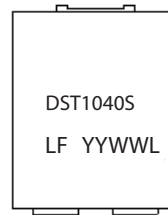


Dimensions-TO-277B



Symbol	Millimeters		
	Min	Typ	Max
A	6.30	6.50	6.70
B	3.88	3.98	4.08
C	0.95	1.10	1.25
D	0.20	0.25	0.30
E	5.28	5.38	5.48
F	3.40	3.55	3.70
G	2.90	3.05	3.20
H	1.74	1.84	1.94
I	1.10	1.25	1.40
J	-	0.85	-
K	1.70	1.80	1.90
L	0.85	0.90	0.95
M	-	0.56	-

Part Numbering and Marking System

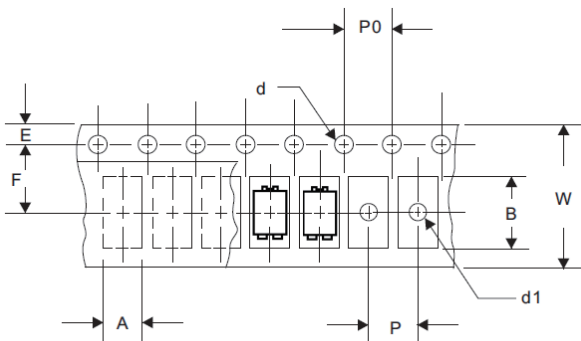


DST = Device Type
10 = Forward Current (10A)
40 = Reverse Voltage (40V)
S = Package Type
LF = Littelfuse
YY = Year
WW = Week
L = Lot Number

Packing Options

Part Number	Marking	Packing Mode	M.O.Q
DST1040S	DST1040S	5000pcs / Reel	5000

Carrier Tape & Reel Specification



Symbol	Millimeters	
	Min	Max
A	4.28	4.48
B	6.80	7.00
d	1.40	1.60
d1	-	1.50
E	1.65	1.85
F	7.40	7.60
P	7.90	8.10
P0	3.90	4.10
W	15.70	16.30