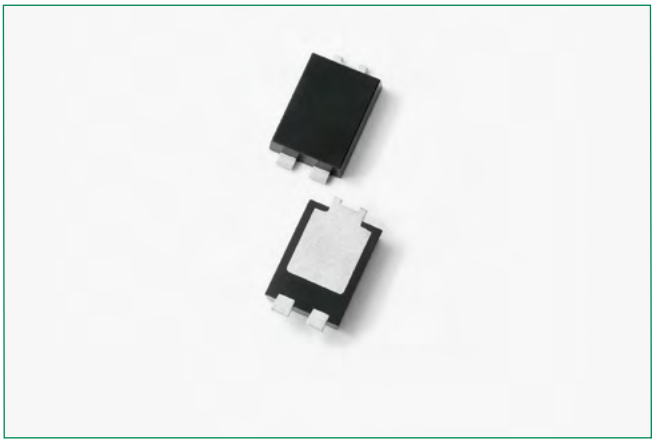
DST560S-A

5A, 60V, TO-277B, Single



Description

The DST Series is a Shocttky Barrier Rectifier that provides ultra low forward voltage (VF) and is designed to meet the general requirements of automotive applications by providing high temperature, low leakage and lower VF.

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

Features

- High reliability application and AEC-Q101 qualified
- Ultra low forward voltage drop
- High frequency operation
- MSL: Level 1 - unlimited
- High junction temperature capability
- Trench MOS Schottky technology
- Single die in TO-277B Package
- Pb-free E3 means 2nd level interconnect is Pb-free and the terminal finish material is tin(Sn) (IPC/ JEDEC J-STD-609A.01)
- Halogen-free

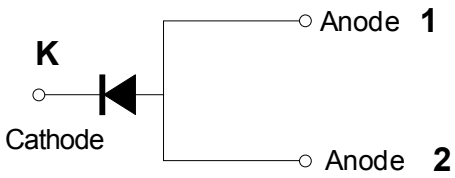
Applications

- Switching mode power supply
- DC/DC converters
- Free-Wheeling diodes
- Polarity Protection Diodes

Additional Information

Resources | Accessories | Samples

Pin out



Maximum Ratings

Parameters	Symbol	Test Conditions	Max	Unit
Peak Inverse Voltage	V_{RWM}	-	60	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @T_L = 125 °C rectangular wave form	5	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	100	A

Electrical Characteristics

Parameters	Symbol	Test Conditions	Typ	Max	Unit
Forward Voltage Drop*	V_{F1}	@2.5A, Pulse, T_J = 25 °C	0.42	-	V
		@5A, Pulse, T_J = 25 °C	0.50	0.70	
	V_{F2}	@2.5A, Pulse, T_J = 125 °C	0.33	-	
		@5A, Pulse, T_J = 125 °C	0.44	0.60	
Reverse Current*	I_{R1}	@V_R = rated V_R, T_J = 25 °C	0.01	0.7	mA
	I_{R2}	@V_R = rated V_R, T_J = 125 °C	6.4	25	
Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C, f_{SIG} = 1MHz	314	-	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
Maximum Thermal Resistance Junction to Ambient	R_{thJA}	DC operation	75	°C/W
Maximum Thermal Resistance Junction to Lead	R_{thJL}		4	°C/W
Approximate Weight	wt		0.08	g
Case Style	TO-277B			

Figure 1:
Typical Forward Characteristics

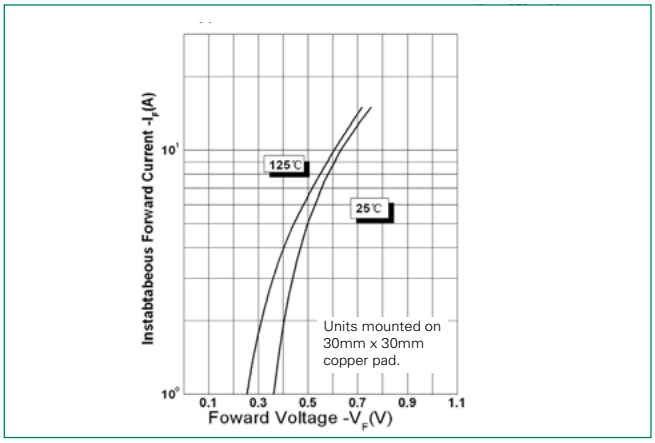


Figure 2:
Typical Reverse Characteristics

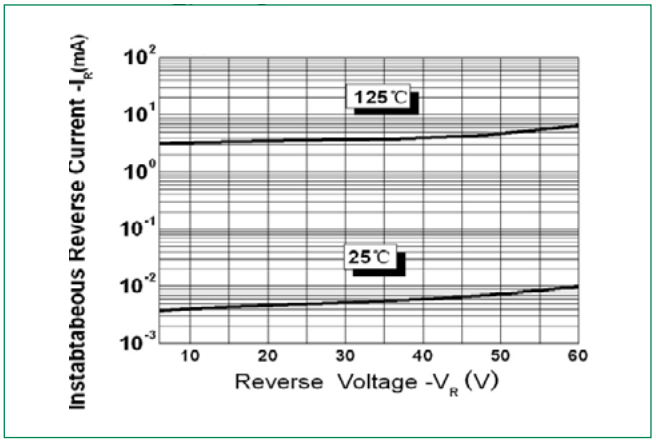
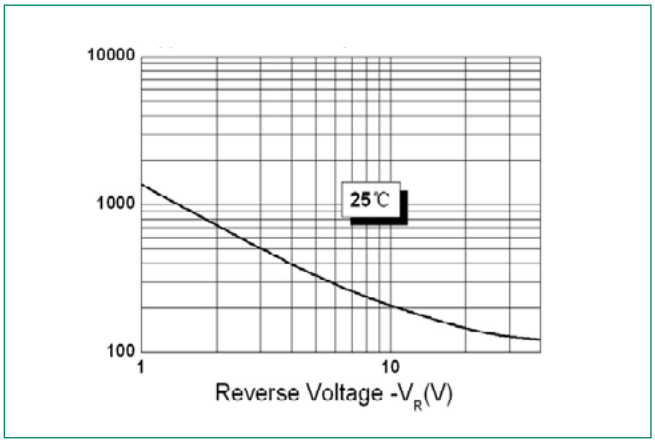


Figure 3:
Typical Junction Capacitance



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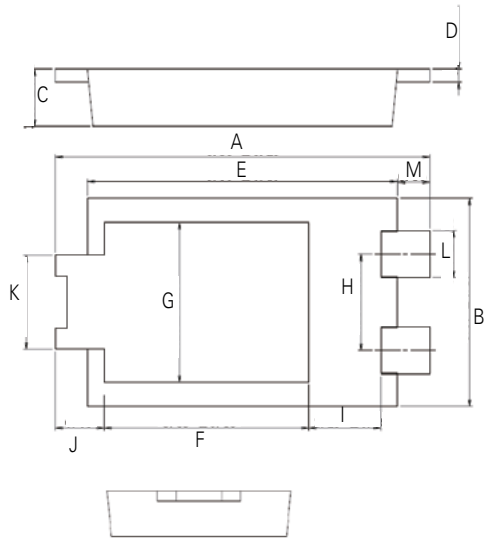
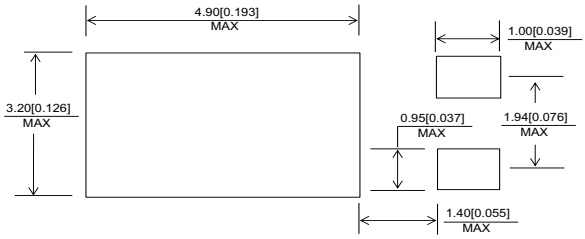
Dimensions-TO-277B

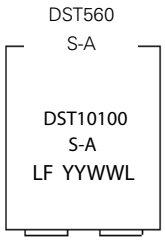


Symbol	Millimeters		
	Min	Typ	Max
A	6.30	6.50	6.70
B	3.88	3.98	4.08
C	0.95	1.10	1.25
D	0.20	0.25	0.30
E	5.28	5.38	5.48
F	3.40	3.55	3.70
G	2.90	3.05	3.20
H	1.74	1.84	1.94
I	1.10	1.25	1.40
J	-	0.85	-
K	1.70	1.80	1.90
L	0.85	0.90	0.95
M	-	0.56	-

Mounting Pad Layout



Part Numbering and Marking System



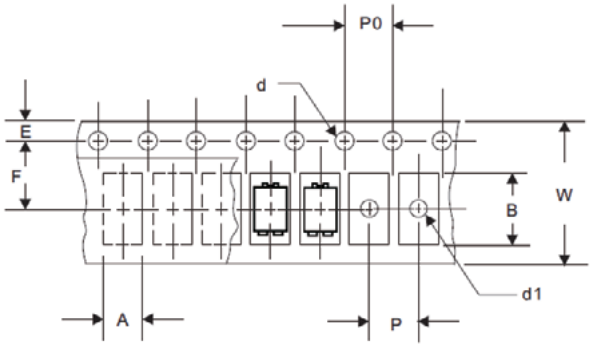
5
60

DST	= Device Type (5A)
10	= Forward Current (60V)
100	= Reverse Voltage (100V)
S	= Package Type
A	= AEC-Q101 qualified device
LF	= Littelfuse
YY	= Year
WW	= Week
L	= Lot Number

Packing Options

Part Number	Marking	Packing Mode	M.O.Q
DST560S-A	DST560S-A	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	5.40	5.60
P	7.90	8.10
P0	3.90	4.10
W	11.70	12.30