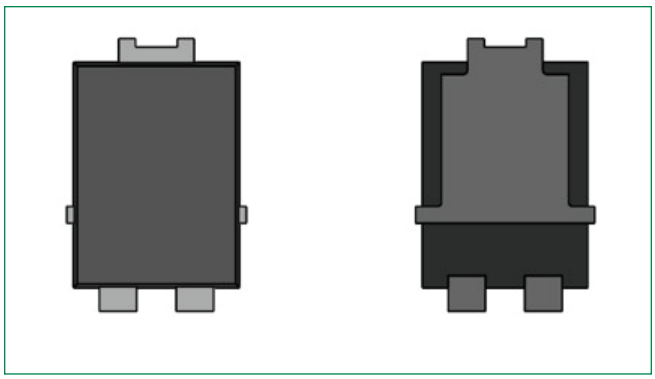
DST560S-A

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

HF RoHS Pb e3



Description

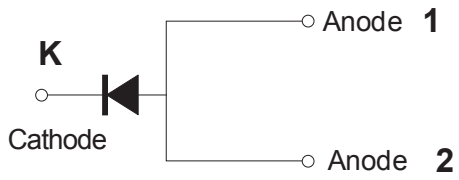
The DST Series is a Shocttky Barrier Rectifier that provides ultra low forward voltage (V_F) and is designed to meet the general requirements of commercial and industrial applications by providing high temperature, low leakage and lower V_F.

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

Pinout



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}	–	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}	@2.5 A, Pulse, T_J = 25°C	0.42	–	V
		@5 A, Pulse, T_J = 25°C	0.50	0.70	
	V_{F2}	@2.5 A, Pulse, T_J = 125°C	0.33	–	
		@5 A, 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 = 5 V, T_C = 25°C, f_{SIG} = 1 MHz	314	–	pF

* Pulse Width < 300µs, Duty Cycle <2%

Revised: TK.01/06/25

DST560S-A

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

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

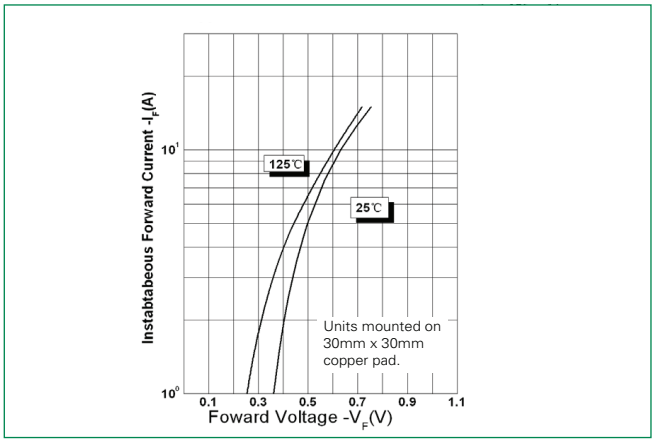


Figure 2:
Typical Reverse Characteristics

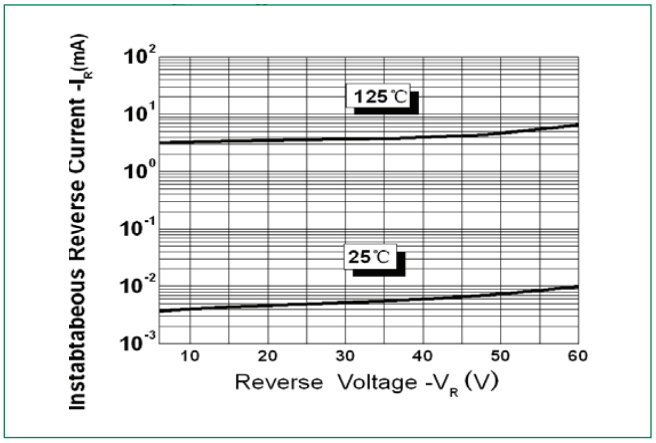
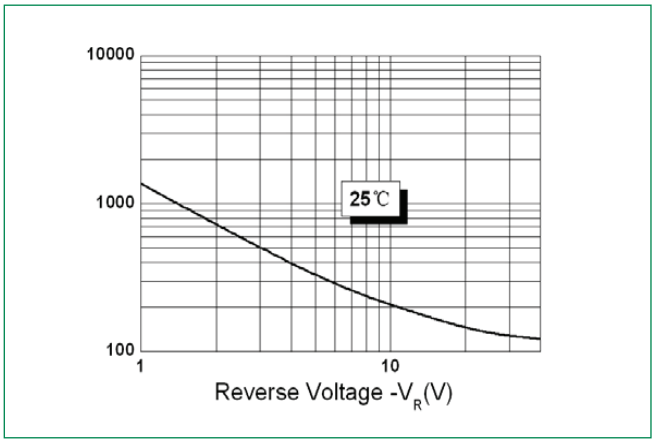


Figure 3:
Typical Junction Capacitance

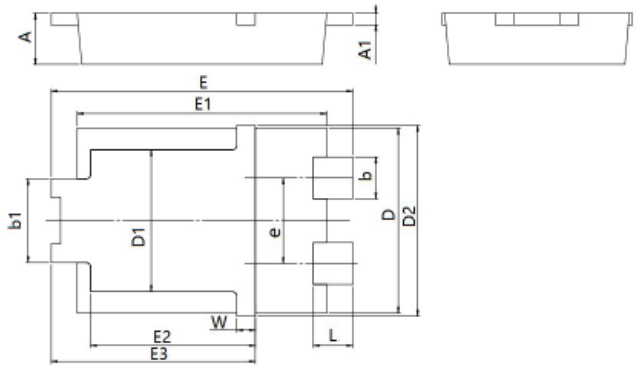


Revised: TK.01/06/25

DST560S-A

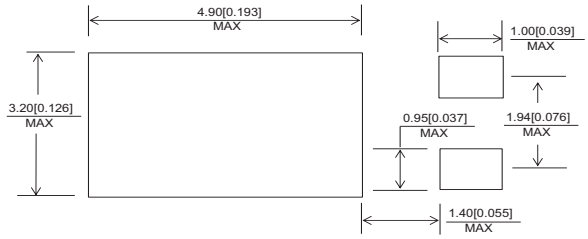
5A, 60V, TO-277B, Single

Dimensions-TO-277B



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.95	1.25	0.037	0.049
A1	0.20	0.30	0.008	0.012
b	0.85	0.95	0.033	0.037
b1	1.70	1.90	0.067	0.075
D	3.88	4.08	0.153	0.161
D1	2.90	3.20	0.114	0.126
D2	4.25	–	0.167	–
e	1.74	1.94	0.069	0.076
E	6.30	6.70	0.248	0.264
E1	5.28	5.48	0.208	0.216
E2	3.40	3.70	0.134	0.146
E3	4.20	4.60	0.165	0.181
L	0.65	1.05	0.025	0.041
W	0.25	0.55	0.010	0.022

Mounting Pad Layout



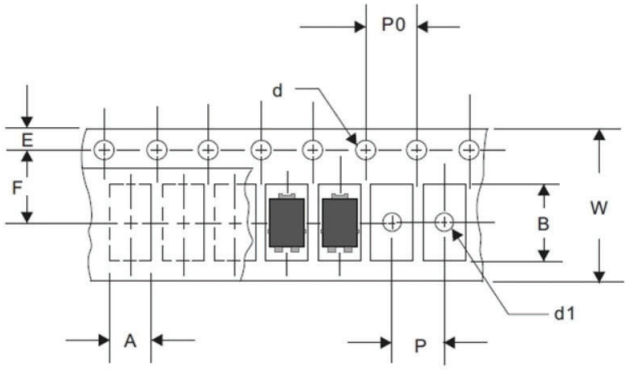
Part Numbering and Marking System

DST = Device Type
5 = Forward Current (5A)
60 = Reverse Voltage (60V)
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	5000 pcs / Reel	20000

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

IXYS Part of: Littelfuse Expertise Applied | Answers Delivered