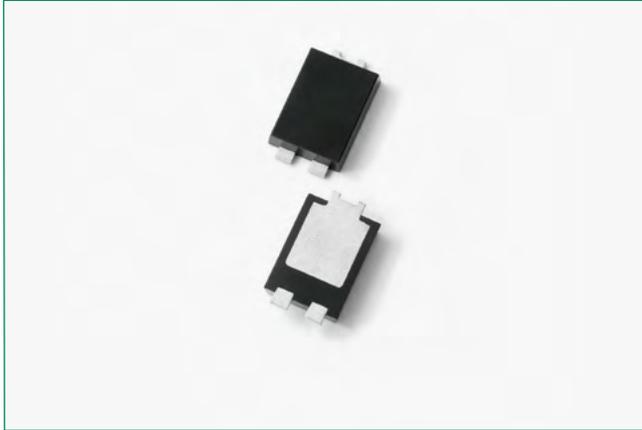


**DST560S-A**

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

**Description**

The DST Series is a Schottky 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**

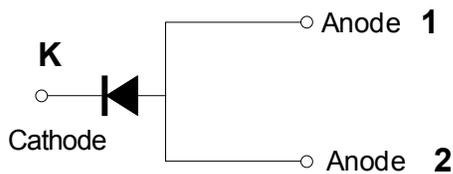
Resources



Accessories



Samples

**Pin out****Maximum Ratings**

Parameters	Symbol	Test Conditions	Max	Unit
Peak Inverse Voltage	$V_{RWM}$	-	60	V
Average Forward Current	$I_{FAV}$	50% duty cycle @ $T_L = 125^\circ\text{C}$ 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, $T_J = 25^\circ\text{C}$	0.42	-	V
		@5A, Pulse, $T_J = 25^\circ\text{C}$	0.50	0.70	
	$V_{F2}$	@2.5A, Pulse, $T_J = 125^\circ\text{C}$	0.33	-	
		@5A, Pulse, $T_J = 125^\circ\text{C}$	0.44	0.60	
Reverse Current*	$I_{R1}$	@ $V_R = \text{rated } V_R, T_J = 25^\circ\text{C}$	0.01	0.7	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R, T_J = 125^\circ\text{C}$	6.4	25	
Junction Capacitance	$C_T$	@ $V_R = 5\text{V}, T_C = 25^\circ\text{C}, f_{SIG} = 1\text{MHz}$	314	-	pF

\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle < 2%

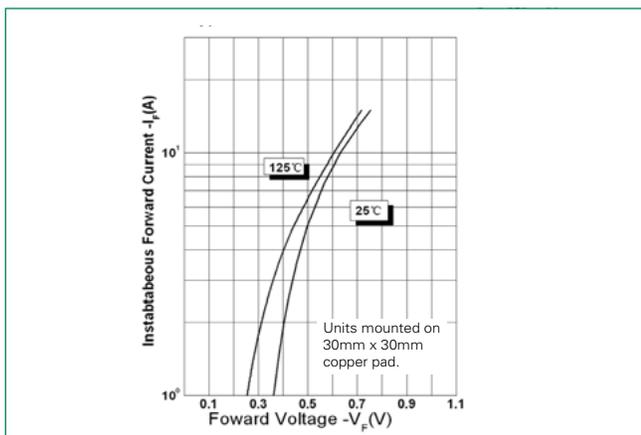
**DST560S-A**

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

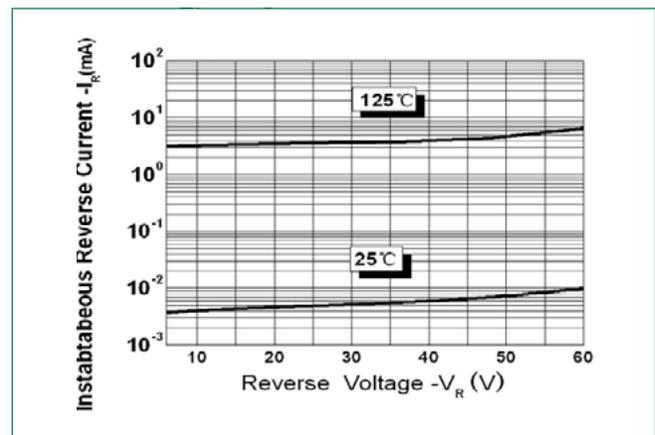
**Thermal-Mechanical Specifications**

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		

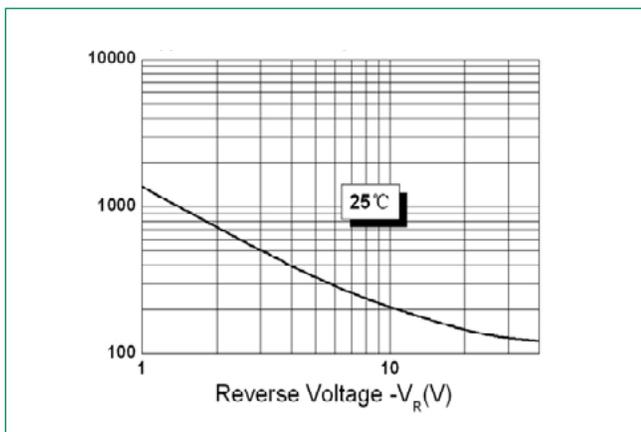
**Figure 1:**  
Typical Forward Characteristics



**Figure 2:**  
Typical Reverse Characteristics



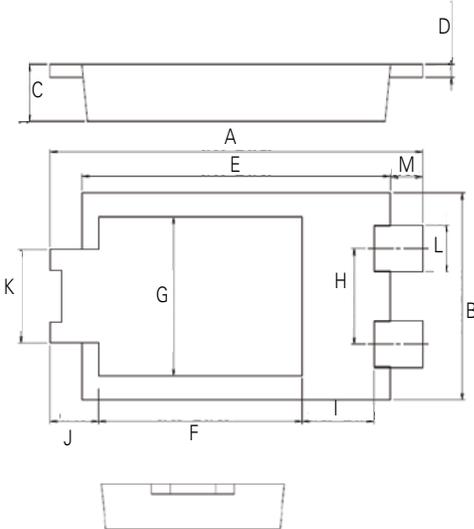
**Figure 3:**  
Typical Junction Capacitance



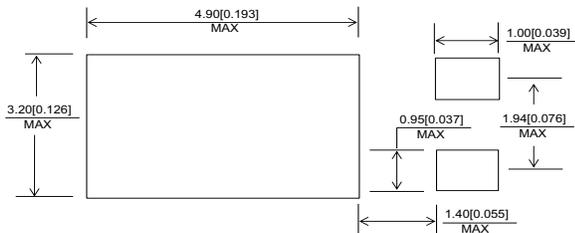
# DST560S-A

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

## Dimensions-TO-277B

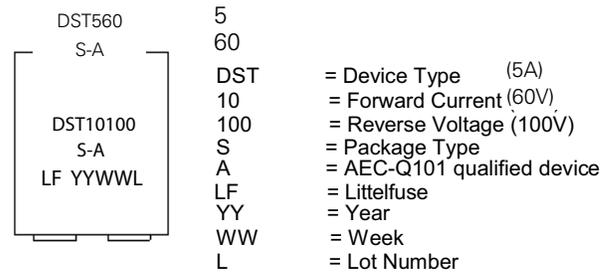


Mounting Pad Layout



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	-

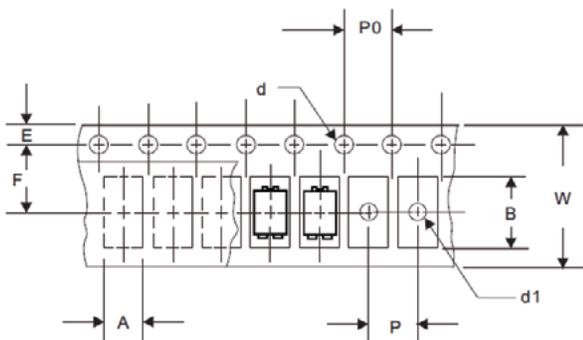
## Part Numbering and Marking System



## 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

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