

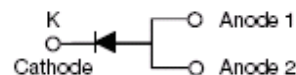
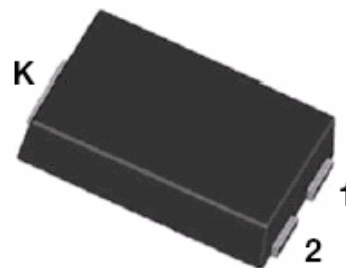
## ST560S SCHOTTKY RECTIFIER

### Applications:

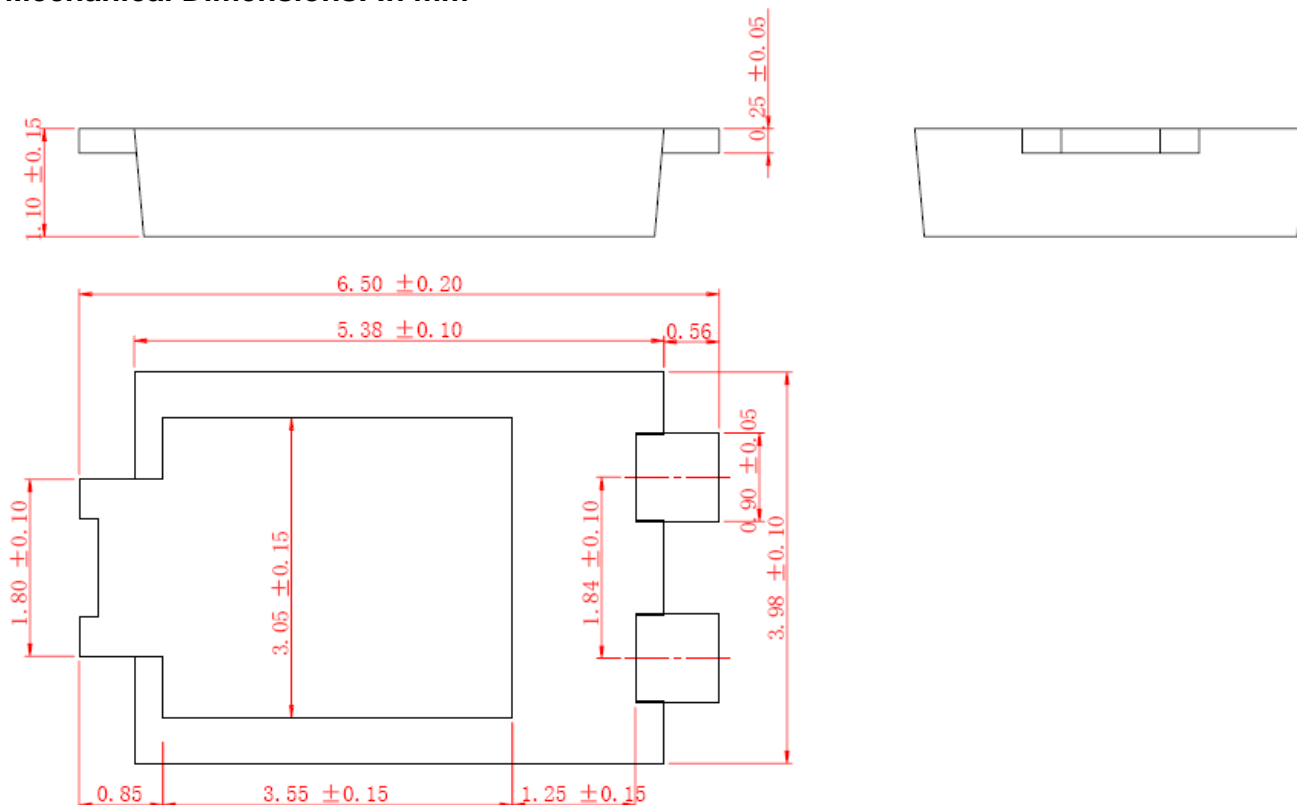
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

### Features:

- 150 °C T<sub>J</sub> operation
- Center tap configuration
- Ultralow forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request



### Mechanical Dimensions: In mm



### TO-277B

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •

**Marking Diagram:**


Where XXXXX is YYWWL

ST	= Ultralow VF
5	= Forward Current (5A)
60	= Reverse Voltage (60V)
S	= Package type
YY	= Year
WW	= Week
L	= Lot Number

**Cautions:** Molding resin  
 Epoxy resin UL:94V-0

**Ordering Information:**

Device	Package	Shipping
ST560S	TO-277B (Pb-Free)	5000pcs/ reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	$V_{RRM}$	-		
Working Peak Reverse Voltage	$V_{RWM}$		60	V
DC Blocking Voltage	$V_R$			
Average Forward Current	$I_{F(AV)}$	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:**

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 2.5A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.42	-	V
		@ 5A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.50	0.70	V
	$V_{F2}$	@ 2.5A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.33	-	V
		@ 5A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.44	0.60	V
Reverse Current*	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$	0.01	0.7	mA
Reverse Current*	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$	6.4	25	mA
Junction Capacitance	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	314	-	pF

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

**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	-	-55 to +150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-	-55 to +150	$^\circ\text{C}$
Typical Thermal Resistance Junction to Ambient (NOTE1)	$R_{\theta JA}$	DC operation	75	$^\circ\text{C/W}$
Typical Thermal Resistance Junction to Lead (NOTE1)	$R_{\theta JL}$	DC operation	4	$^\circ\text{C/W}$
Approximate Weight	wt	-	0.08	g
Case Style	TO-277B			

**NOTE: 1.** Units mounted on P.C.B., 0.5 x 0.5" (30 x 30mm) copper pads.

Figure 1  
Typical Forward Characteristics

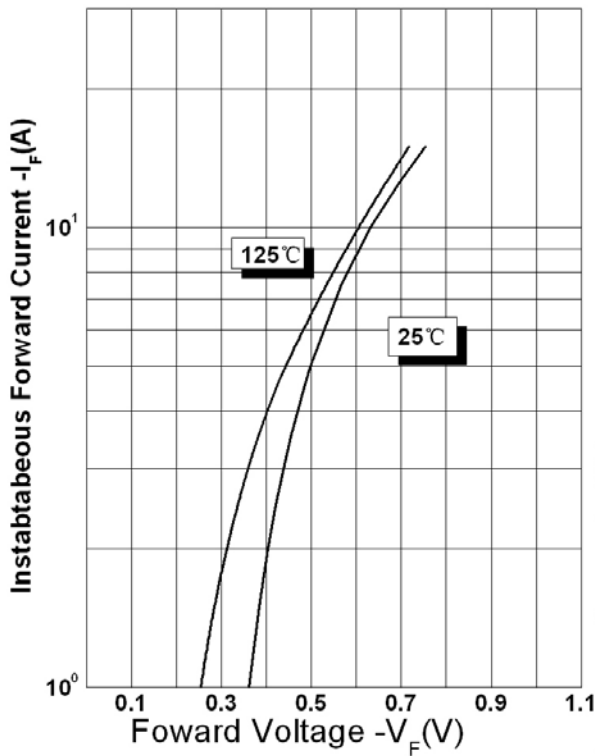


Figure 2  
Typical Reverse Characteristics

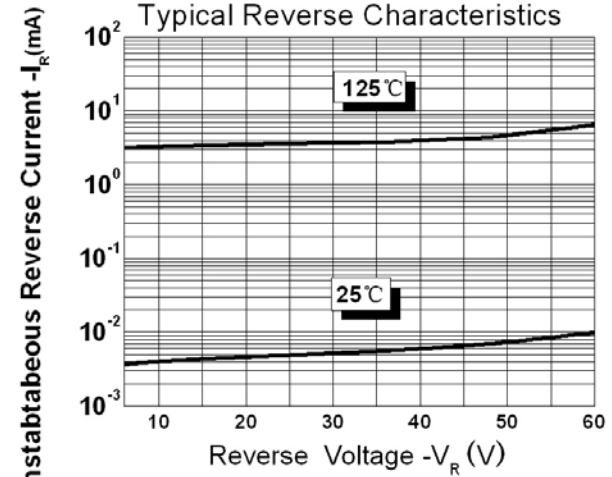
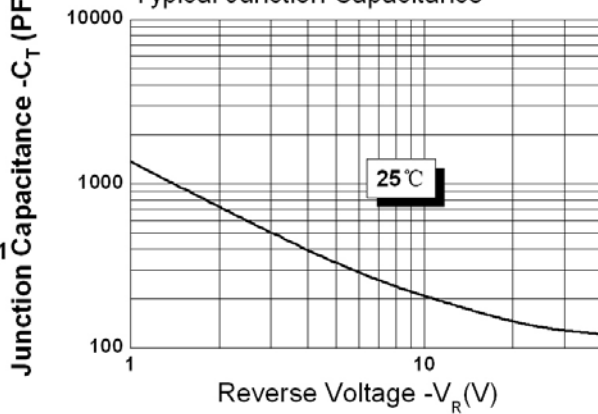


Figure 3  
Typical Junction Capacitance





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