

## 10SQ050 SCHOTTKY BARRIER RECTIFIER

### Applications:

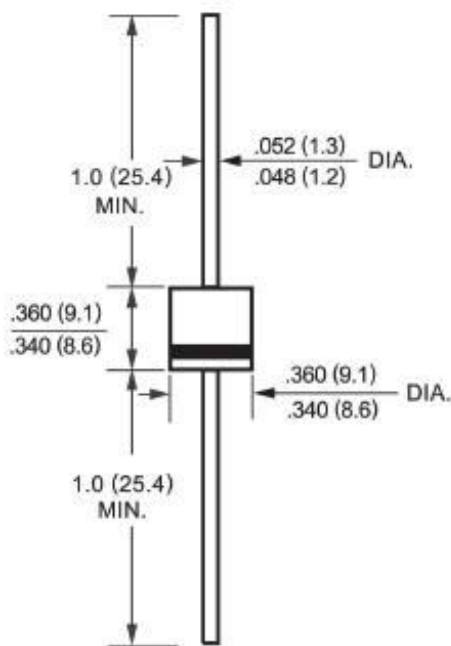
- DC-DC converters
- AC adapter
- High frequency rectification circuit
- Bypass diodes

### Features:

- Super-high speed & low noise switching
- Low voltage drop
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request



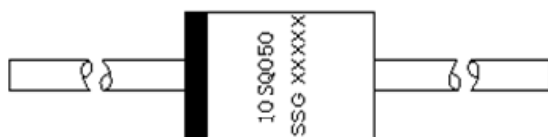
### Mechanical Dimensions: In Inches/ mm



R-6

**Marking Diagram:**

Where XXXXX is YYWWL



10 = Forward Current (10A)  
 S = Package Type  
 Q = Device Type  
 050 = Reverse Voltage (50V)  
 SSG = SSG  
 YY = Year  
 WW = Week  
 L = Lot Number

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

**Ordering Information:**

Device	Package	Shipping
10SQ050	R-6 (Pb-Free)	500pcs / 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	$V_{RRM}$	-	50	V
Working Peak Reverse Voltage	$V_{RWM}$			
DC Blocking Voltage	$V_R$			
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_L = 75^\circ\text{C}$ , rectangular wave form	10	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine pulse	150	A

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 10 A, Pulse, $T_J = 25\text{ }^{\circ}\text{C}$	0.53	0.55	V
	$V_{F2}$	@ 10 A, Pulse, $T_J = 125\text{ }^{\circ}\text{C}$	0.47	0.50	V
Reverse Current*	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^{\circ}\text{C}$	0.04	1.0	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^{\circ}\text{C}$	25	60	mA

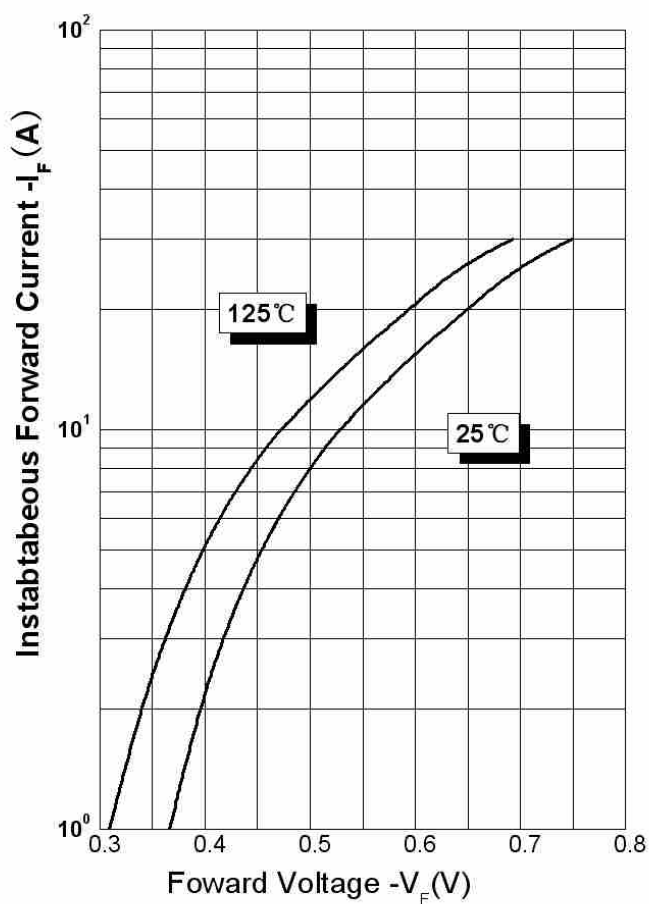
\* Pulse Width < 300 $\mu$ s, Duty Cycle <2%

**Thermal-Mechanical Specifications:**

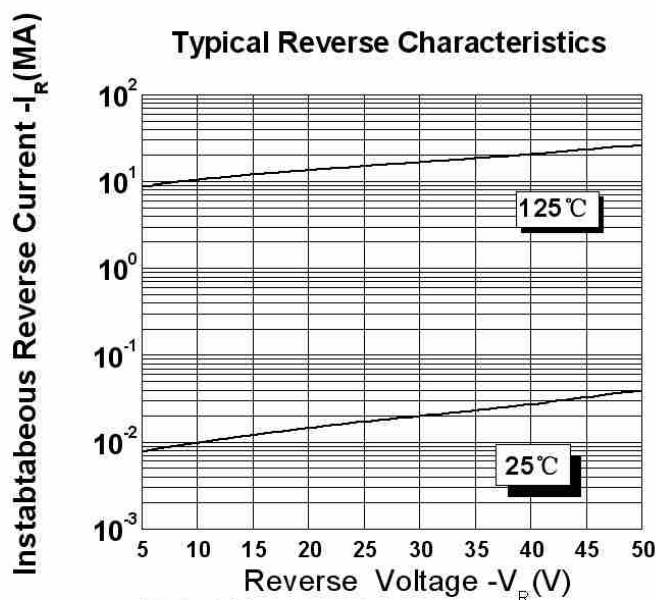
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature -1	$T_J$	-	-55 to +150	$^{\circ}\text{C}$
Junction Temperature -2*			-55 to +175	
Storage Temperature Range	$T_{stg}$	-	-55 to +175	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to ambient	$R_{\theta JA}$	-	18	$^{\circ}\text{C/W}$
Typical Thermal Resistance, Junction to lead	$R_{\theta JL}$	-	8	$^{\circ}\text{C/W}$
Case Style	R-6			

\* This rating is limited to the use for bypass diodes and the condition where the reverse bias voltage is not applied.

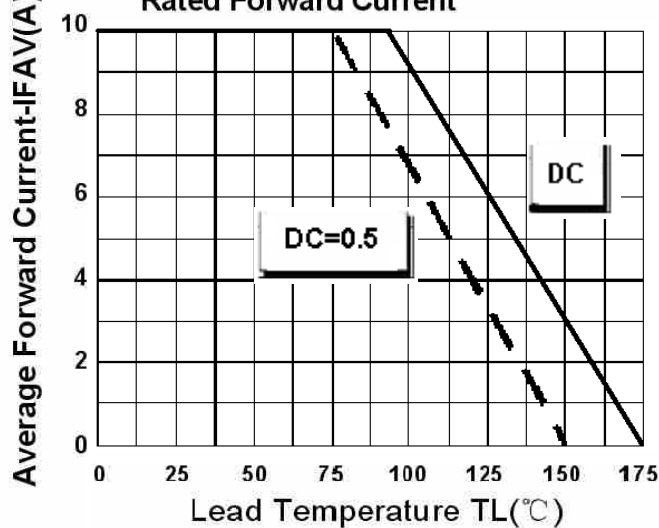
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Rated Forward Current**



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