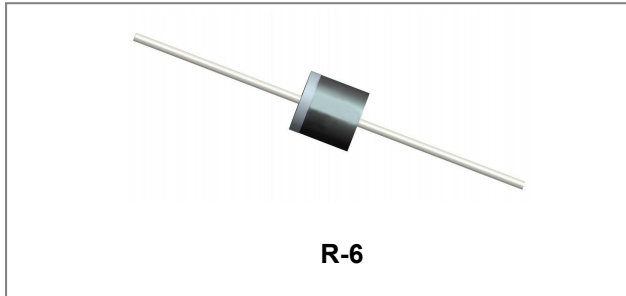


## 10SQ050 SCHOTTKY BARRIER RECTIFIER



### 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

### Circuit Diagram



### Mechanical Data

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

### Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	-	50	V
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:

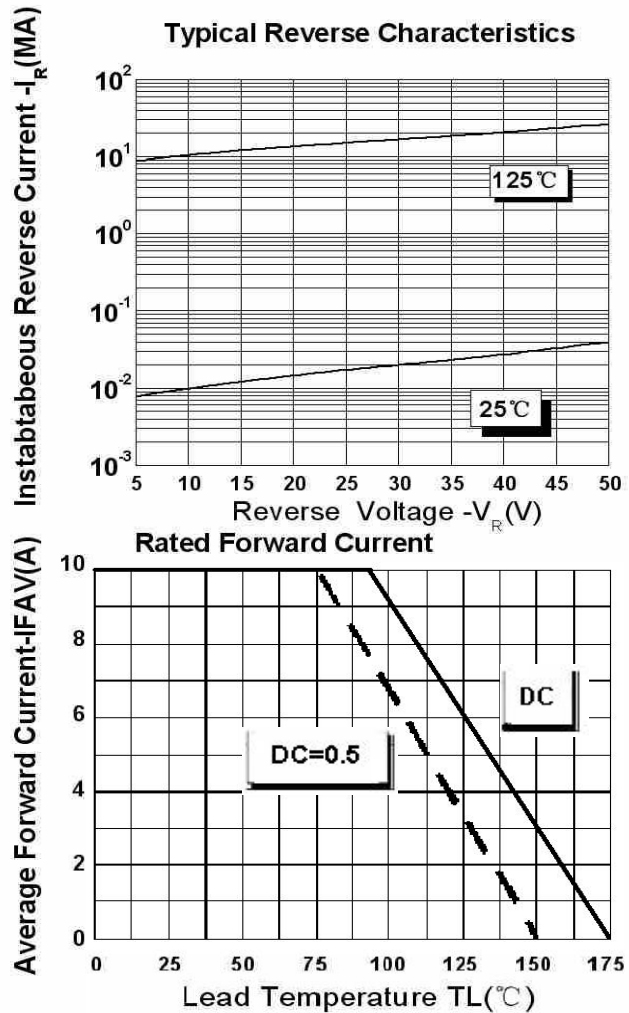
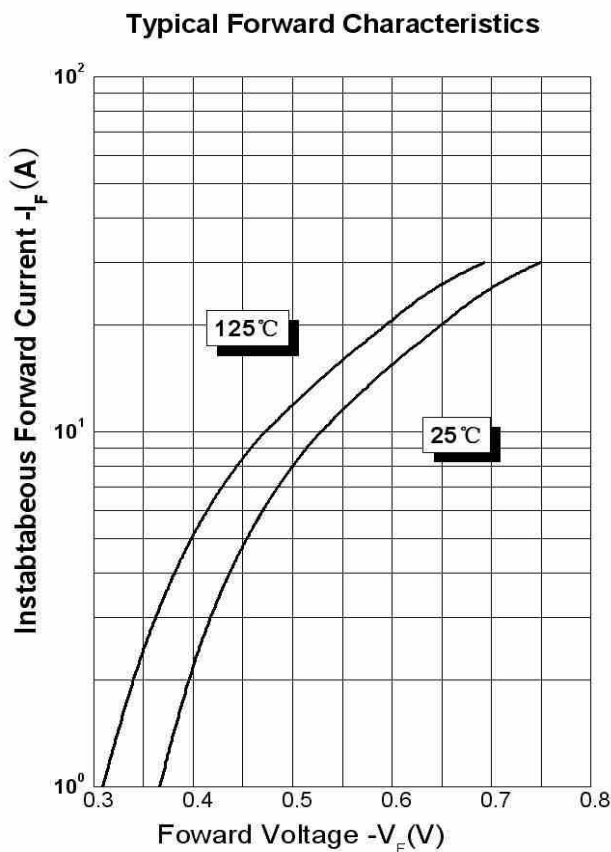
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 10 A, Pulse, $T_J = 25^\circ\text{C}$	0.53	0.55	V
	$V_{F2}$	@ 10 A, Pulse, $T_J = 125^\circ\text{C}$	0.47	0.50	V
Reverse Current*	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	0.04	1.0	mA
	$I_{R2}$	@ $V_R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

\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

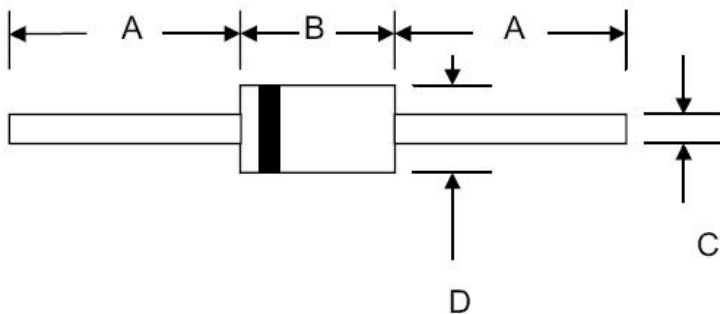
**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature -1	T <sub>J</sub>	-	-55 to +150	°C
Junction Temperature -2*			-55 to +175	
Storage Temperature Range	T <sub>stg</sub>	-	-55 to +175	°C
Typical Thermal Resistance Junction to ambient	R <sub>θJA</sub>	-	18	°C/W
Typical Thermal Resistance, Junction to lead	R <sub>θJL</sub>	-	8	°C/W
Case Style	R-6			

**Ratings and Characteristics Curves**



**Mechanical Dimensions R-6**



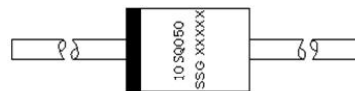
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	8.60	9.10	0.340	0.360
C	1.2	1.3	0.048	0.052
D	8.60	9.10	0.340	0.360

**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.

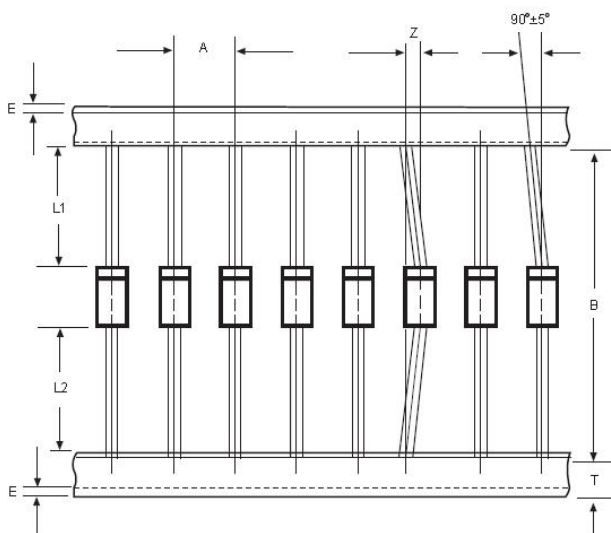
**Marking Diagram**



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

**Carrier Tape Specification R-6**



SYMBOL	Millimeters	
	Min.	Max.
A	9.50	10.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

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