



## 20SQ045 SCHOTTKY BARRIER RECTIFIER

### Applications:

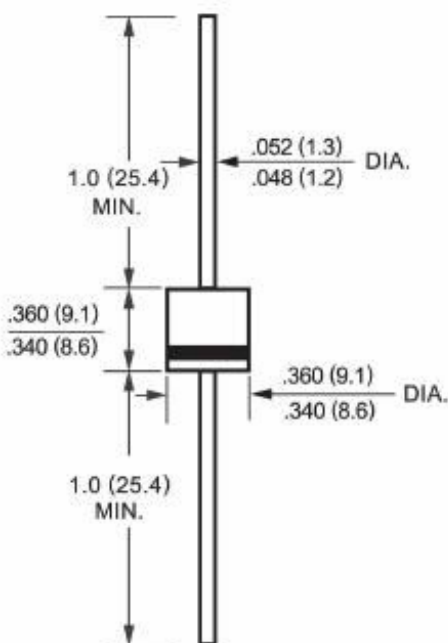
- DC-DC converters
- AC adapter
- High frequency rectification circuit
- Bypass diodes
- Photovoltaic Solar cell Protection Schottky Rectifier

### 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



### Mechanical Dimensions: In Inches/ mm



R-6



Technical Data  
Data Sheet N0006, Rev. A

**Green Products**

**Marking Diagram:**



Where XXXXX is YYWWL

- 20 = Forward Current (20A)
- S = Package Type
- Q = Device Type
- 045 = Reverse Voltage (45V)
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

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

**Ordering Information:**

Device	Package	Shipping
20SQ045	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 Rating:**

Characteristics	Symbol	Conditions	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	-	45	V
Max. average forward current	$I_{F(AV)}$	R- load, $T_a=25^{\circ}C$	20	A
Surge(Non-repetitive) Forward Current	$I_{FSM}$	8.3ms single half sine-wave	350	A



**Electrical Characteristics (Ta=25°C Unless otherwise specified)**

Characteristics	Symbol	Conditions	Max.	Unit
Peak Forward Voltage	V <sub>FM</sub>	I <sub>FM</sub> =20.0A, Ta=25°C	0.55	V
Peak Reverse Current	I <sub>RRM1</sub>	V <sub>RM</sub> =V <sub>RRM</sub>	Ta=25°C	0.5
	I <sub>RRM2</sub>		Ta=100°C	50
Thermal Resistance(Typical)	R <sub>θJ-c</sub>	Between junction and case	3.0	°C/W
	R <sub>θJ-L</sub>	Between junction and lead	2.0	

**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature at reduced reverse voltage at reduced reverse voltage in DC forward mode	T <sub>J</sub>	V <sub>R</sub> ≤ 80%V <sub>RRM</sub>	-55 to +150	°C
		V <sub>R</sub> ≤ 50%V <sub>RRM</sub>	-55 to +180	
			-55 to +200	
Max. Storage Temperature	T <sub>stg</sub>	-	-55 to +150	°C
Approximate Weight	wt	-	2.24	g
Case Style		R-6		

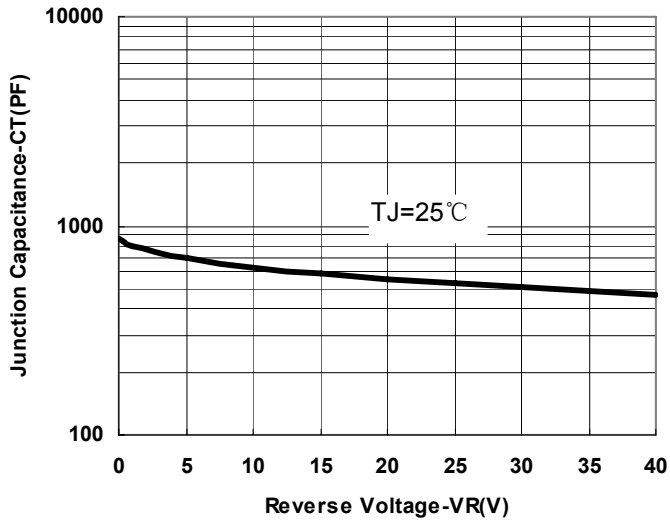


Fig.1-Typical Junction Capacitance

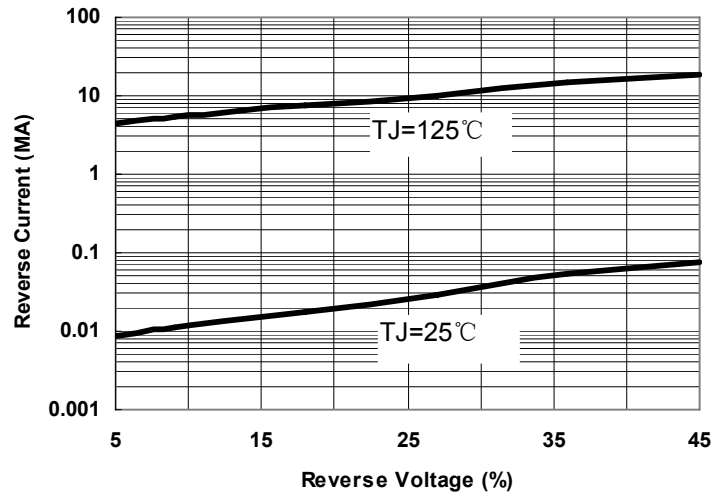


Fig.2-Typical Reverse Characteristics

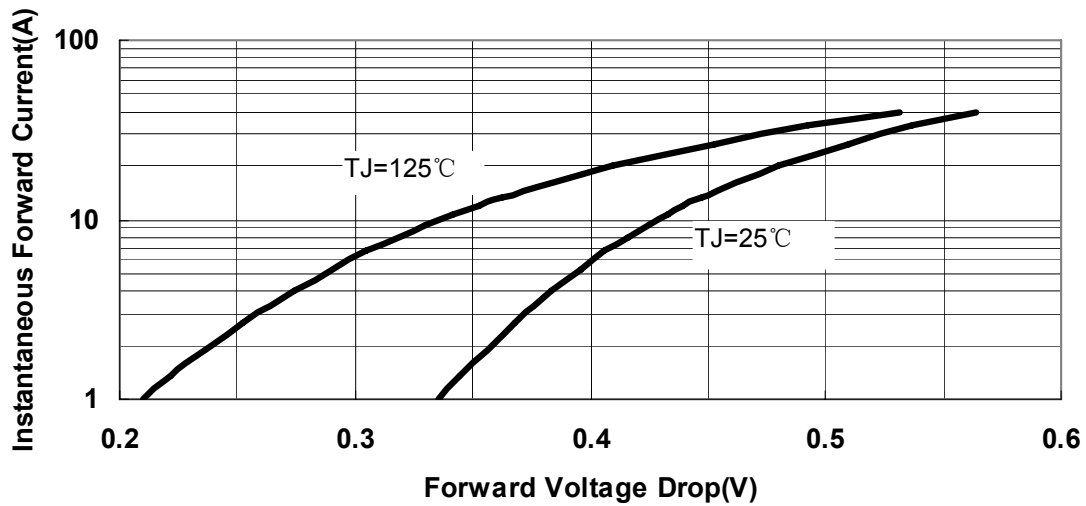


Fig.3-Typical Instantaneous Forward Voltage Characteristics



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