

12SQ045 SCHOTTKY BARRIER RECTIFIER

Applications:

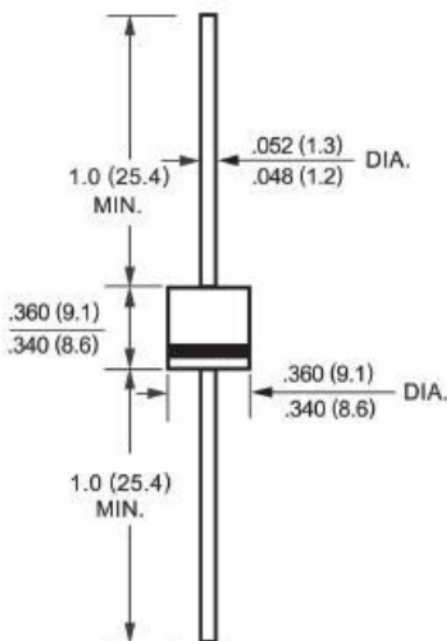
- DC-DC converters
- AC adapter
- High frequency rectification circuit
- Bypass diodes
- Photovoltaic Solar cell Protection Schottky Rectifier

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



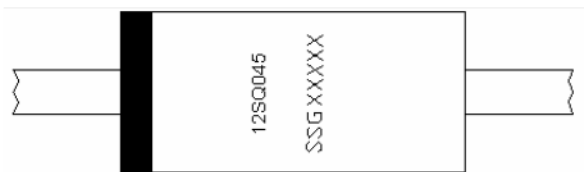
R-6



Technical Data
Data Sheet N0005, Rev. A

Green Products

Marking Diagram:



Where XXXXX is YYWWL

- 12 = Forward Current (12A)
- 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
12SQ045	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, $T_a=25^{\circ}C$	12	A
Surge(Non-repetitive) Forward Current	I_{FSM}	8.3ms single half sine-wave	275	A



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

Characteristics	Symbol	Conditions	Max.	Unit
Peak Forward Voltage	V_{FM}	$I_{FM}=12.0A, T_a=25^\circ C$	0.55	V
Peak Reverse Current	I_{RRM1}	$V_{RM}=V_{RRM}$	$T_a=25^\circ C$	0.5
	I_{RRM2}		$T_a=100^\circ C$	20
Thermal Resistance(Typical)	$R_{\theta J-c}$	Between junction and case	3.0	°C/W
	$R_{\theta J-L}$	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_J	$V_R \leq 80\% V_{RRM}$ $V_R \leq 50\% V_{RRM}$	-55 to +150 -55 to +180 -55 to +200	°C
Max. Storage Temperature	T_{stg}	-	-55 to +150	°C
Approximate Weight	wt	-	2.24	g
Case Style		R-6		

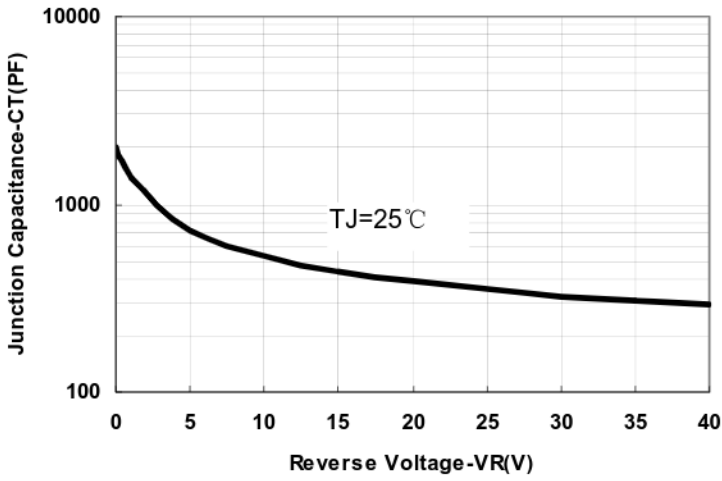


Fig.1-Typical Junction Capacitance

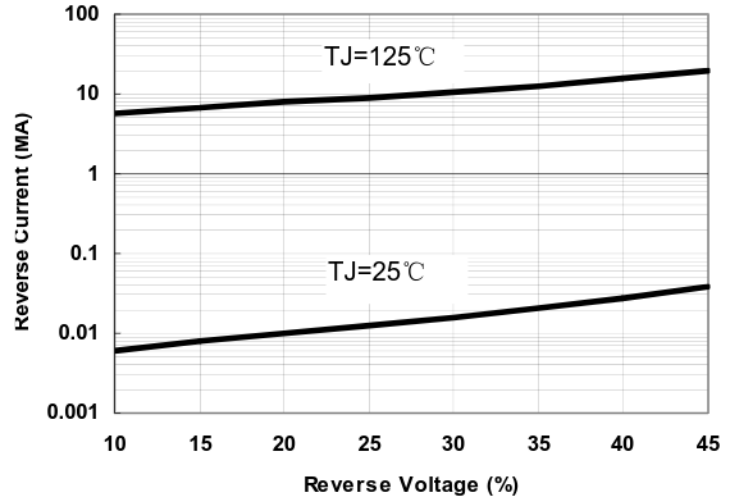


Fig.2-Typical Reverse Characteristics

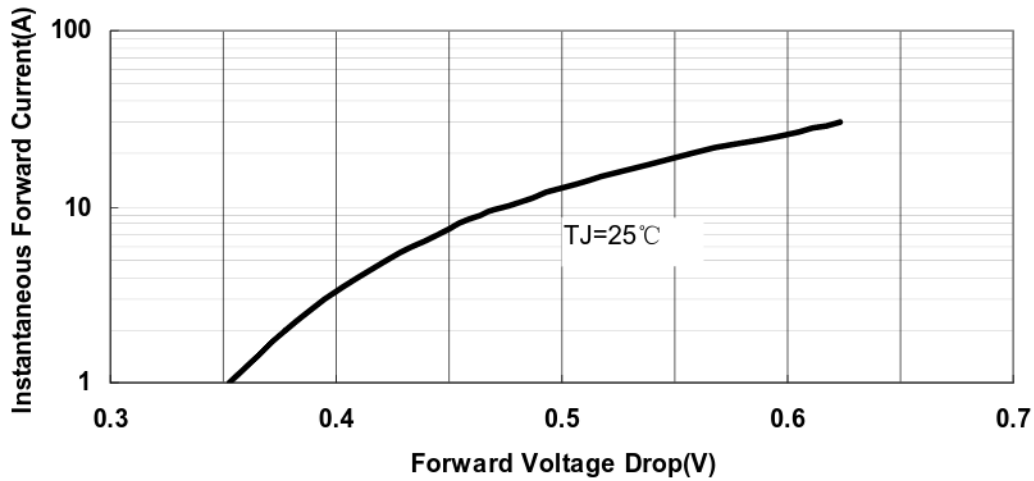


Fig.3-Typical Instantaneous Forward Voltage Characteristics



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