



# 12SQ040 thru 12SQ100

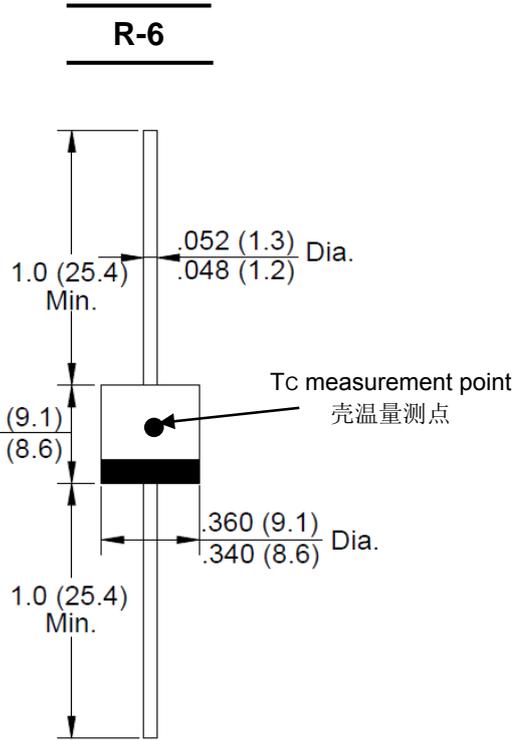
**PHOTOVOLTAIC SOLAR CELL PROTECTION SCHOTTKY RECTIFIER**      **REVERSE VOLTAGE - 40 to 100Volts**  
**FORWARD CURRENT - 12.0 Amperes**

### FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low VF
- High surge capacity
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

### MECHANICAL DATA

- Case: JEDEC R-6 molded plastic
- Polarity: Color band denotes cathode
- Weight: 0.07 ounces , 2.1 grams
- Mounting position: Any



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave ,60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	12SQ040	12SQ045	12SQ050	12SQ060	12SQ080	12SQ100	UNIT	
Maximum Recurrent Peak Reverse Voltage	VRRM	40	45	50	60	80	100	V	
Maximum RMS Voltage	VRMS	28	31.5	35	42	56	70	V	
Maximum DC Blocking Voltage	VDC	40	45	50	60	80	100	V	
Maximum Average Forward Rectified Current @Tc=95 °C	I(AV)	12						A	
Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load(JEDEC Method)	IFSM	300						A	
Peak Forward Voltage at 12A DC(Note1)	VF	0.55		0.7		0.8		V	
Maximum DC Reverse Current @Tj=25°C at Rated DC Bolcking Voltage @Tj=100°C	IR	0.5						50	mA
Typical Junction Capacitance (Note2)	CJ	450						pF	
Typical Thermal Resistance (Note3)	RθJC	3.0						°C/w	
Operating Temperature Range	TJ	-55 to+200						°C	
Storage Temperature Range	TSTG	-55 to+200						°C	

NOTES:1.300us Pulse Width, 2%Duty Cycle.  
 2.Measured at 1.0 MHZ and applied reverse voltage of 4.0VDC.  
 3.Thermal Resistance Junction to case.  
 4.The typical data above is for reference only(典型值仅供参考).

# RATING AND CHARACTERISTIC CURVES

## 12SQ040 thru 12SQ100



FIG.1-FORWARD CURRENT DERATING CURVE

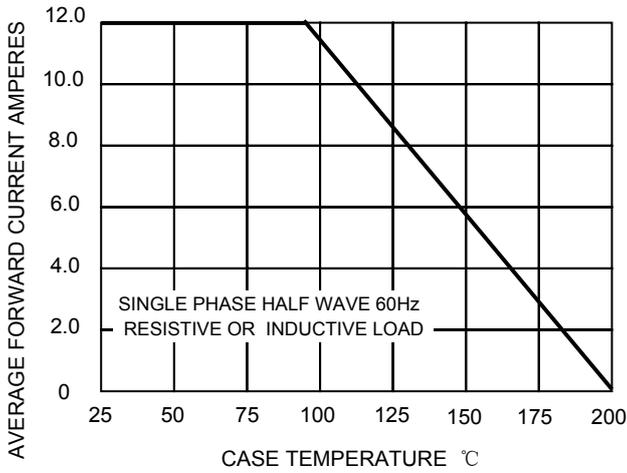


FIG.2-MAXIMUM NON-REPETITIVE SURGE

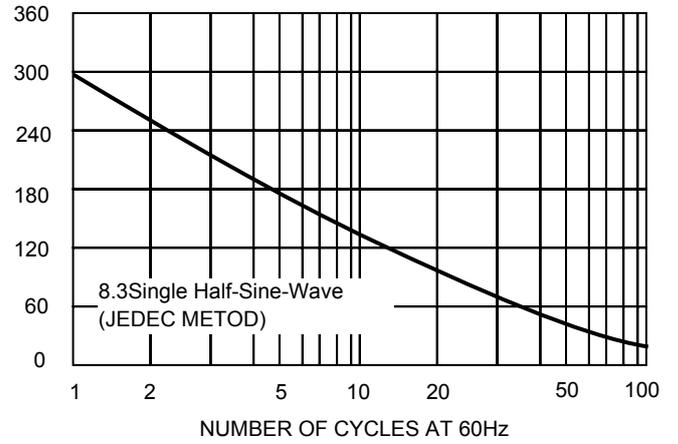


FIG.3-TYPICAL REVERSE CHARACTERISTICS

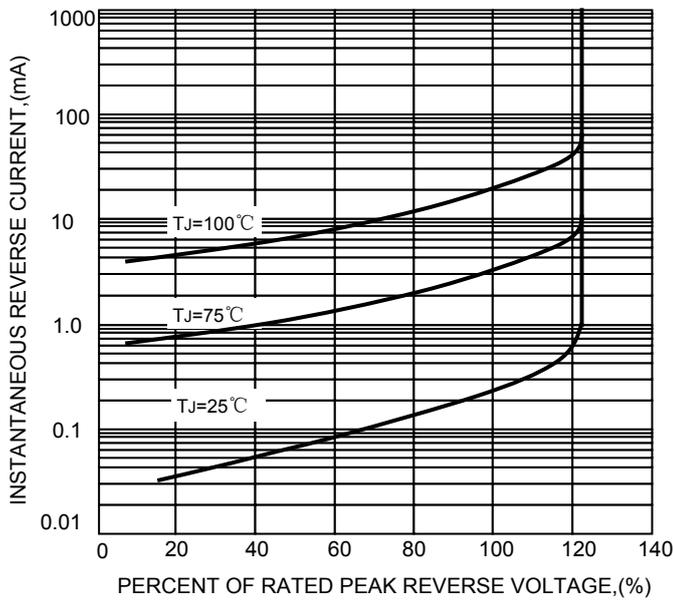


FIG.4-TYPICAL FORWARD CHARACTERISTICS

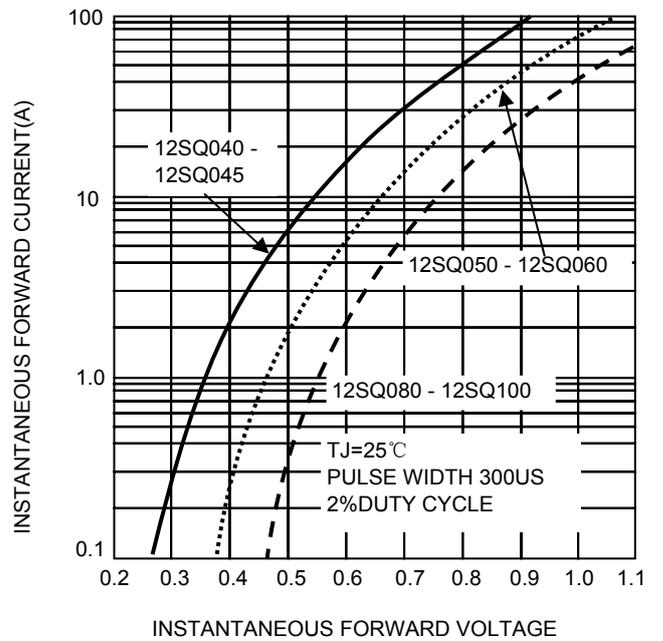
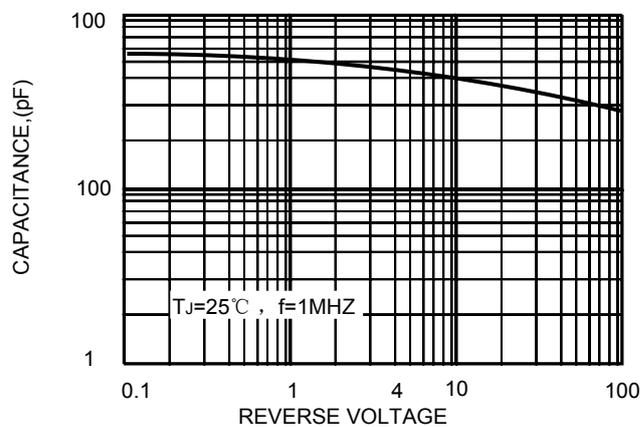


FIG.5-TYPICAL JUNCTION



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考!)



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