



10SQ040 thru 10SQ100

PHOTOVOLTAIC SOLAR CELL PROTECTION SCHOTTKY RECTIFIER

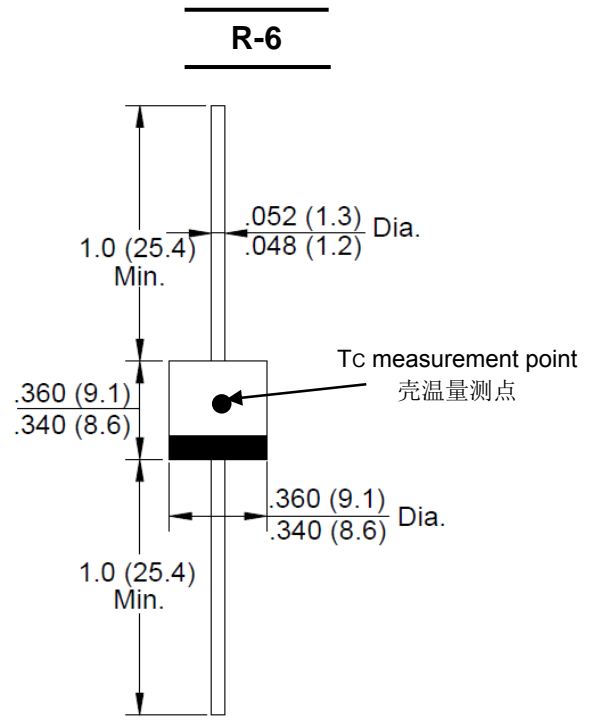
REVERSE VOLTAGE - 40 to 100Volts
FORWARD CURRENT - 12.5 Amperes

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	10SQ040	10SQ045	10SQ050	10SQ060	10SQ080	10SQ100	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	40	45	50	60	80	100	V
Maximum RMS Voltage	V _{RMS}	28	31.5	35	42	56	70	V
Maximum DC Blocking Voltage	V _{DC}	40	45	50	60	80	100	V
Maximum Average Forward Rectified Current @T _c =95 °C	I _(AV)	12.5						A
Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load(JEDEC Method)	I _{FSM}	275						A
Peak Forward Voltage at 12.5A DC(Note1)	V _F	0.55		0.7		0.8		V
Maximum DC Reverse Current @T _j =25°C at Rated DC Bolcking Voltage @T _j =100°C	I _R	0.5						mA
Typical Junction Capacitance (Note2)	C _J	450						pF
Typical Thermal Resistance (Note3)	R _{θJC}	3.0						°C/w
Operating Temperature Range	T _J	-55 to+200						°C
Storage Temperature Range	T _{STG}	-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
10SQ040 thru 10SQ100



FIG.1-FORWARD CURRENT DERATING CURVE

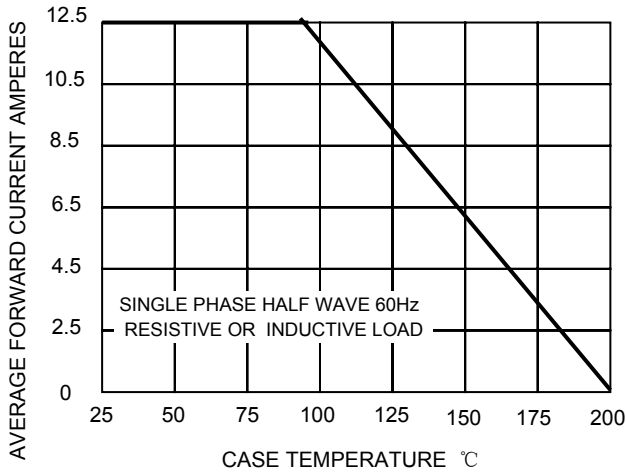


FIG.2-MAXIMUM NON-REPETITIVE SURGE

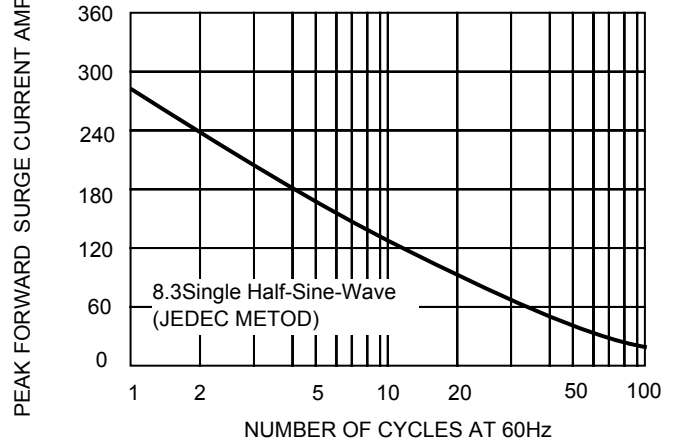


FIG.3-TYPICAL REVERSE CHARACTERISTICS

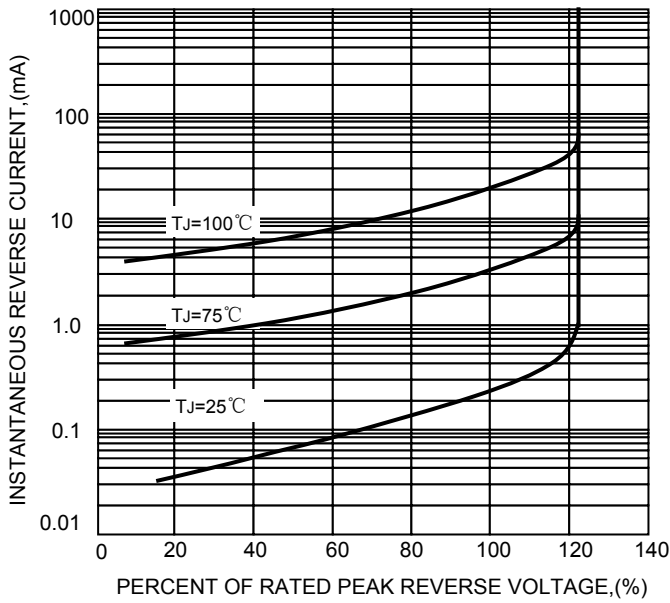


FIG.4-TYPICAL FORWARD CHARACTERISTICS

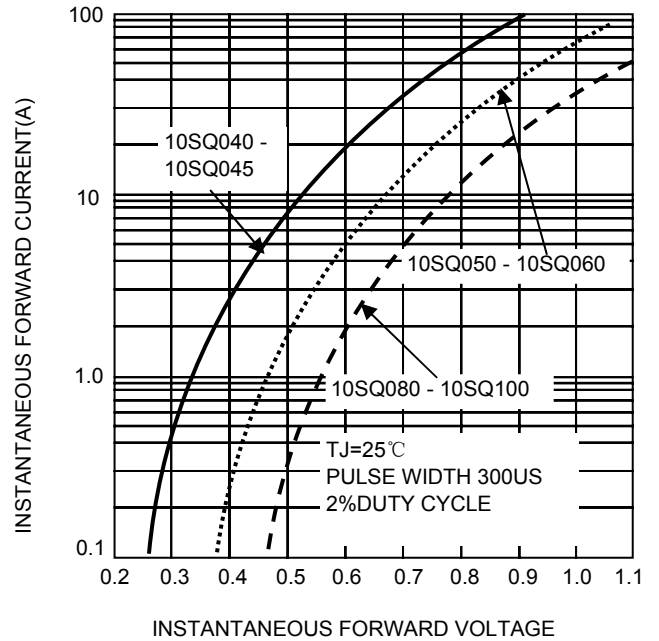
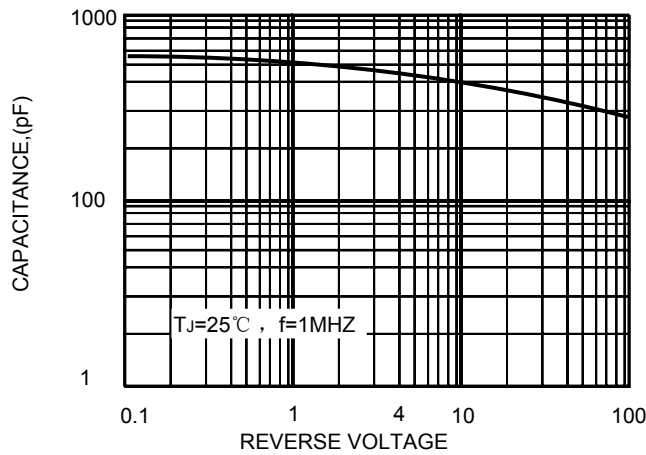


FIG.5-TYPICAL JUNCTION



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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