



# 12SQ030 thru 12SQ100

## SCHOTTKY BARRIER RECTIFIERS

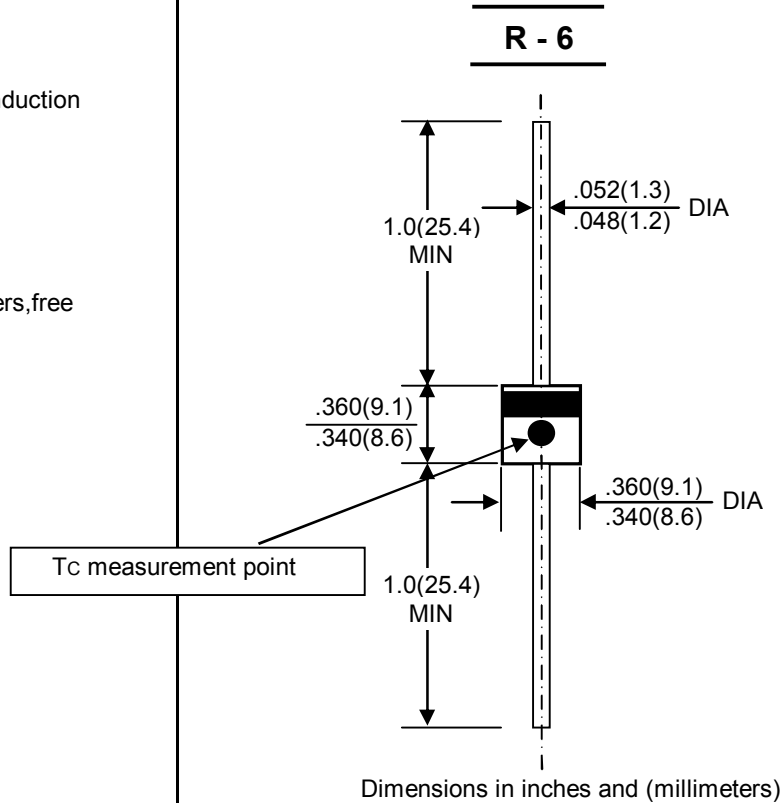
**REVERSE VOLTAGE - 30 to 100Volts**  
**FORWARD CURRENT - 12.0 Amperes**

### 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



### 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	12SQ030	12SQ035	12SQ040	12SQ045	12SQ050	12SQ060	12SQ080	12SQ100	UNIT	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	30	35	40	45	50	60	80	100	V	
Maximum RMS Voltage	V <sub>RMS</sub>	21	24.5	28	31.5	35	42	56	70	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	30	35	40	45	50	60	80	100	V	
Maximum Average Forward Rectified Current @T <sub>c</sub> =95 °C	I(AV)	12								A	
Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load(JEDEC Method)	I <sub>FSM</sub>	275								A	
Peak Forward Voltage at 12A DC(Note1)	V <sub>F</sub>	0.55			0.7		0.8			V	
Maximum DC Reverse Current @T <sub>j</sub> =25°C at Rated DC Bolcking Voltage @T <sub>j</sub> =100°C	I <sub>R</sub>	0.5					50				mA
Tyical Junction Capacitance (Note2)	C <sub>J</sub>	450								pF	
Tyical Thermal Resistance (Note3)	R <sub>θJC</sub>	3.0								°C/w	
Operating Temperature Range	T <sub>J</sub>	-55 to+200								°C	
Storage Temperature Range	T <sub>STG</sub>	-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.

# RATING AND CHARACTERISTIC CURVES

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FIG.1-FORWARD CURRENT DERATING CURVE

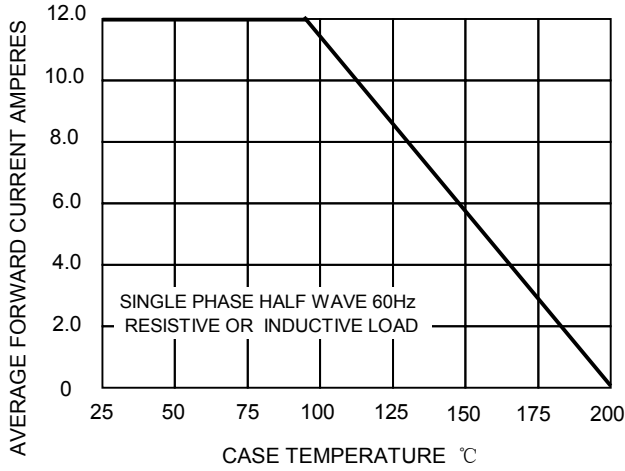


FIG.2-MAXIMUM NON-REPETITIVE SURGE

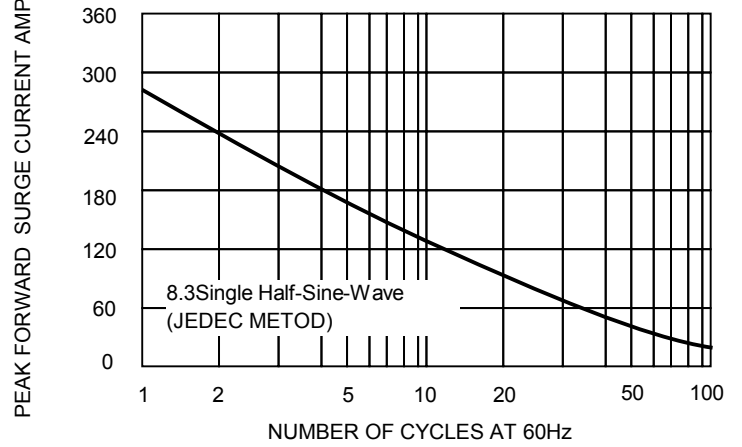


FIG.3-TYPICAL REVER CHARACTERISTICS

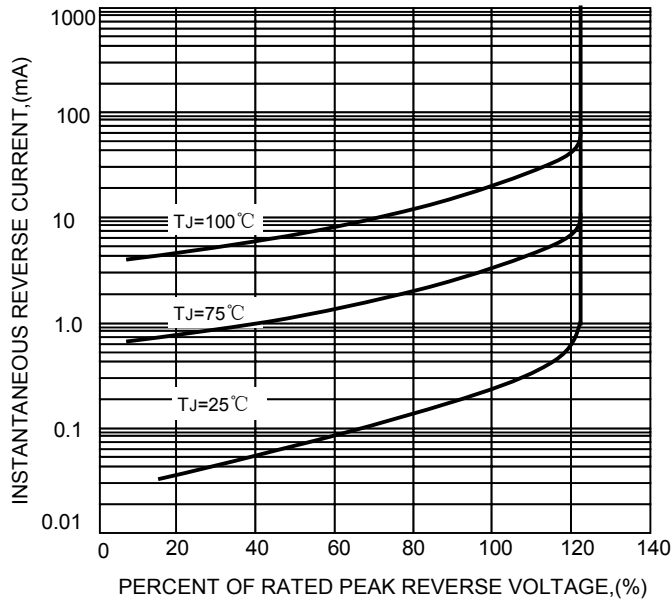


FIG.4-TYPICAL FORWARD CHARACTERISTICS

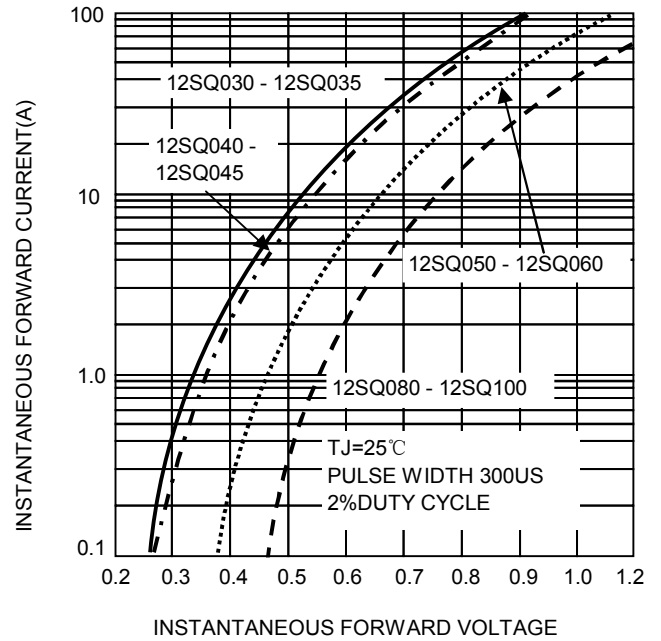


FIG.5-TYPICAL JUNCTION CAPACITANCE

