



12SQ030 thru 12SQ100

SCHOTTKY BARRIER RECTIFIERS

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

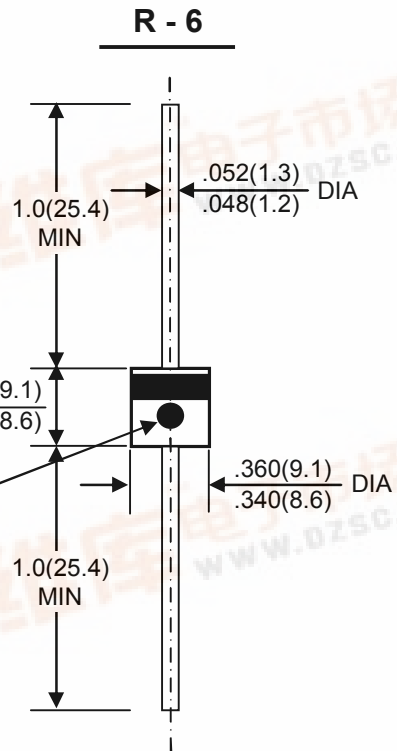
FEATURES

- 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

Tc measurement point



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	12SQ030	12SQ035	12SQ040	12SQ045	12SQ050	12SQ060	12SQ080	12SQ100	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	30	35	40	45	50	60	80	100	V
Maximum RMS Voltage	VRMS	21	24.5	28	31.5	35	42	56	70	V
Maximum DC Blocking Voltage	VDC	30	35	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	275								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
Tyical Junction Capacitance (Note2)	CJ	450								pF
Tyical 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.

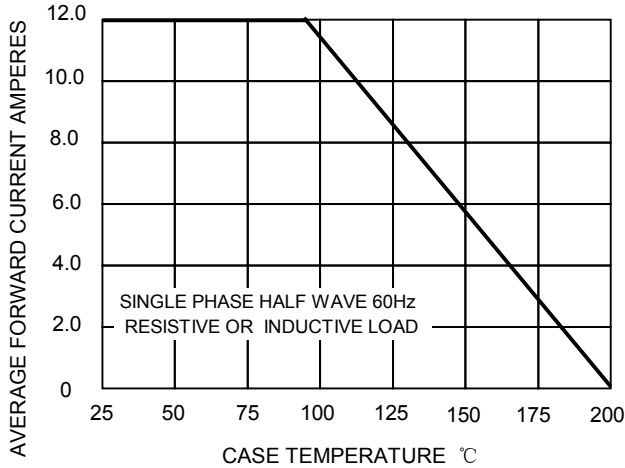


RATING AND CHARACTERISTIC CURVES

12SQ030 thru 12SQ100



FIG.1-FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT AMPERES

FIG.2-MAXIMUM NON-REPETITIVE SURGE

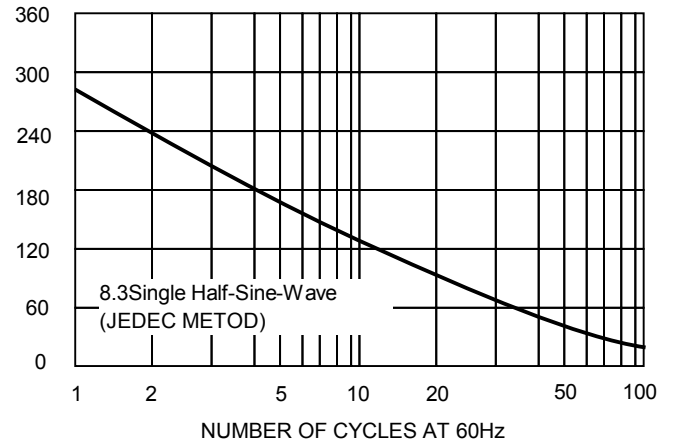


FIG.3-TYPICAL REVER CHARACTERISTICS

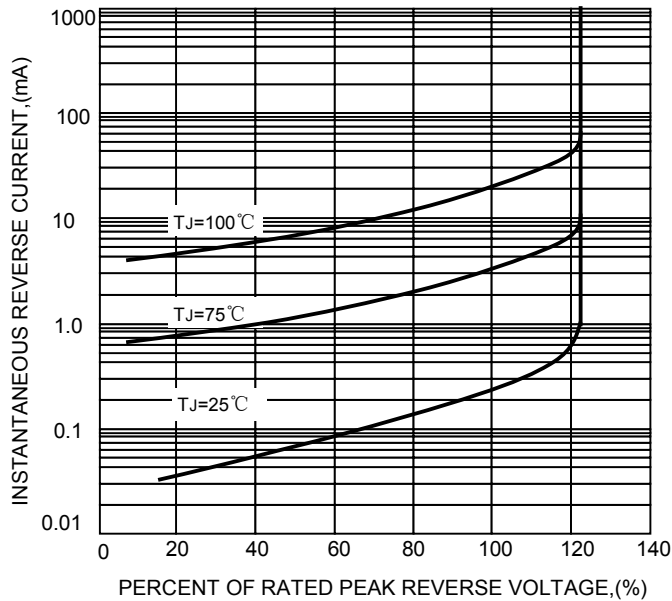


FIG.4-TYPICAL FORWARD CHARACTERISTICS

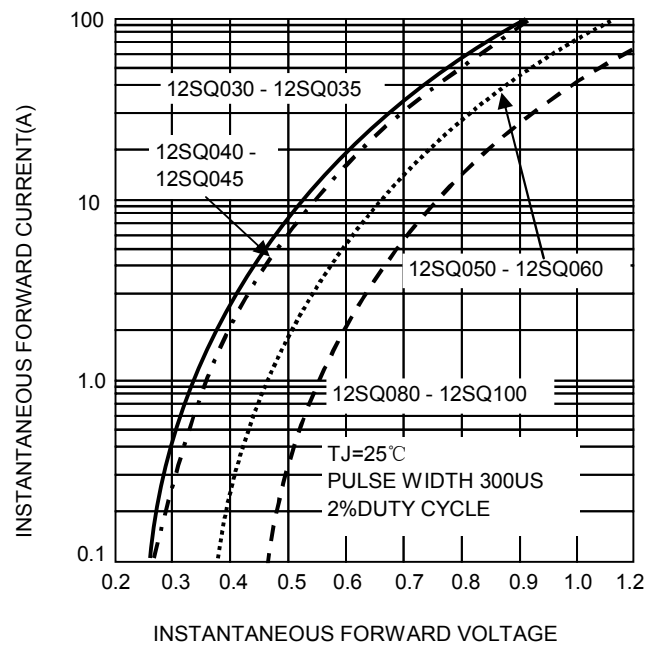


FIG.5-TYPICAL JUNCTION CAPACITANCE

