

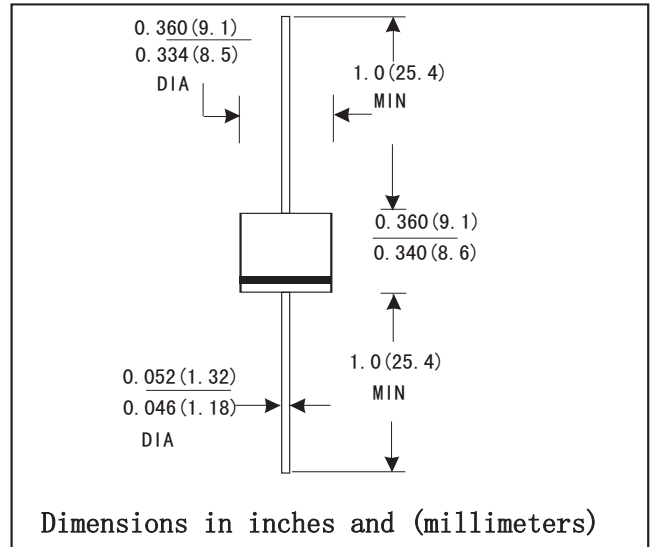
## R-6 PHOTOVOLTAIC DIODES

### 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
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

### MECHANICAL DATA

- Case: R-6 molded plastic body
- Lead:Plated axial leads,solderable per MIL- STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting Position:Any



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

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 <sub>(AV)</sub>	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 Blocking Voltage @T <sub>j</sub> =125 °C	I <sub>R</sub>	0.1				50				mA
Typical Junction Capacitance (Note2)	C <sub>J</sub>	450								pF
Typical Thermal Resistance (Note3)	R <sub>θJC</sub>	3.0								°C/w
Junction temperature Range in DC forward mode	T <sub>J</sub>	-55 to+175								°C
Storage Temperature Range	T <sub>s</sub>	-55 to+175								°C
ESD	VESD	15000								V

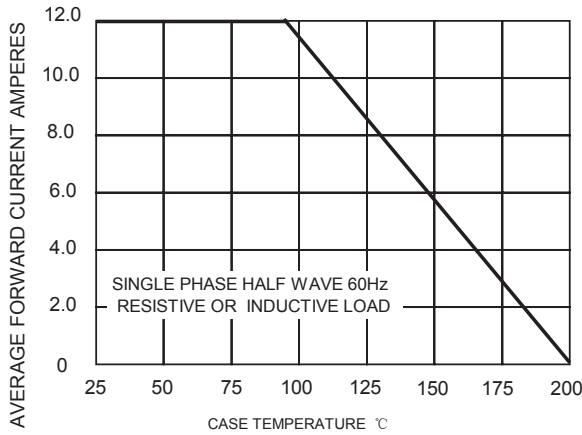
NOTES:1.300us Pulse Width, 2%Duty Cycle.

2.Measured at 1.0 MHZ and applied reverse voltage of 4.0VDC.

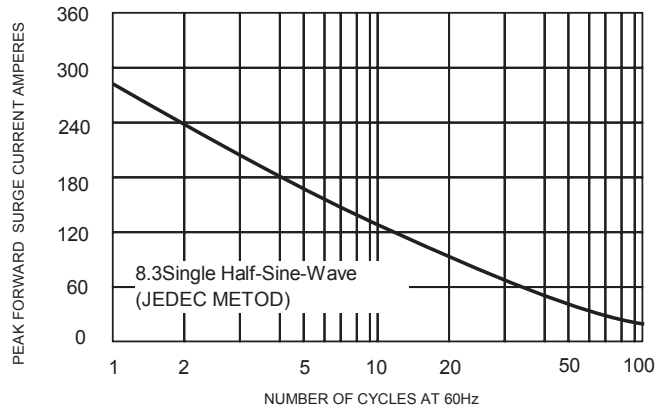
3.Thermal Resistance Junction to case.

## RATINGS AND CHARACTERISTIC CURVES

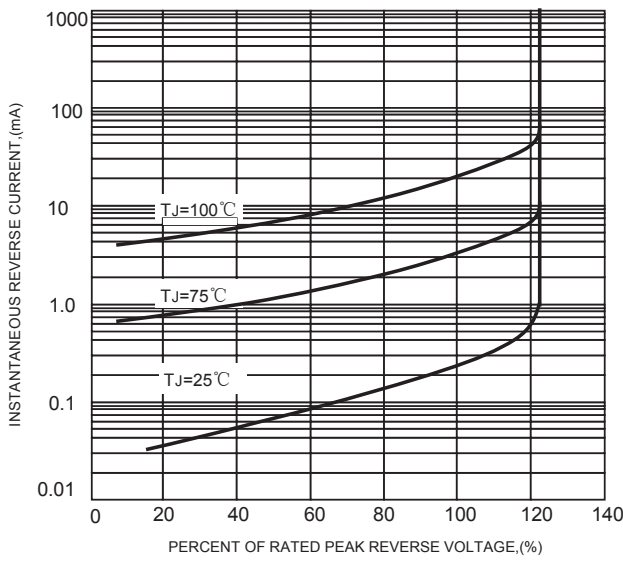
**FIG.1-FORWARD CURRENT DERATING CURVE**



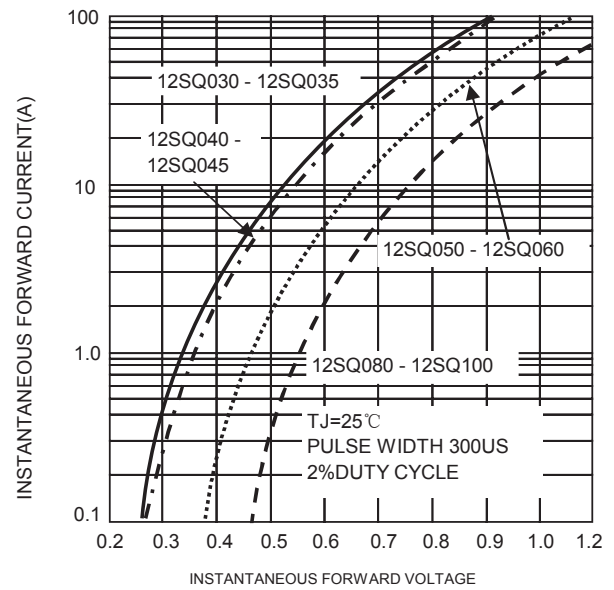
**FIG.2-MAXIMUM NON-REPETITIVE SURGE**



**FIG.3-TYPICAL REVER CHARACTERISTICS**



**FIG.4-TYPICAL FORWARD CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**

