

PHOTOVOLTAIC DIODE

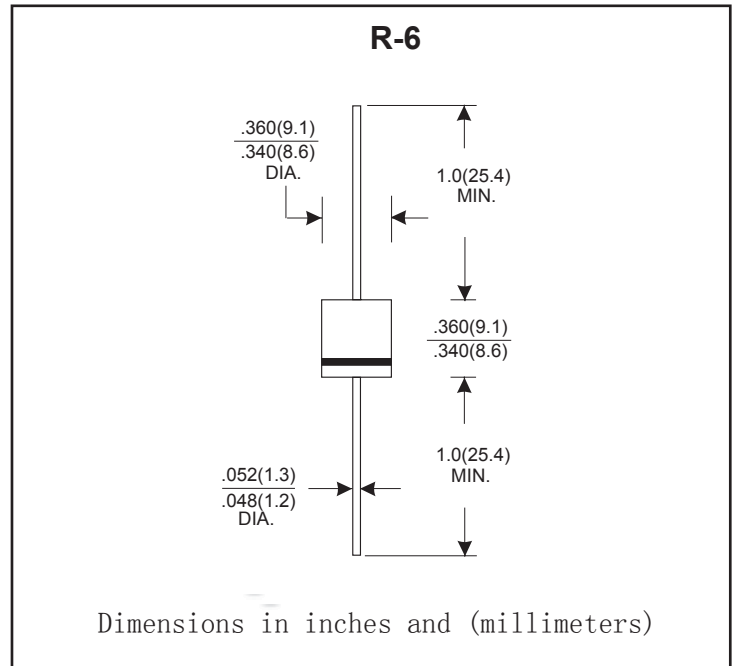
VOLTAGE RANGE: 30--- 100 V CURRENT: 12.0 A

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)Single phase,half wave,60 Hz,resistive or inductive load.

For capacitive load,derate 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 Blocking Voltage @Tj=125°C	IR	0.1				50				mA
Typical Junction Capacitance (Note2)	CJ	450								pF
Typical Thermal Resistance (Note3)	RθJC	3.0								°C/w
Junction temperature Range in DC forward mode	TJ	-55 to+175				200				°C
Storage Temperature Range	Ts	-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

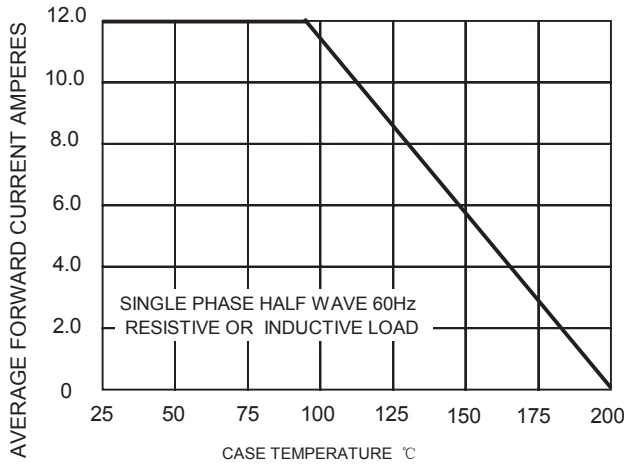


FIG.2-MAXIMUM NON-REPETITIVE SURGE

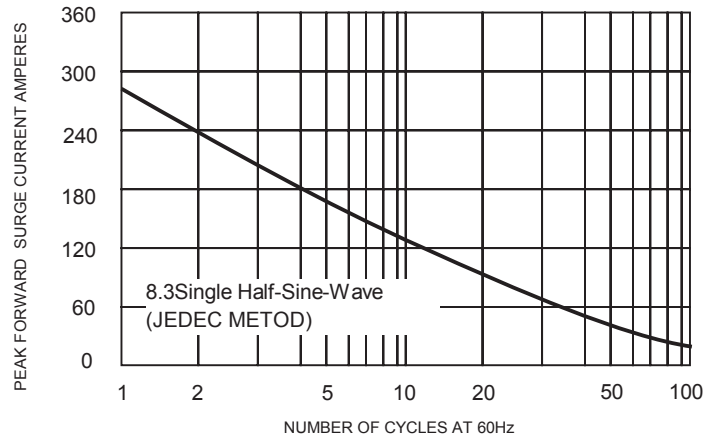


FIG.3-TYPICAL REVER CHARACTERISTICS

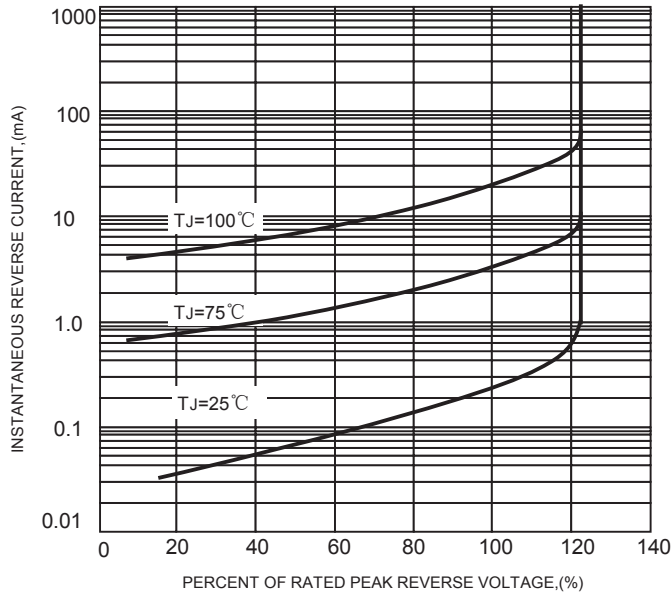


FIG.4-TYPICAL FORWARD CHARACTERISTICS

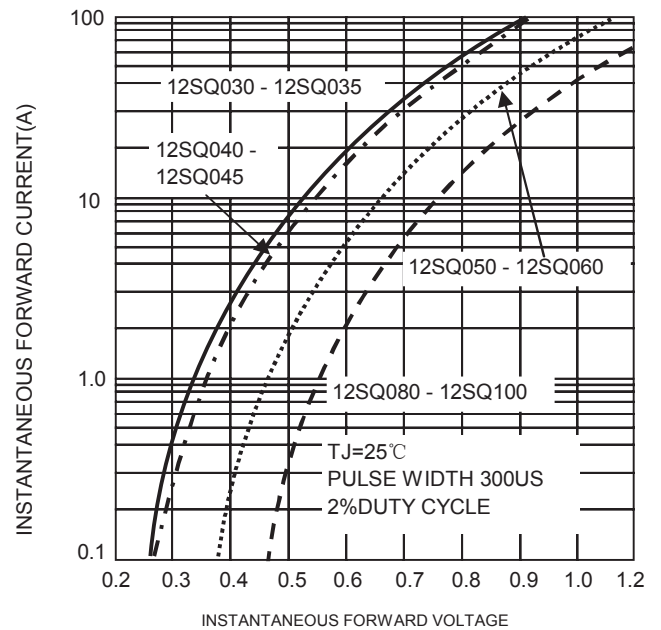


FIG.5-TYPICAL JUNCTION CAPACITANCE

