

PHOTOVOLTAIC DIODE

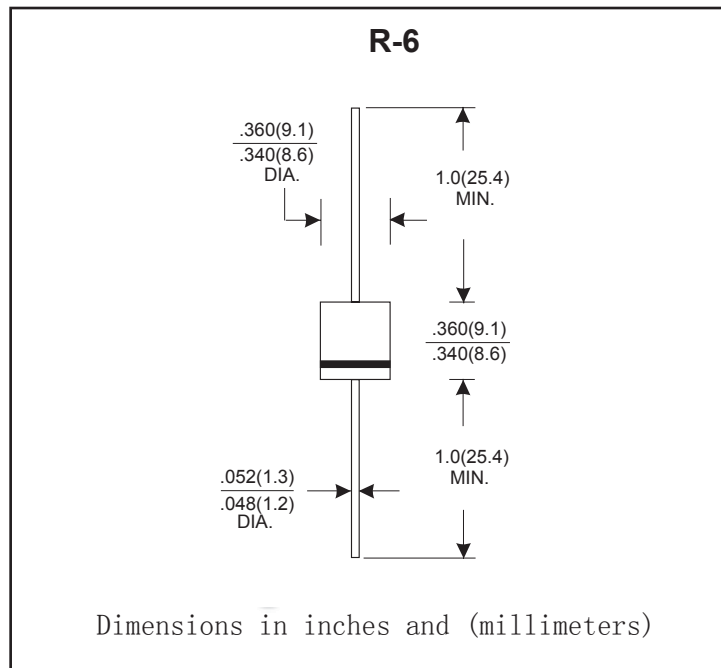
VOLTAGE RANGE: 30--- 100 V CURRENT: 10.0 A

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	10SQ030	10SQ035	10SQ040	10SQ045	10SQ050	10SQ060	10SQ080	10SQ100	UNIT	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	30	35	40	45	50	60	80	100	V	
Maximum RMS Voltage	V _{RMS}	21	24.5	28	31.5	35	42	56	70	V	
Maximum DC Blocking Voltage	V _{DC}	30	35	40	45	50	60	80	100	V	
Maximum Average Forward Rectified Current@T _c =95 °C	I(AV)	10								A	
Peak Forward Surage Current 8.3ms single half sine-wave super imposed on rated load(JEDEC Method)	I _{FSM}	275								A	
Peak Forward Voltage at 10A 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 =125°C	I _R	0.1					50				mA
Tyical Junction Capacitance (Note2)	C _J	450									PF
Tyical Thermal Resistance (Note3)	R _{θJC}	3.0									°C/w
Junction temperature Range in DC forward mode	T _J	-55 to+175					200				°C
Storage Temperature Range	T _S	-55 to+175									°C
ESD	VESD	15000									V

NOTES:1.300us Pulse Width, 2%Dudy 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

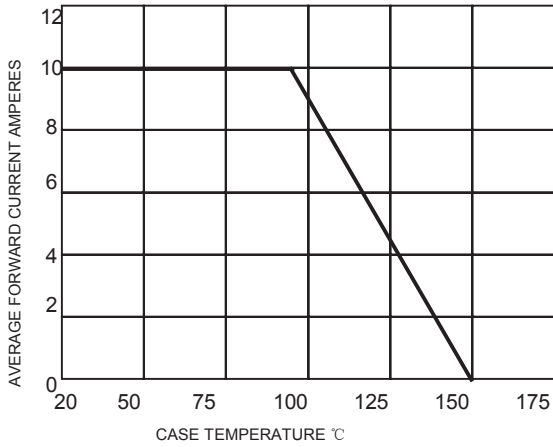


FIG.2-MAXIMUM NON-REPETITIVE SURGE

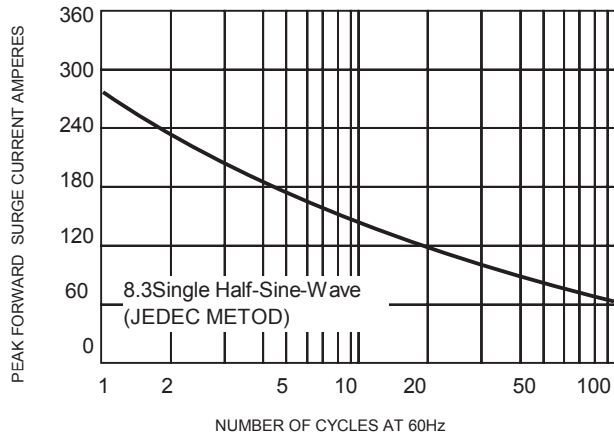


FIG.3-TYPICAL REVERSE CHARACTERISTICS

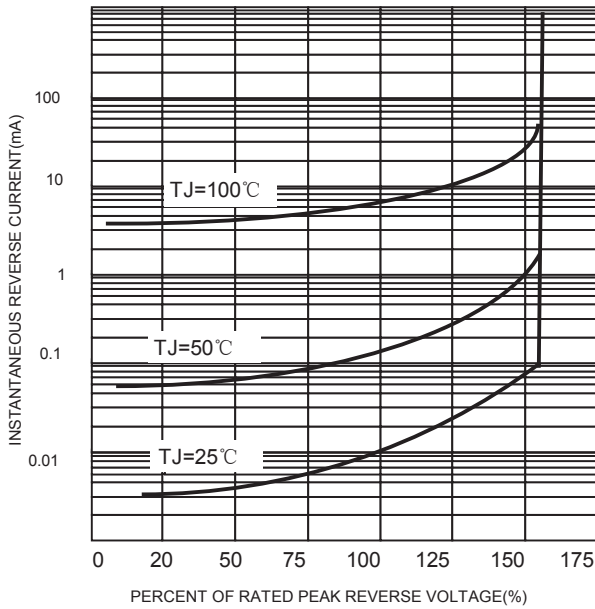


FIG.4-TYPICAL FORWARD CHARACTERISTICS

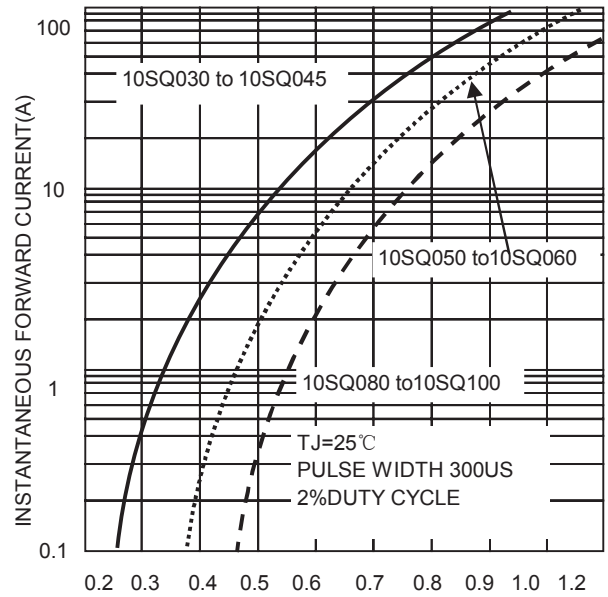


FIG.5-TYPICAL JUNCTION CAPACITANCE INSTANTANEOUS FORWARD VOLTAGE

