



XIN SEMICONDUCTOR  
ISO9002

HQ MARKING

# 1SS101 THUR 1SS301

SUPER HIGH SPEED SWITCHING DIODE  
SPECIAL DESIGN FOR PROTECTING SOLAR BATTERY

## FEATURES

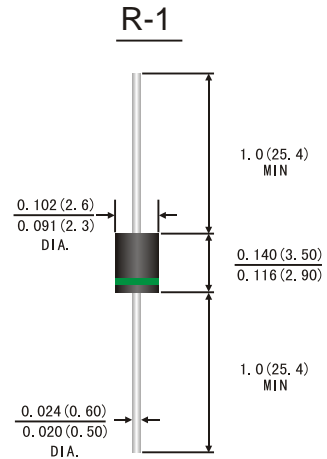
- For general purpose applications
- These diodes features very low turn-on voltage and fastswitching. These devices are protected by a Pnjunction guard ring against excessive voltage, such as electrostatic discharges.

## APPLICATIONS

- High speed switch circuit
- IC polarity protection
- Solar battery polarity protection
- Small signal rectifier

## MECHANICAL DATA

- Case: JEDEC R-1 molded plastic body
- Polarity: color band denotes cathode end
- Mounting Position: Any
- Weight: 0.0063ounce, 0.18 gram



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

	Symbols	1SS101	1SS201	1SS301	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	Volts
Maximum RMS voltage	$V_{RMS}$	14	21	28	Volts
Maximum DC blocking voltage	$V_{DC}$	20	30	40	Volts
Maximum non-repetitive peak reverse voltage	$V_{RSM}$	24	36	48	Volts
Maximum average forward rectified current 0.375"(9.5mm)lead length at $T_L=90^\circ\text{C}$	$I_{(AV)}$	0.5			Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) at $T_L=70^\circ\text{C}$	$I_{FSM}$	5.0			Amps
Maximum instantaneous forward voltage at 1mA 200mA	$V_F$	0.20			Volts
		0.35			
Maximum instantaneous reverse current at rated DC blocking voltage)	$I_R$	0.01			m A
		1.0			
Typical junction capacitance	$C_J$	10.0			pF
Typical thermal resistance	$R_{\theta JA}$	50.0			°C/W
	$R_{\theta JL}$	15.0			
Operating junction and storage temperature range	$T_J$ $T_{SIG}$	-65 to +125			°C

# RATINGS AND CHARACTERISTIC CURVES 1SS101 THRU 1SS301

FIG.1-FORWARD CURRENT DERATING CURVE

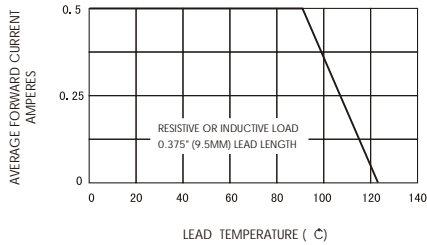


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

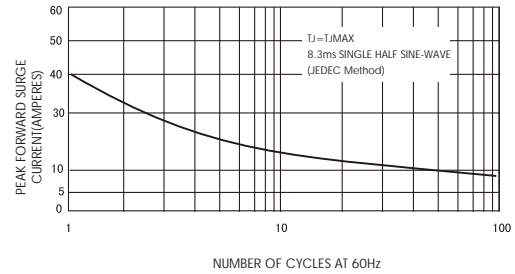


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

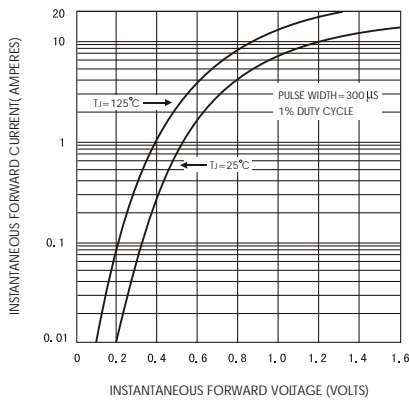


FIG.4-TYPICAL REVERSE CHARACTERISTICS

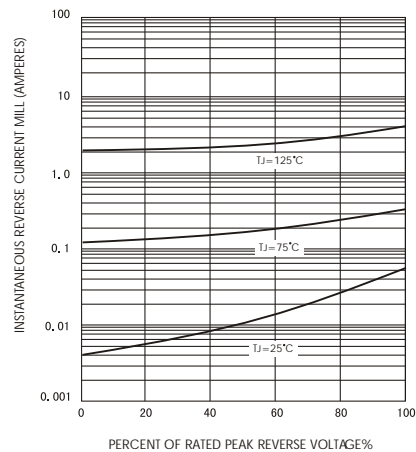


FIG.5-TYPICAL JUNCTION CAPACITANCE

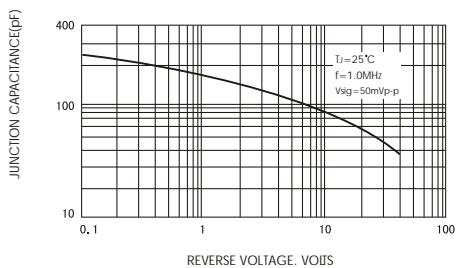


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

