



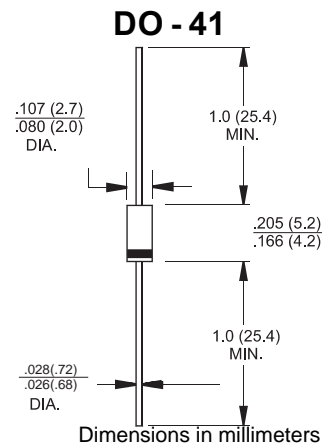
**VOLTAGE RANGE: 20 --- 100 V**  
**CURRENT: 1.0A**

## Features

- ◇ Metal-Semiconductor junction with guard ring
- ◇ Epitaxial construction
- ◇ Low forward voltage drop, low switching losses
- ◇ High surge capability
- ◇ For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- ◇ The plastic material carries U/L recognition 94V-0

## Mechanical Data

- ◇ Case: JEDEC DO-41, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.009 ounces, 0.26grams
- ◇ Mounting position: Any



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		SR120	SR130	SR140	SR150	SR160	SR180	SR1100	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	70	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	V
Maximum average forward rectified current 9.5mm lead length, (see fig.1)	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	$I_{FSM}$	30.0							A
Maximum instantaneous forward voltage @ 1.0A (Note 1)	$V_F$	0.45	0.55	0.7		0.85		V	
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	$I_R$	0.5					0.1		mA
		10.0							
Typical junction capacitance (Note2)	$C_J$	110							pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	50							$^\circ\text{C}/\text{W}$
Operating junction temperature range	$T_J$	- 55 ---- + 150					- 55 ---- + 175		$^\circ\text{C}$
Storage temperature range	$T_{STG}$	- 55 ---- + 150					- 55 ---- + 175		$^\circ\text{C}$

NOTE: 1. Pulse test : 300  $\mu\text{s}$  pulse width, 1% duty cycle.

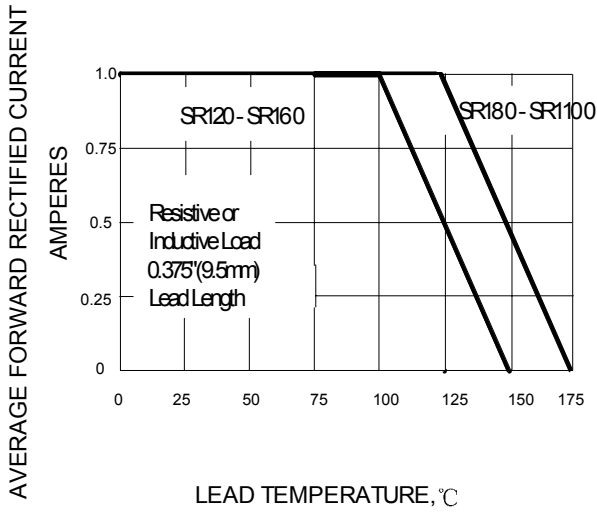
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient

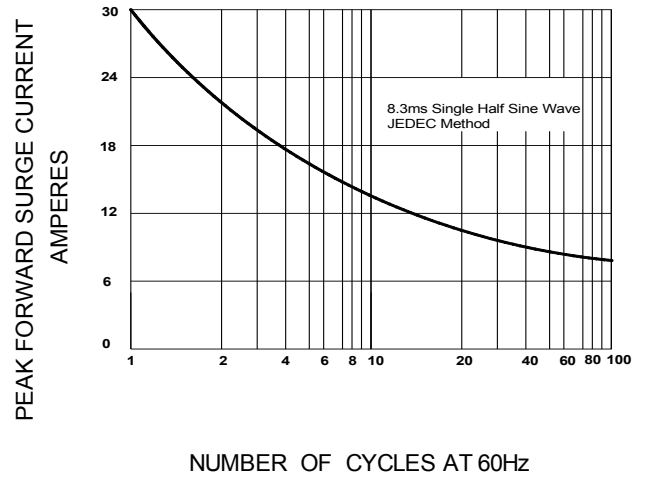


## Ratings AND Characteristic Curves

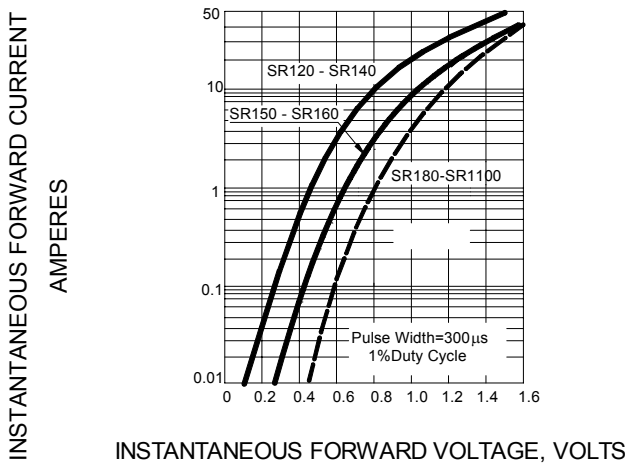
**FIG.1 -- FORWARD DERATING CURVE**



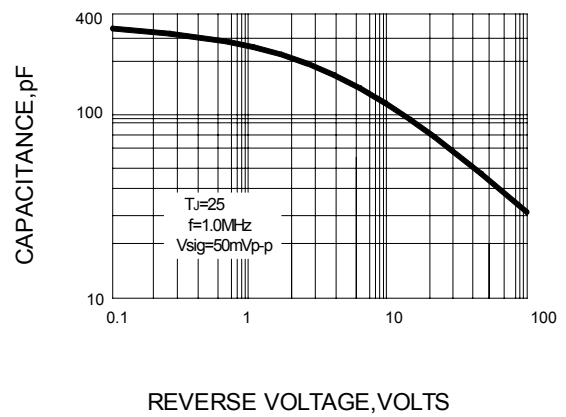
**FIG.2 -- PEAK FORWARD SURGE CURRENT**



**FIG.3 -- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4 -- TYPICAL JUNCTION CAPACITANCE**



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
DO-41	5000/AMMO	50000	42X28X31	14.00	12.00