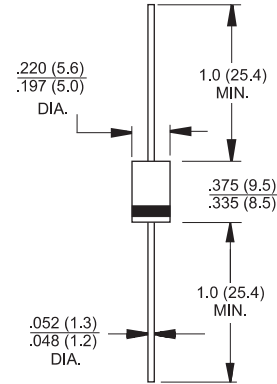




### DO - 27

## Features

- ✧ Low power loss, high efficiency.
- ✧ High current capability, Low VF.
- ✧ High reliability
- ✧ High surge current capability.
- ✧ Epitaxial construction.
- ✧ Guard-ring for transient protection.
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application



## Mechanical Data

- ✧ Cases: DO-27, Molded plastic
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 1.2 grams

Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

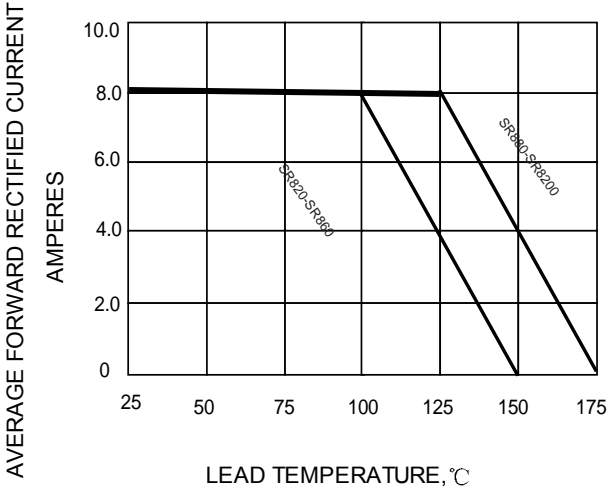
PARAMETER	SYMBOL	SR 820	SR 830	SR 840	SR 850	SR 860	SR 880	SR 890	SR 8100	SR 8150	SR 8200	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	90	100	150	200	V
Maximum RMS voltage	$V_{RWS}$	14	21	28	35	42	56	63	70	105	140	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	90	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	8.0										A
Peak forward surge current 8.3ms half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150										A
$I^2t$ Rating for Fusing ( $t < 8.3ms$ )	$I^2t$	93.375										A <sup>2</sup> s
Maximum Forward Voltage at 8.0A	$V_F$	0.45	0.55	0.70			0.85				V	
Maximum DC Reverse current at Rated DC Blocking Voltage	$I_R$	500					100					$\mu$ A
	$I_R$	15			10		5			1.0		mA
Typical Thermal Resistance (note1)	$R_{\theta JA}$	35					10					°C/W
	$R_{\theta JC}$	2					2					
Typical junction capacitance: VR=4.0v, f=1MHz	$C_J$	250			210			120			pF	
Junction temperature	$T_J$	-55~150					-55~175					°C
Storage temperature range	$T_{STG}$	-55~150					-55~175					°C

Notes: 1. Mount on Cu-Pad Size 5mm x 5mm on P.C.B..

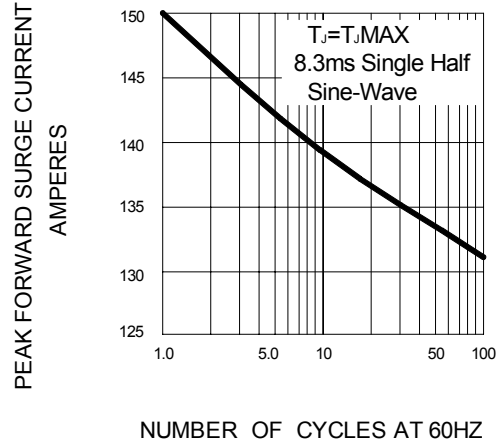


### Ratings AND Characteristic Curves

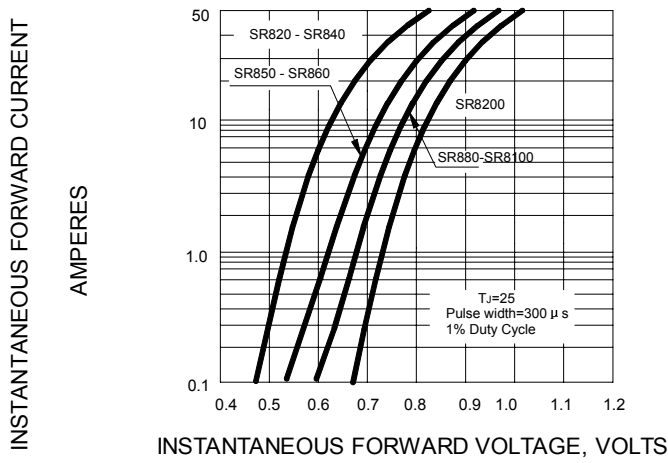
**FIG.1 -- FORWARD CURRENT DERATING CURVE**



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



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



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
DO-27	1250/AMMO	12500	40X26.5X30	14.00	12.00