



**TAYCHIPST**

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

SR502 THRU SR5100

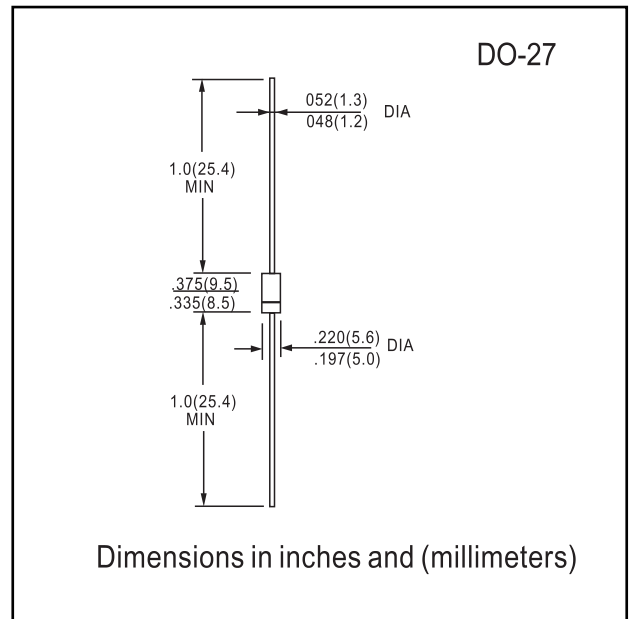
20V-100V 5.0A

**FEATURES**

- Plastic Package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, Low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed : 250°C/10 seconds at terminals, 0.375" (9.5mm) lead length, 5lbs. (2.3Kg) tension

**MECHANICAL DATA**

- Case : JEDEC DO-201AD molded plastic body
- Terminals : Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight : 0.041 ounce, 1.15 gram



**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	SR502	SR503	SR504	SR505	SR506	SR508	SR5100	Units
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	Volts
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length(see Fig. 1)	I(AV)	5.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated Tl)	I <sub>FSM</sub>	150.0							Amps
Maximum instantaneous forward voltage at 5.0A (Note 1)	V <sub>F</sub>	0.55		0.70		0.85		Volts	
Maximum instantaneous reverse current at rated DC blocking voltage (Note1)	T <sub>A</sub> =25°C	2.5							mA
	T <sub>A</sub> =100°C	50		25					
Typical junction capacitance (Note 3)	C <sub>J</sub>	500		400		pF			
Typical thermal resistnce (Note 2)	Rθ JA	25.0							°C/W
	Rθ JL	8.0							
Operating junction temperature range	T <sub>J</sub>	-65 to +125			-65 to +150				°C
Storage temperature range	T <sub>STG</sub>	-65 to +150							°C

Notes:

- (1) Pulse test: 300μ S pulse width, 1% duty cycle
- (2) Thermal resistance from junction to lead vrtical P.C.B. mounted, 0.375"(9.5mm) lead length
- (3) Measured 1MHz and reverse voltage of 4.0 volts

**RATINGS AND CHARACTERISTIC CURVES SR502 THRU SR5100**

FIG.1-FORWARD CURRENT DERATING CURVE

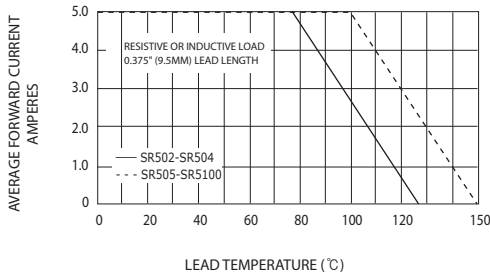


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

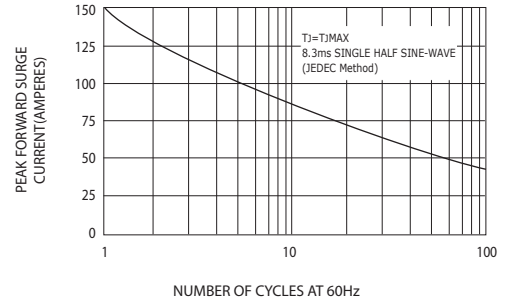


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

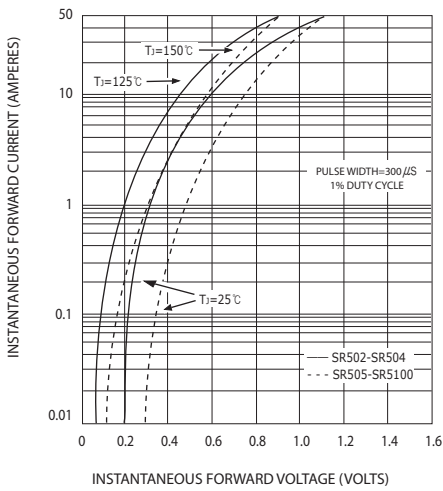


FIG.4-TYPICAL REVERSE CHARACTERISTICS

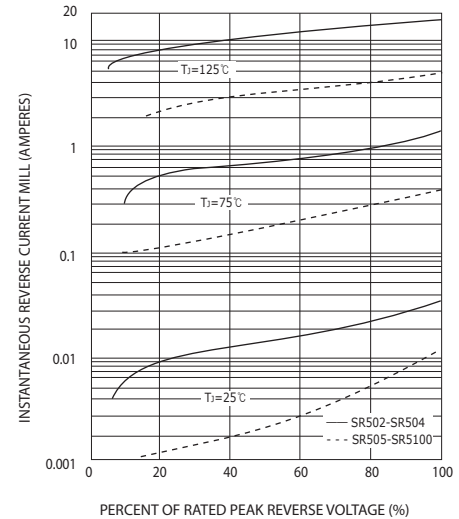


FIG.5-TYPICAL JUNCTION CAPACITANCE

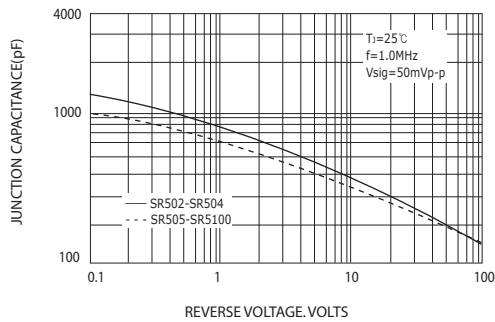


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

