



# SR120 THRU SR1A0

Reverse Voltage - 20 to 100 Volts Forward Current - 1.0 Ampere

## SCHOTTKY BARRIER RECTIFIER

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### Mechanical Data

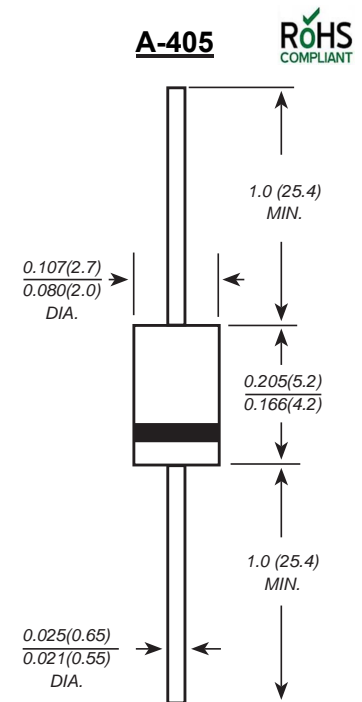
**Case** : JEDEC A-405 Molded plastic body

**Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity** : Polarity symbol marking on body

**Mounting Position** : Any

**Weight** : 0.008 ounce, 0.23 grams



Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

Parameter	SYMBOLS	SR 120	SR 130	SR 140	SR 150	SR 160	SR 170	SR 180	SR 190	SR 1A0	UNITS
Marking Code		MDD SR 120	MDD SR 130	MDD SR 140	MDD SR 150	MDD SR 160	MDD SR 170	MDD SR 180	MDD SR 190	MDD SR 1A0	
Maximum repetitive peak reverse voltage		V <sub>RMM</sub>	20	30	40	50	60	70	80	90	
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	49	56	63	70	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	70	80	90	100	V
Maximum average forward rectified current at T <sub>A</sub> =75 °C	I <sub>(AV)</sub>	1.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	40									A
Maximum instantaneous forward voltage at 1.0A	V <sub>F</sub>	0.55			0.70		0.85				V
Maximum DC reverse current at rated DC blocking voltage T <sub>A</sub> =25 °C T <sub>A</sub> =100 °C	I <sub>R</sub>	0.5									mA
		10.0					5.0				
Typical junction capacitance (NOTE 2)	C <sub>J</sub>	110			80						pF
Typical thermal resistance (NOTE 3)	R <sub>θJA</sub>	50.0									°C/W
Operating junction and storage	T <sub>J</sub>	-65 to +125					-65 to +150				°C
Storage temperature range	T <sub>STG</sub>	-65 to +150									



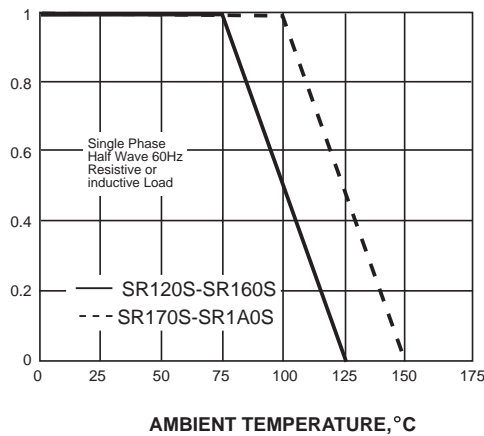
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## Ratings And Characteristic Curves

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,  
AMPERES

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

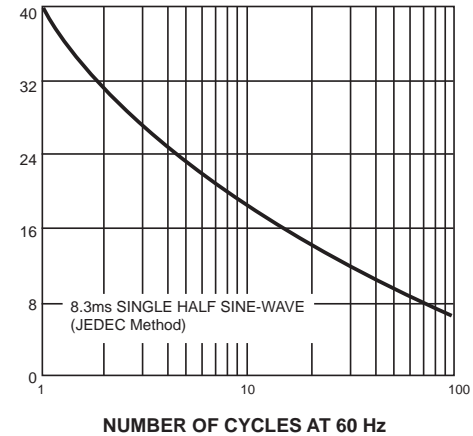
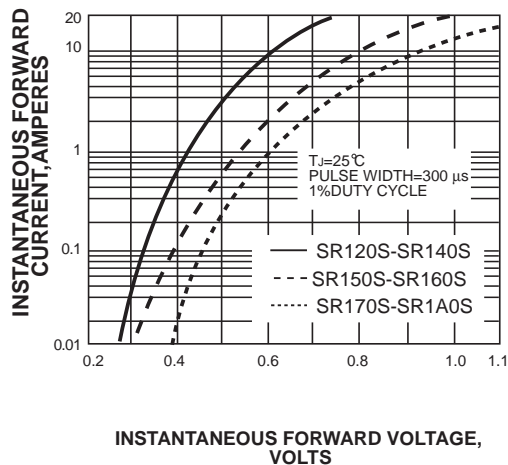


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,  
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

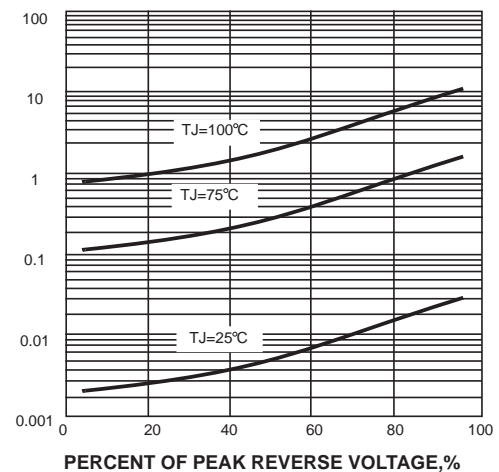
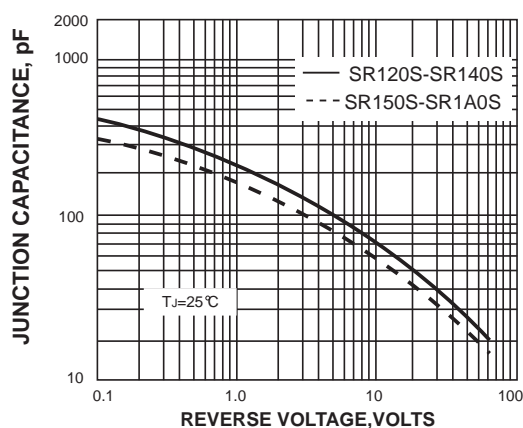
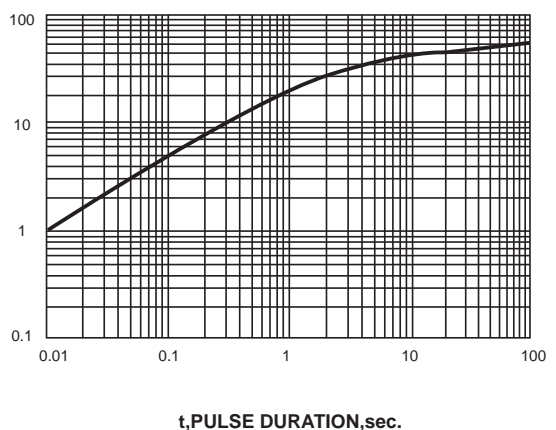


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.