



## SCHOTTKY BARRIER RECTIFIER

# SR1620 THRU SR1680

VOLTAGE RANGE  
CURRENT

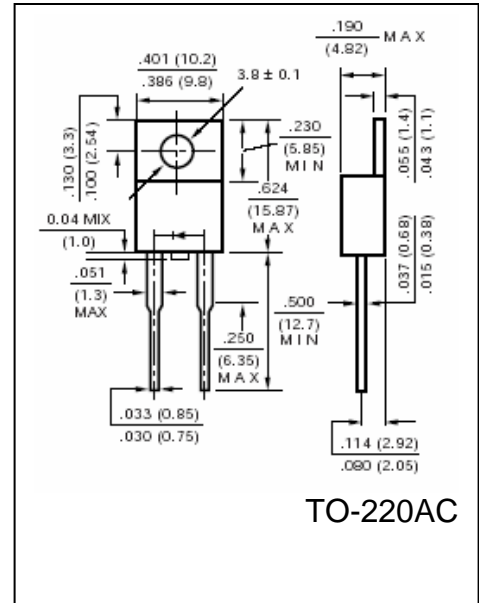
20 to 80 Volts  
16.0 Ampere

### FEATURES

- Fast switching
- Low forward voltage
- Low power loss for high efficiency
- High Surge capability
- High temperature Soldering guaranteed:  
250 °C/10 seconds, 0.16" (4.06mm) lead length
- Also available with reversed polarity, add an "R" suffix,  
i.e. SR1620R
- Also available in an isolated version, SRF1620
- Also available in a dual diode version, SR1620C

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-202E  
Method 208C
- Polarity: as marked
- Mounting Position: Any, 5.0 in-lbs Torque Max.
- Weight: 0.064 ounce, 1.81 gram



### 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 derate current by 20%

	SYMBOLS	SR 1620	SR 1630	SR 1635	SR 1640	SR 1645	SR 1650	SR 1660	SR 1680	UNIT
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	30	35	40	45	50	60	80	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	25	38	32	35	42	56	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	35	40	45	50	60	80	Volts
Maximum Average Forward Rectified Current, (Note 1) T <sub>C</sub> = 100°C (SR1620-1645), T <sub>C</sub> = 125°C (SR1650-1680)	I <sub>(AV)</sub>	16.0								Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	150								Amps
Maximum Instantaneous Forward Voltage @ 16.0A (Note 1)	V <sub>F</sub>	0.65					0.75		0.85	Volts
Maximum DC Reverse Current at Rated T <sub>A</sub> = 25 °C	I <sub>R</sub>	10								mA
DC Blocking Voltage per element (Note 1) T <sub>A</sub> = 100 °C		100								
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C <sub>J</sub>	800					600			pF
Typical Thermal Resistance	R <sub>θJC</sub>	1.5								°C/W
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: 300μs pulse width, 1% duty cycle

FIG.1-TYPICAL FORWARD CURRENT

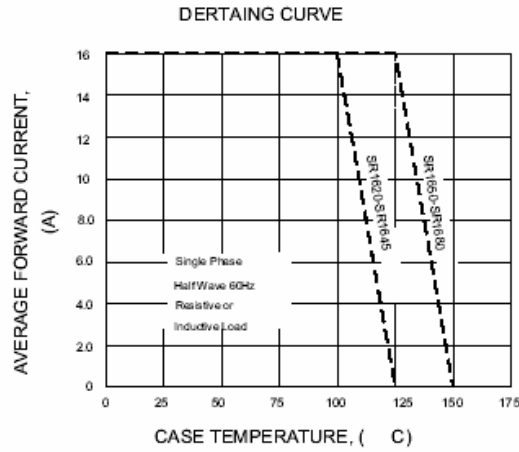


FIG.2-MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT

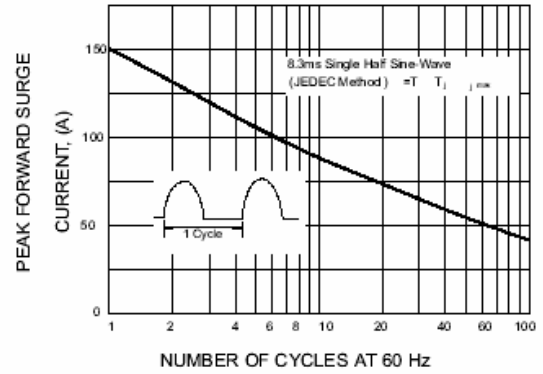


FIG.3-TYPICAL INSTANTANEOUS  
FORWARD CHARACTERISTICS

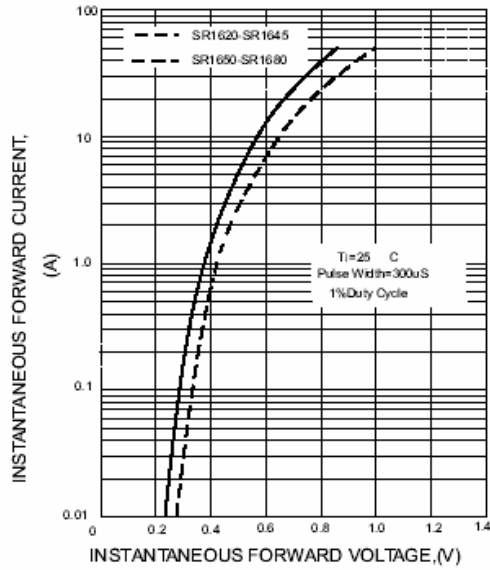


FIG.4-TYPICAL REVERSE  
CHARACTERISTICS

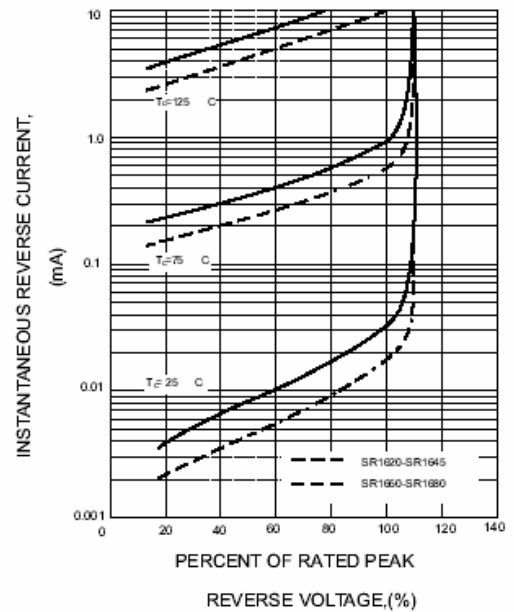


FIG.5-TYPICAL JUNCTION CAPACITANCE

