

PFS

SCHOTTKY BARRIER RECTIFIER

SR1020C THRU SR10100C

VOLTAGE RANGE
CURRENT

20 to 100 Volts
10.0 Ampere

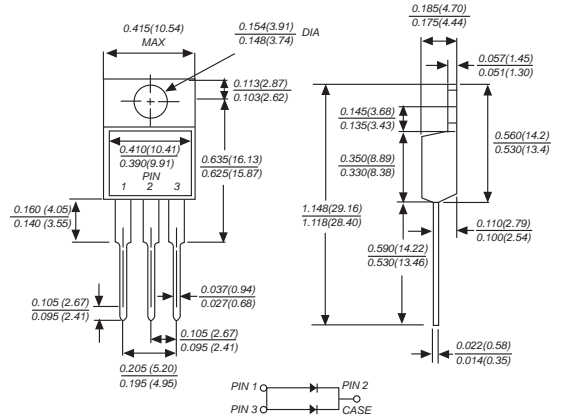
FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guardring 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, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

- Case : R-1 molded plastic body
- Terminals : Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight : 0.007 ounce, 0.20 gramS

TO-220AB



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%.

	SYMBOLS	SR 1020C	SR 1030C	SR 1040C	SR 1045C	SR 1050C	SR 1060C	SR 1070C	SR 1080C	SR 1090C	SR 10100C	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	45	50	60	70	80	90	100	VOLTS
Maximum RMS voltage	V_{RMS}	14	21	28	32	35	42	49	56	63	70	VOLTS
Maximum DC blocking voltage	V_{DC}	20	30	40	45	50	60	70	80	90	100	VOLTS
Maximum average forward rectified current at T_c (see fig.1)	$I_{(AV)}$	10.0										Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150.0										Amps
Maximum instantaneous forward voltage at 10.0A	V_F	0.55			0.75			0.85			Volts	
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R	1.0					50.0					mA
Typical junction capacitance (NOTE 1)	C_J	550					450					pF
Typical thermal resistance (NOTE 2)	$R_{\theta JC}$	2.0										$^\circ\text{C/W}$
Operating junction temperature range	T_J	-65 to +125					-65 to +150					$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +150										$^\circ\text{C}$

- Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal resistance from junction to case

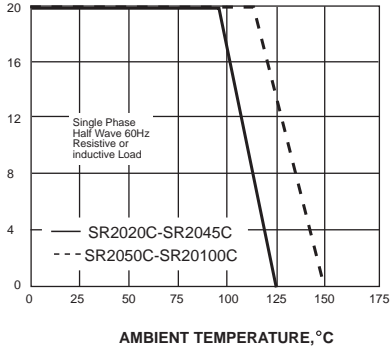
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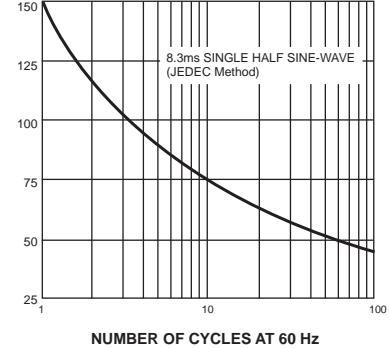
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



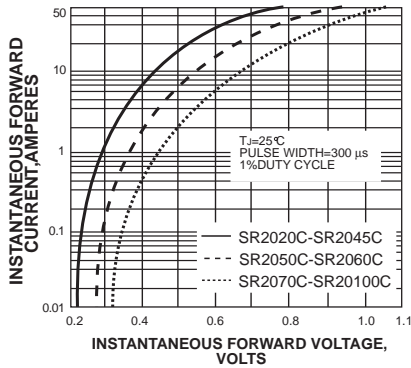
PEAK FORWARD SURGE CURRENT,
AMPERES

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



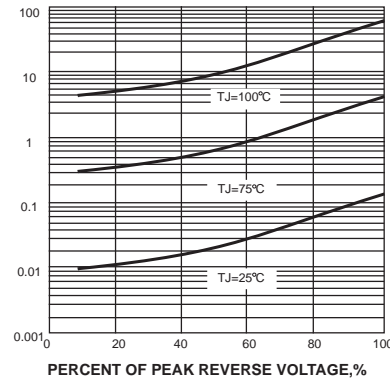
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



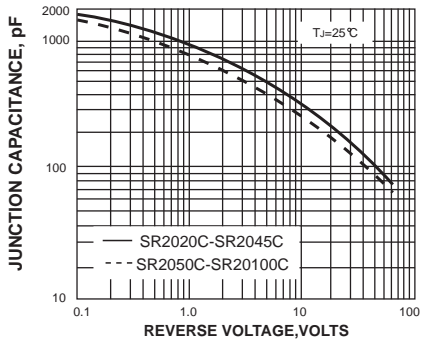
INSTANTANEOUS REVERSE CURRENT,
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

