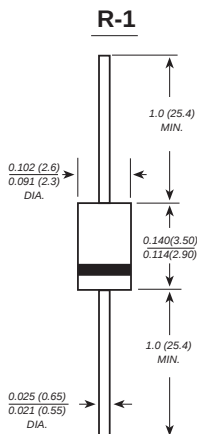


1S20 THRU 1SA0

SCHOTTKY BARRIER RECTIFIER

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



Dimensions in inches and (millimeters)

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:
260°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

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	1S 20	1S 30	1S 40	1S 50	1S 60	1S 70	1S 80	1S 90	1S A0	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	70	80	90	100	VOLTS
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	49	56	63	70	VOLTS
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	70	80	90	100	VOLTS
Maximum average forward rectified current 0.375”(9.5mm) lead length(see fig.1)	I _{AV}	1.0									Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	40.0									Amps
Maximum instantaneous forward voltage at 1.0A	V _F	0.55			0.70		0.85				Volts
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	0.5									mA
		10.0									
Typical junction capacitance (NOTE 1)	C _J	110			80						pF
Typical thermal resistance (NOTE 2)	R _{θJA}	50.0									°C/W
Operating junction temperature range	T _J	-65 to +125			-65 to +150						°C
Storage temperature range	T _{STG}	-65 to +150									°C

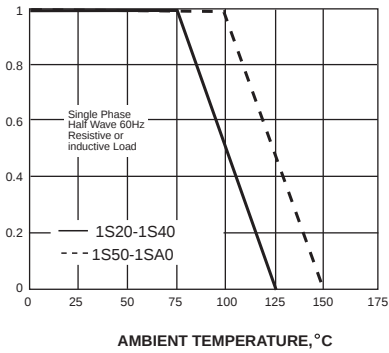
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES 1S20 THRU 1SA0

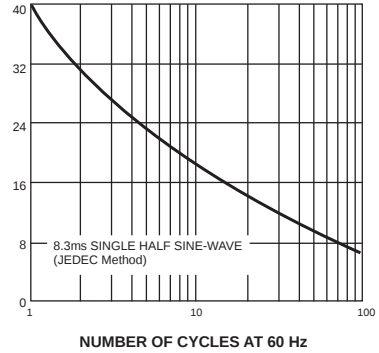
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



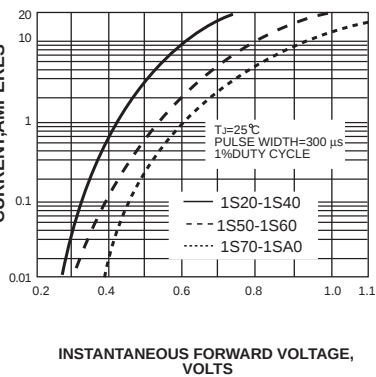
PEAK FORWARD SURGE CURRENT,
AMPERES

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



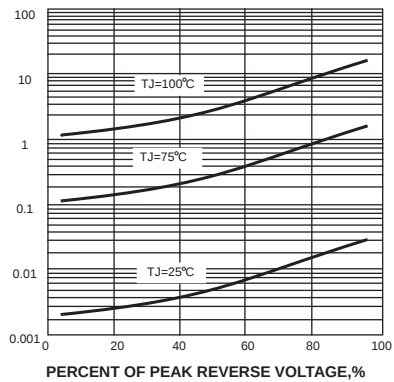
INSTANTANEOUS FORWARD
CURRENT,AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



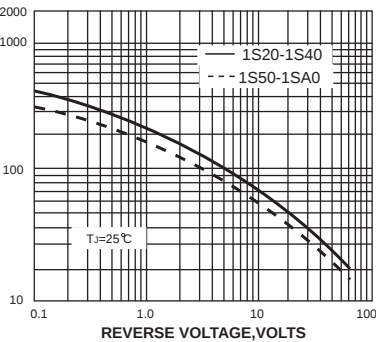
INSTANTANEOUS REVERSE CURRENT,
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

