

1S20 THRU 1S100

1.0 AMP. SCHOTTKY BARRIER RECTIFIERS

Voltage Range
20 to 100 Volts
Current
1.0 Amperes

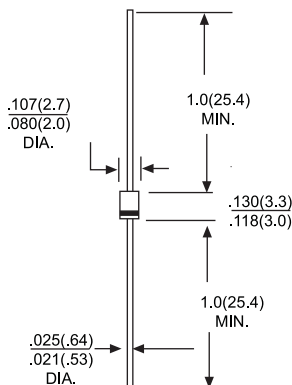
Features

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

Mechanical Data

- Cases: Molded plastic body
- Terminals: Plated Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 0.20 gram

R-1



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number		1S20	1S30	1S40	1S50	1S60	1S80	1S100	UNITS
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	20	30	40	50	60	80	100	V
Maximum RMS Voltage	V _{RMS}	14	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	V _{DC}	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current See Fig.1	I _{F(AV)}	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	40.0							A
Maximum Instantaneous Forward Voltage @1.0A	V _F	0.45	0.55	0.6	0.7		0.85		V
Maximun DC Reverse Current @ T _A = 25°C at Rated DC Blocking Voltage @ T _A = 100°C	I _R	0.5 10.0							mA mA
Thermal Resistance from Junction to Amlient	R _{θJA}	50							°C/W
Typical Junction Capacitance (Note 2)	C _J	110			80				pF
Operating Temperature Range	T _J	-55 to+125							°C
Storage Temperature Range	T _{STG}	-55 to+150							°C

NOTES: 1. Thermal Resistance from Junction to Ambient at .375"(9.5mm) Lead Length, PC Board Mounted.

2. Measured at 1.0 MHz and Applied $V_R = 4.0$ Volts

RATING AND CHARACTERISTIC CURVES

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FIG.1- MAXIMUN FORWARD CURRENT DERATING CURVE

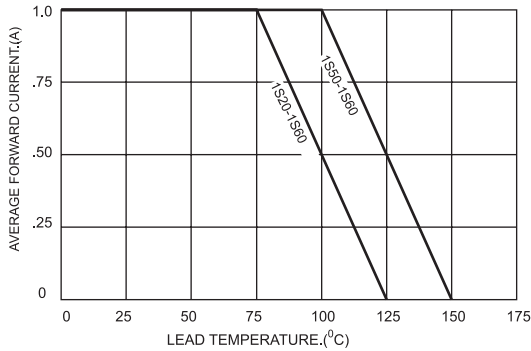


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

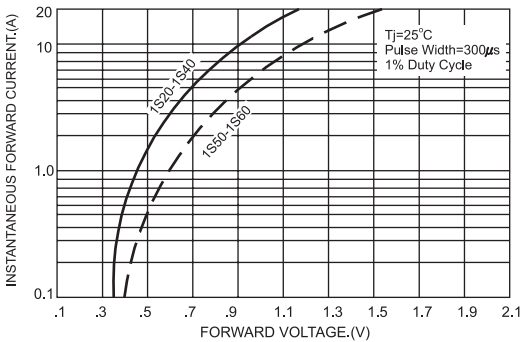


FIG.3-TYPICAL REVERSE CHARACTERISTICS

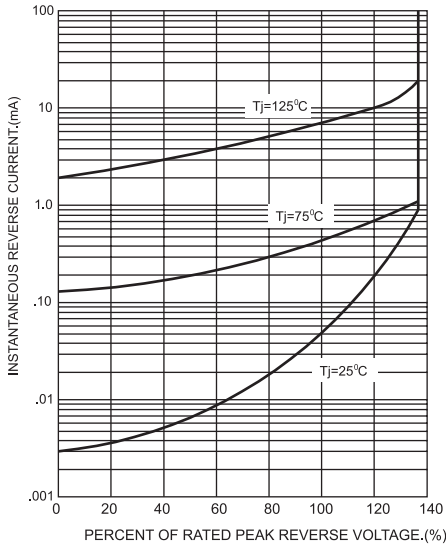


FIG.4-TYPICAL JUNCTION CAPACITANCE

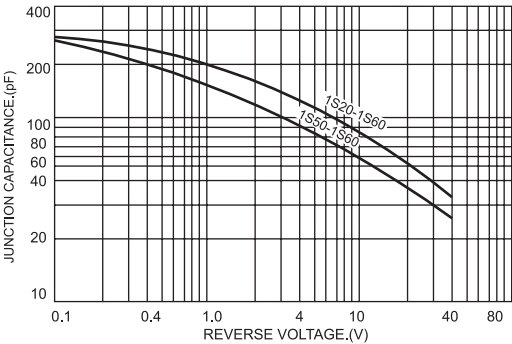


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

