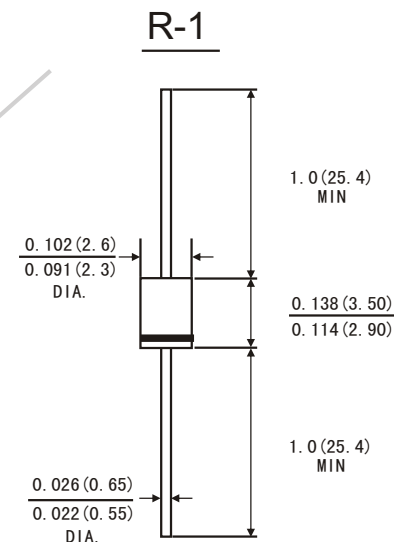


### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- 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:260°C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

### 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: 0.007ounce,0.20 gram



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

	Symbols	1S20	1S30	1S40	1S50	1S60	1S80	1SA0	1S150	1S200	Units	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	150	200	Volts	
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	57	71	105	140	Volts	
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	150	200	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 <sub>FSM</sub>	40.0									Amps	
Maximum instantaneous forward voltage at 1.0 A(Note 1 )	V <sub>F</sub>	0.55			0.70		0.85		0.90	0.95	Volts	
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	T <sub>a</sub> =25°C	0.5									mA	
	T <sub>a</sub> =100°C	10										
Typical junction capacitance(Note 3)	C <sub>J</sub>	110									Pf	
Typical thermal resistance(Note 2)	R <sub>θJA</sub>	50.0									°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: 300 μs pulse width,1% duty cycle

2.Thermal resistance (from junction to ambient)Vertical P.C.B. mounted , 0.5"(12.7mm)lead length

3.Measured at 1.0MHz and reverse voltage of 4.0 volts

# RATINGS AND CHARACTERISTIC CURVES 1S20 THRU 1S200

FIG.1-FORWARD CURRENT DERATING CURVE

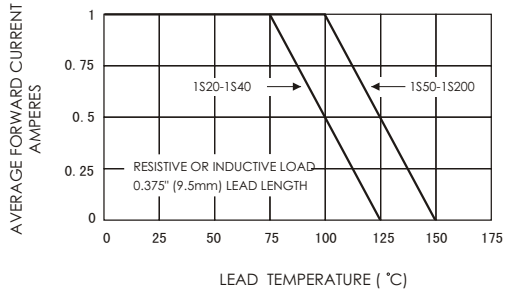


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

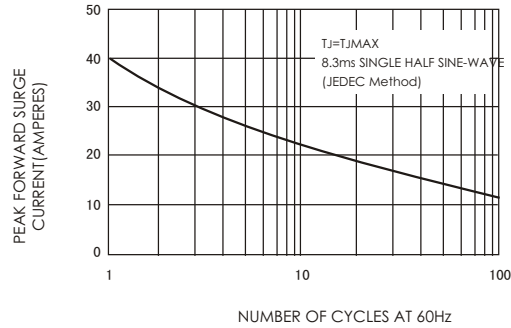


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

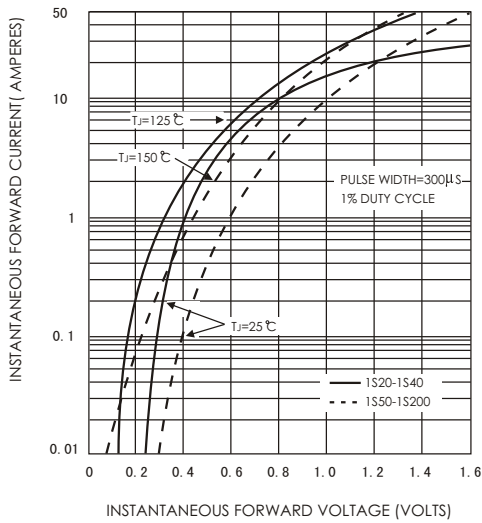


FIG.4-TYPICAL REVERSE CHARACTERISTICS

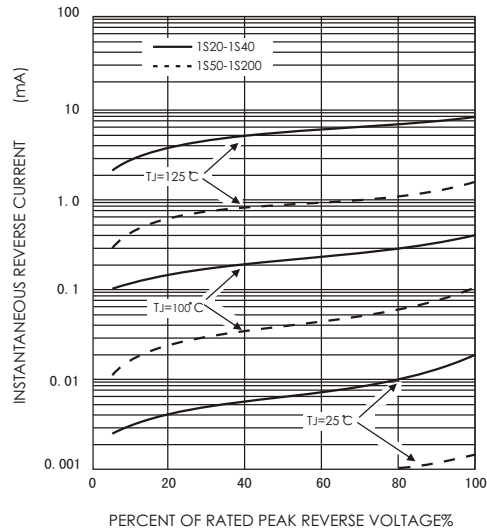


FIG.5-TYPICAL JUNCTION CAPACITANCE

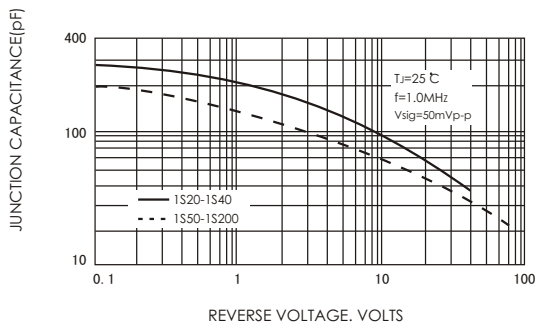


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

