



**SOLID STATE INC.**

46 FARRAND STREET  
BLOOMFIELD, NEW JERSEY 07003

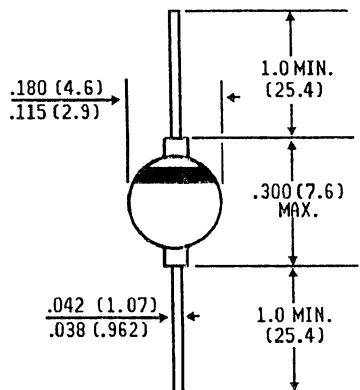
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# 1N5550 THRU 1N5554

**GLASS PASSIVATED SILICON RECTIFIER**  
**Voltage - 200 to 1000 Volts    Current - 3.0 Amperes**

## FEATURES

- ◆ Glass passivated cavity-free junction
- ◆ High temperature metallurgically bonded
- ◆ Hermetically sealed package



Dimensions in inches and (millimeters)

- ◆ Medium switching for good efficiency
- ◆ High temperature soldering guaranteed: 350°C/10 seconds/.375", (9.5mm) lead length at 5 lbs., (2.3kg) tension

## MECHANICAL DATA

**Case:** One piece glass, hermetically sealed

**Terminals:** Plated Axial leads

**Polarity:** Color band denotes cathode

**Mounting Position:** Any

**Weight:** .037 ounce, 1.04 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, derate current by 20%.

	SYMBOLS	1N5550	1N5551	1N5552	1N5553	1N5554	UNITS
*Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	140	280	420	560	700	Volts
*Maximum DC Blocking Voltage	V <sub>DC</sub>	200	400	600	800	1000	Volts
*Minimum Reverse Breakdown Voltage at 50 μ A	V <sub>BR</sub>	240	460	660	880	1100	Volts
*Maximum Average Forward Rectified Current .375", (9.5mm) Lead Lengths at T <sub>A</sub> = 55°C	I <sub>(AV)</sub>	3.0					Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	100					Amps
* Maximum Instantaneous Forward Voltage at 3.0A	V <sub>F</sub>	1.0			1.1		Volts
*Maximum DC Reverse Current T <sub>A</sub> = 25°C at Rated DC Blocking Voltage T <sub>A</sub> = 100°C T <sub>A</sub> = 200°C	I <sub>R</sub>	1.0 25.0 1500					μA
*Maximum Junction Capacitance (Note 2)	C <sub>J</sub>	150	120	100	90	85	pf
*Maximum Reverse Recovery Time (Note 1) T <sub>J</sub> = 25°C	T <sub>RR</sub>	2.0			4.0.		μs
Typical Thermal Resistance (Note 4)	R <sub>ΘJA</sub>	15.0					°C/W
*Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +200					°C

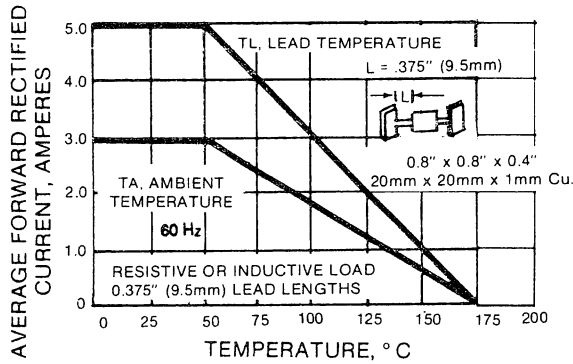
### NOTES:

- Reverse Recovery Test Conditions : I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 25A.
- Measured at 1 MHz and applied reverse voltage of 12.0 volts.

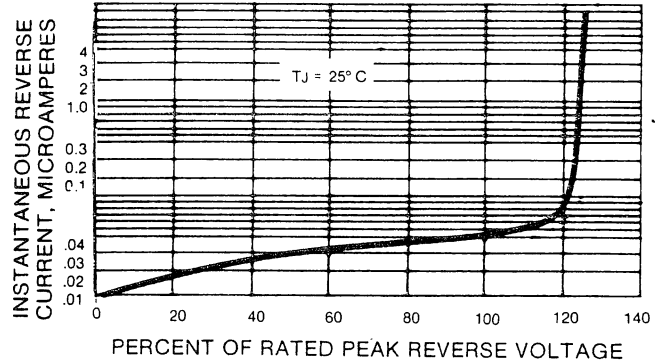
- Thermal Resistance from Junction to Ambient at .375" (9.5mm) Lead Lengths, with both leads mounted between heat sinks.
- \*JEDEC Registered Values

# RATINGS AND CHARACTERISTIC CURVES 1N5550 THRU 1N5554

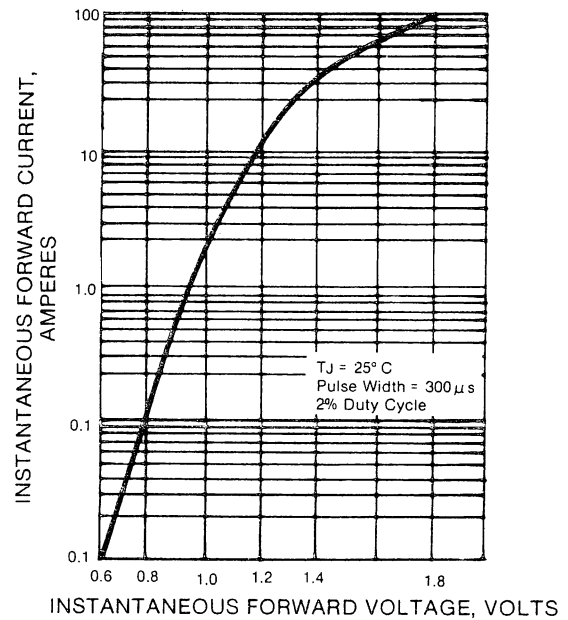
**FIG. 1 — FORWARD CURRENT DERATING CURVE**



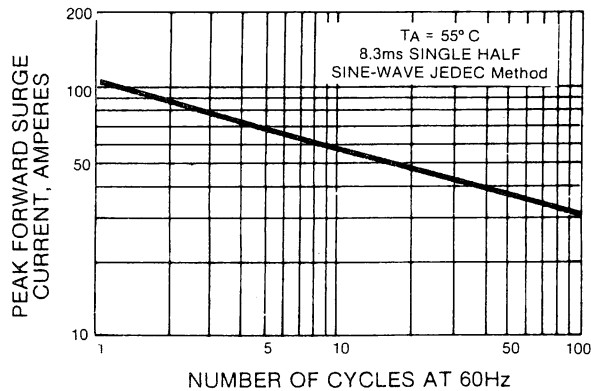
**FIG. 2 — TYPICAL REVERSE CHARACTERISTICS**



**FIG. 4 — TYPICAL FORWARD CHARACTERISTICS**



**FIG. 3 — MAXIMUM NON-REPETITIVE SURGE CURRENT**



**FIG. 5 — REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**

