



SOLID STATE INC.

46 FARRAND STREET
BLOOMFIELD, NEW JERSEY 07003

www.solidstateinc.com

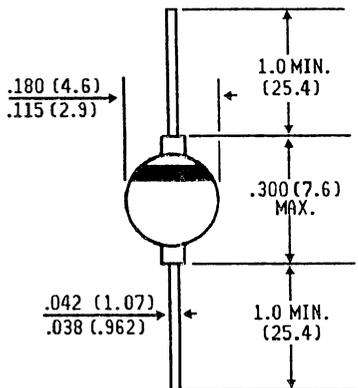
1N5550 THRU 1N5554

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

NOTES:

- Reverse Recovery Test Conditions : I_F = 0.5A, I_R = 1.0A, I_{rr} = 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

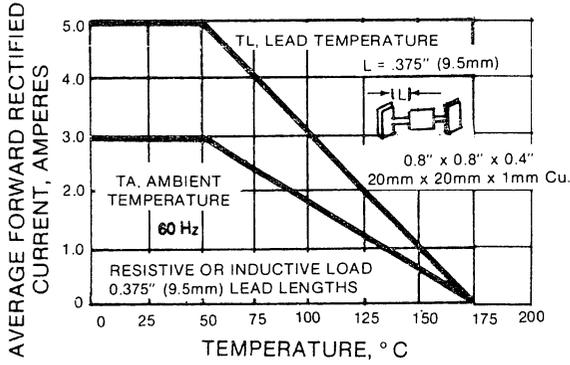


FIG. 2 — TYPICAL REVERSE CHARACTERISTICS

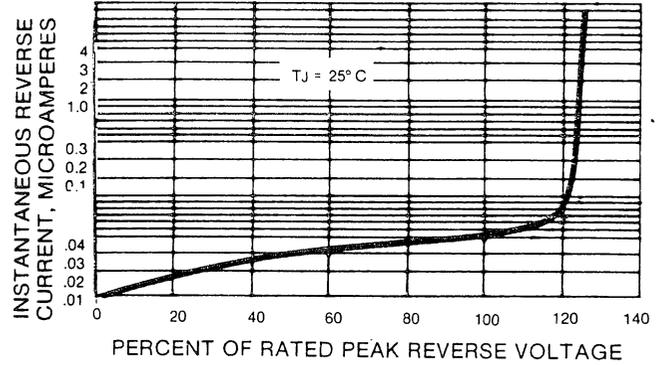


FIG. 3 — MAXIMUM NON-REPETITIVE SURGE CURRENT

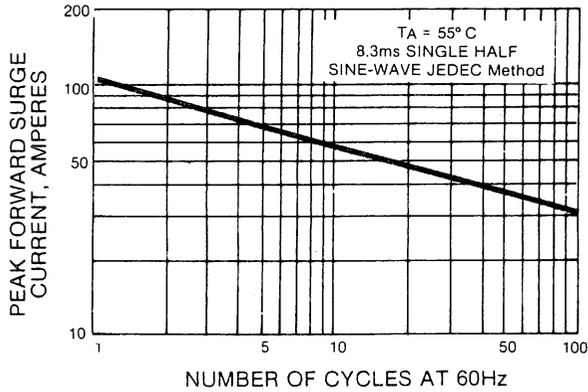


FIG. 4 — TYPICAL FORWARD CHARACTERISTICS

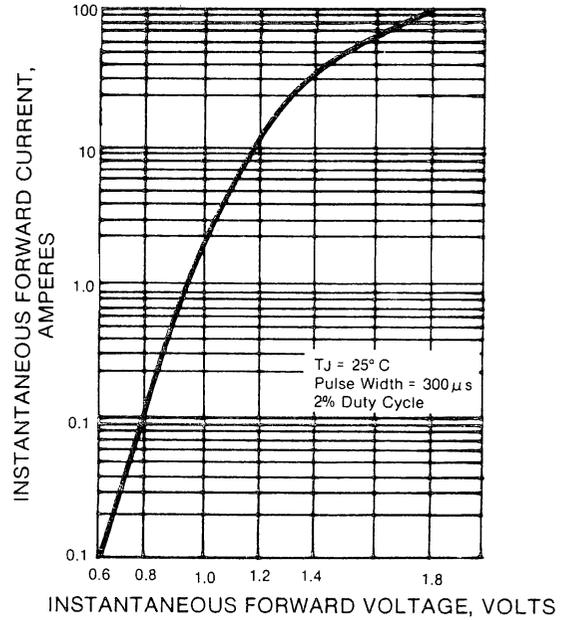
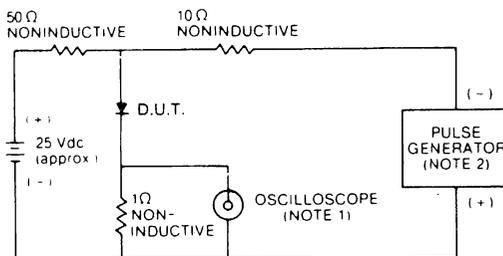


FIG. 5 — REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



- NOTES 1 Rise Time = 7ns max. Input Impedance = 1 megohm, 22pF
2 Rise Time = 10ns max. Source Impedance = 50 ohms

