

STH101 THRU STH108

GW

1.0 AMP SURFACE MOUNT HIGH EFFICIENCY RECTIFIERS

FEATURES

- * Glass passivated device
- * Ideal for surface mount applications
- * Low reverse leakage
- * Metallurgically bonded construction

MECHANICAL DATA

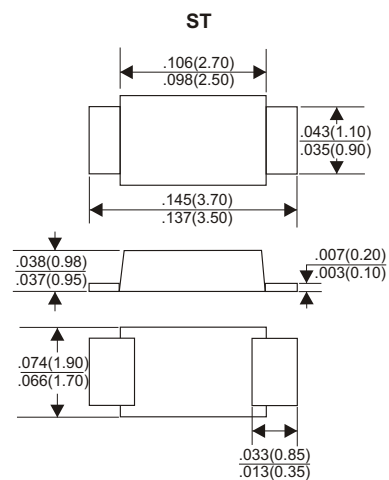
- * Case: Molded plastic body over passivated chip
- * Terminals: Solderable per MIL-STD-750, Method 2026
- * Polarity: Color band denotes cathode end
- * Mounting position: Any

VOLTAGE RANGE

50 to 1000 Volts

CURRENT

1.0 Ampere



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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	STH101	STH102	STH103	STH105	STH106	STH107	STH108	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at Ta=55°C	1.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	25							A
Maximum Instantaneous Forward Voltage at 1.0A	1.0			1.3	1.7			V
Maximum DC Reverse Current Ta=25°C	5.0							μA
at Rated DC Blocking Voltage Ta=100°C	100							μA
Maximum Reverse Recovery Time (Note 1)	50				75			nS
Typical Junction Capacitance (Note 2)	15							pF
Typical Thermal Resistance RθJA (Note 3)	180							°C/W
Operating and Storage Temperature Range Tj, Tstg	-55 — +150							°C
Marking Code	E11	E12	E13	E15	E16	E17	E18	

NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. Thermal Resistance from Junction to Ambient.

RATING AND CHARACTERISTIC CURVES (STH101 THRU STH108)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

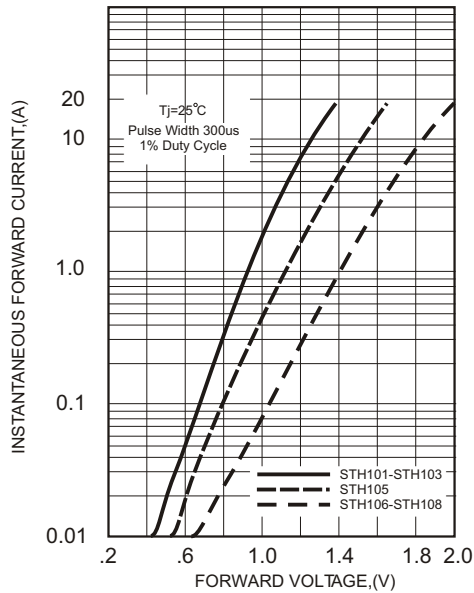


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

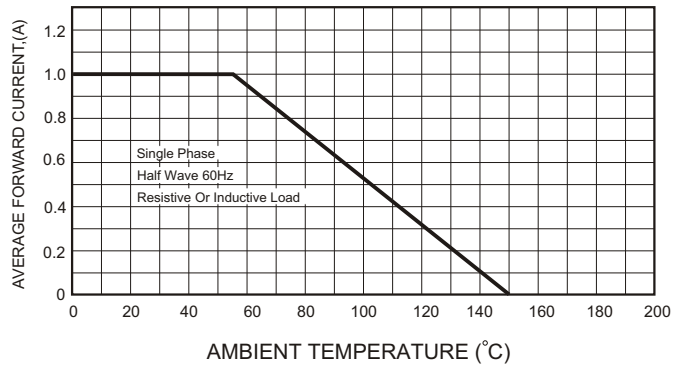


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

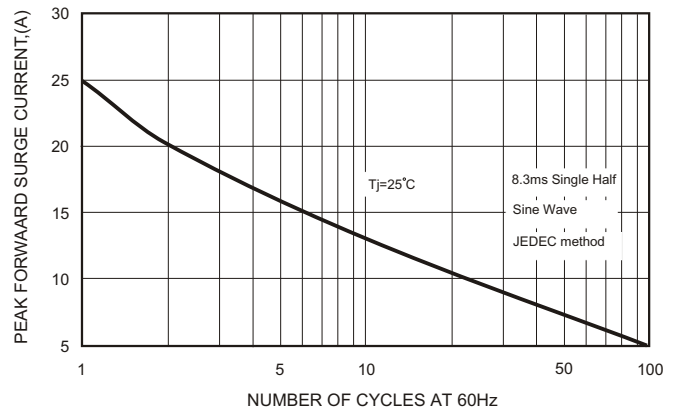
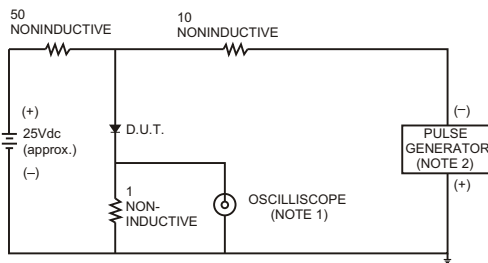


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

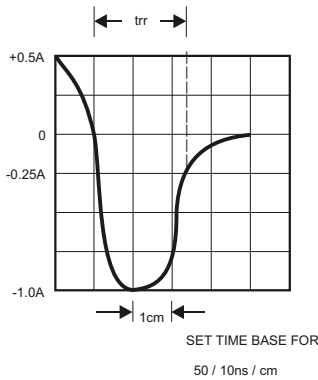


FIG.5-TYPICAL JUNCTION CAPACITANCE

