

ST4001 THRU ST4007

GW

1.0 AMP SURFACE MOUNT SILICON RECTIFIERS

FEATURES

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

MECHANICAL DATA

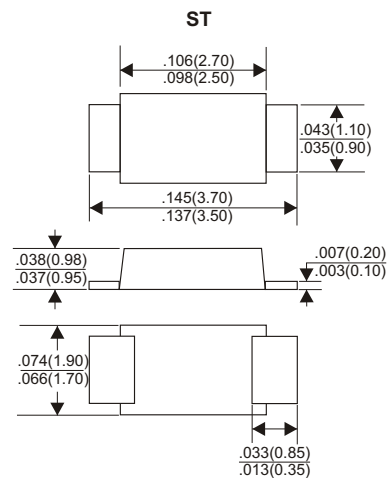
- * Case: Molded plastic body over passivated chip
- * Terminals: Solderable per MIL-STD-750, Method 2026
- * Polarity: Color band denotes cathode end
- * Mounting position: Any

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	ST4001	ST4002	ST4003	ST4004	ST4005	ST4006	ST4007	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 $T_L=100^\circ\text{C}$	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	1.1							V
Maximum DC Reverse Current $T_a=25^\circ\text{C}$	10							μA
at Rated DC Blocking Voltage $T_a=125^\circ\text{C}$	50							μA
Typical Junction Capacitance (Note 1)	4							pF
Typical Thermal Resistance R_{JA} (Note 2)	95							$^\circ\text{C/W}$
Operating and Storage Temperature Range T_J, T_{STG}	-55 — +150							$^\circ\text{C}$
Marking Code	D01	D02	D03	D04	D05	D06	D07	

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. PCB mounted on 0.2*0.2" (5.0*5.0mm) copper pad area.

RATING AND CHARACTERISTIC CURVES (ST4001 THRU ST4007)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

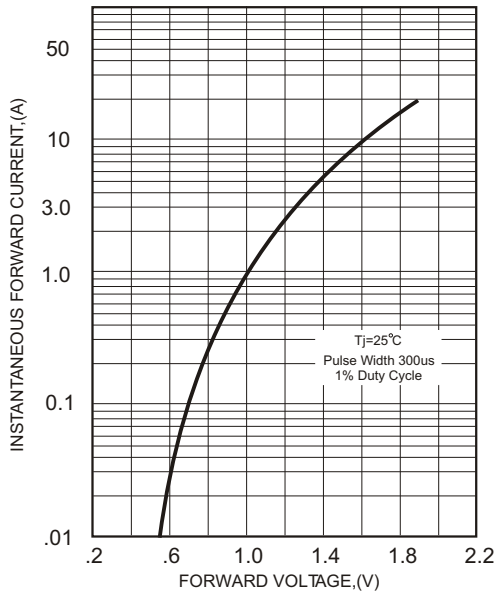


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

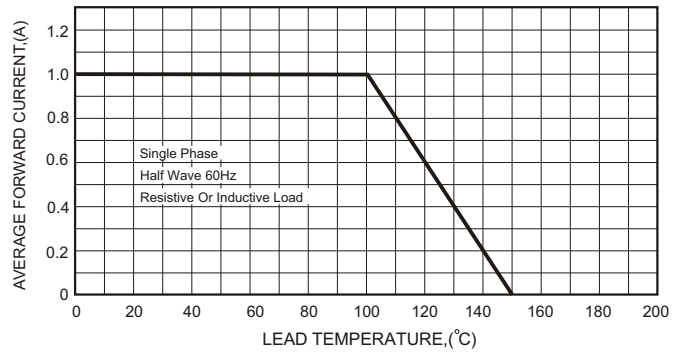


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

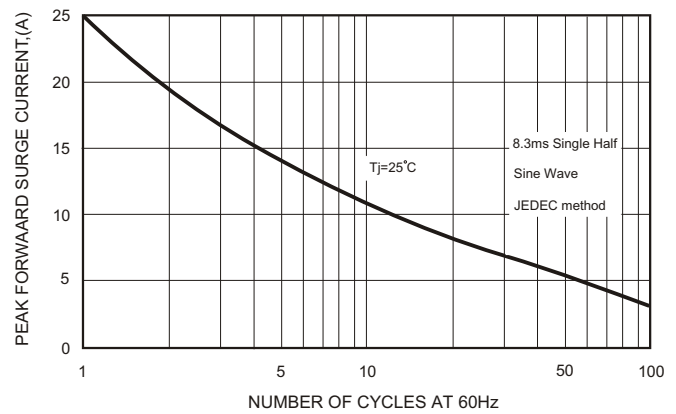


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

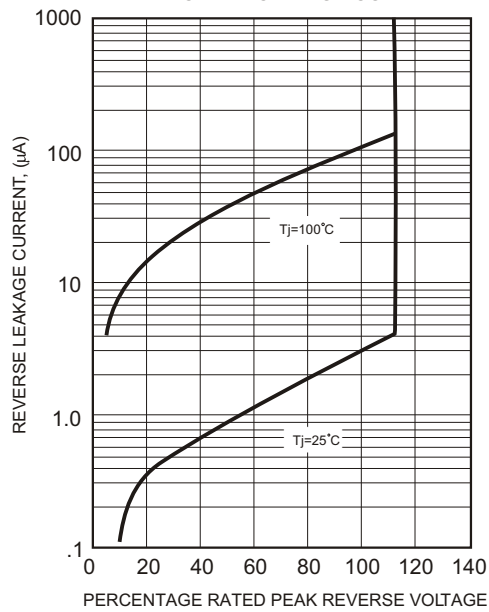


FIG.5-TYPICAL JUNCTION CAPACITANCE

