

# ST120 THRU ST1100



## 1.0 AMP SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

### FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Low forward voltage drop

### MECHANICAL DATA

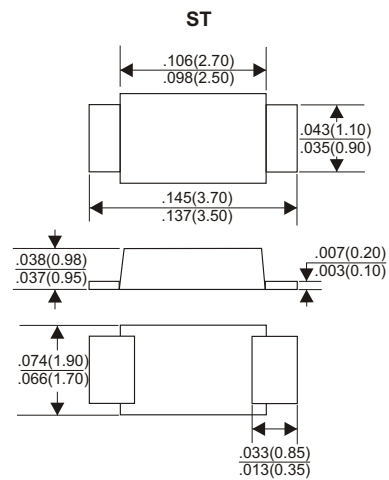
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

### VOLTAGE RANGE

20 to 100 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   | ST120      | ST130 | ST140 | ST150 | ST160 | ST180 | ST1100 | UNITS |
|---|------------|-------|-------|-------|-------|-------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage  | 20         | 30    | 40    | 50    | 60    | 80    | 100    | V     |
| Maximum RMS Voltage   | 14         | 21    | 28    | 35    | 42    | 56    | 70     | V     |
| Maximum DC Blocking Voltage   | 20         | 30    | 40    | 50    | 60    | 80    | 100    | V     |
| Maximum Average Forward Rectified Current<br>at $T_L=100^\circ\text{C}$                               | 1.0        |       |       |       |       |       |        | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 30         |       |       |       |       |       |        | A     |
| Maximum Instantaneous Forward Voltage at 1.0A   | 0.55       |       | 0.70  |       | 0.85  |       |        | V     |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage  | 0.5        |       |       |       |       |       |        | mA    |
| Typical Junction Capacitance (Note 1)   | 110        |       |       |       |       |       |        | pF    |
| Typical Thermal Resistance $R_{\theta JA}$ (Note 2)   | 80         |       |       |       |       |       |        | °C/W  |
| Operating Temperature Range $T_j$   | -65 — +150 |       |       |       |       |       |        | °C    |
| Storage Temperature Range $T_{stg}$   | -65 — +150 |       |       |       |       |       |        | °C    |
| Marking Code  | Y12        | Y13   | Y14   | Y15   | Y16   | Y18   | Y1T    |       |

#### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient.

## RATING AND CHARACTERISTIC CURVES (ST120 THRU ST1100)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

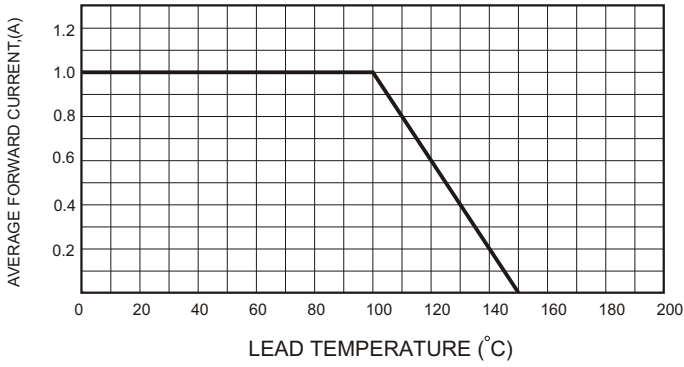


FIG.2-TYPICAL FORWARD CHARACTERISTICS

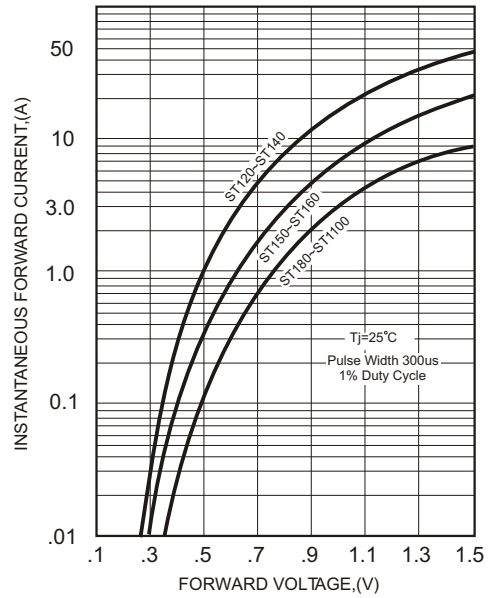


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

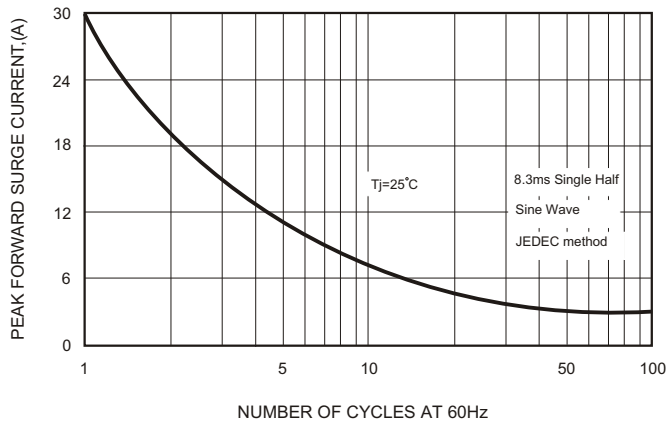


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

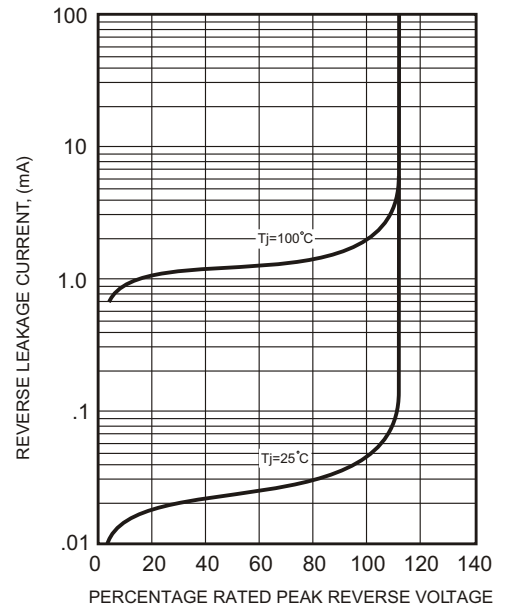


FIG.4-TYPICAL JUNCTION CAPACITANCE

