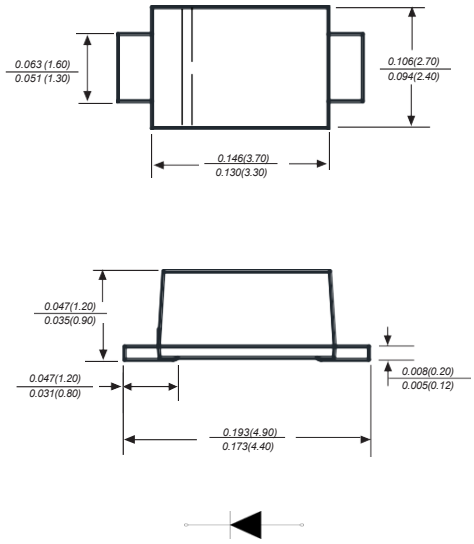
# SURFACE MOUNT TRENCH SCHOTTKY RECTIFIER

## Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Metal silicon junction,majority carrier conduction
- Low power loss,high efficiency
- Built-in strain relief,ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 260°C/10 seconds at terminals

**SMAF**




Dimensions in inches and (millimeters)

## Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unlss otherwise specified.

Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

| Parameter | SYMBOLS | ST34F | ST36F | ST310F | UNITS |
|---|---|---|---|---|---|
| Marking Code | | ST34F | ST36F | ST310F | |
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 40 | 60 | 100 | V |
| Maximum RMS voltage | $V_{RMS}$ | 28 | 42 | 70 | V |
| Maximum DC blocking voltage | $V_{DC}$ | 40 | 60 | 100 | V |
| Maximum average forward rectified current at TL(see fig.1) | $I_{(AV)}$ | 3.0 | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed onrated load (JEDEC Method) | $I_{FSM}$ | 80 | 60 | 100 | A |
| Maximum instantaneous forward voltage at 3.0A | $V_F$ | 0.45 | 0.50 | 0.60 | V |
| Maximum DCreverse current $T_A$=25℃ | $I_R$ | 0.30 | 0.50 | 0.10 | mA |
| at rated DCblocking voltage $T_A$=100℃ | | 5 | | | |
| Typical junction capacitance (NOTE1) | CJ | 450 | 400 | 180 | pF |
| Typical thermal resistance (NOTE 2) | $R_{\theta JA}$ | 60.0 | | 65.0 | ℃/W |
| Operating junction temperature range | $T_J$ | -55 to +125 | -55 to +150 | | ℃ |
| Operating storage temperaturerange | $T_{STG}$ | -55 to +150 | | | ℃ |

**Note:**1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2.Thermal resistance from junction to ambient at 0.375"(9.5mm)lead length,P.C.B. mounted

## Ratings And Characteristic Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

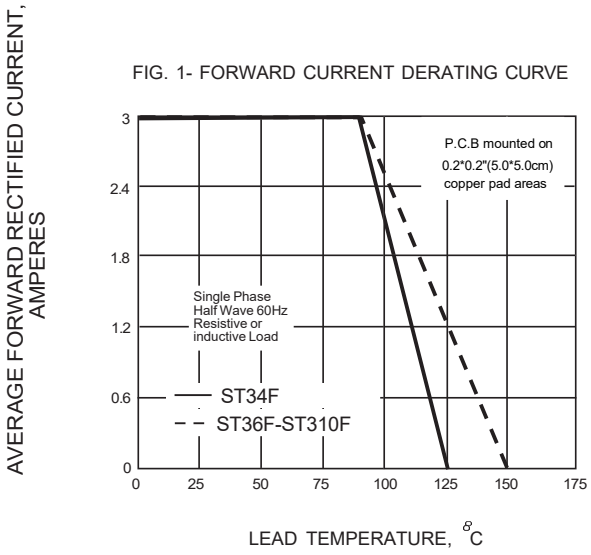



FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

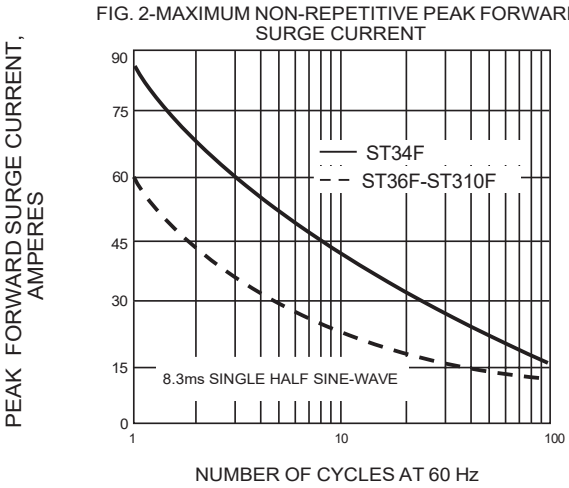



FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

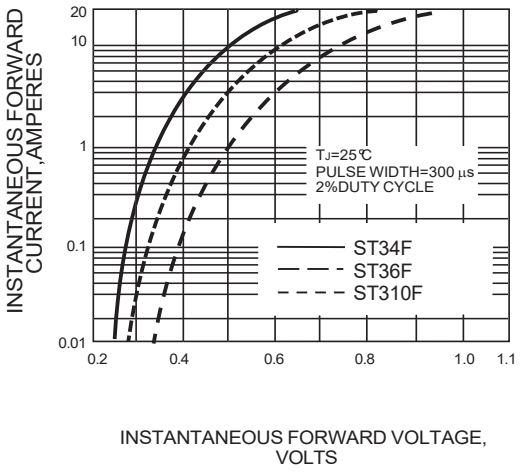



FIG. 4-TYPICAL REVERSE CHARACTERISTICS

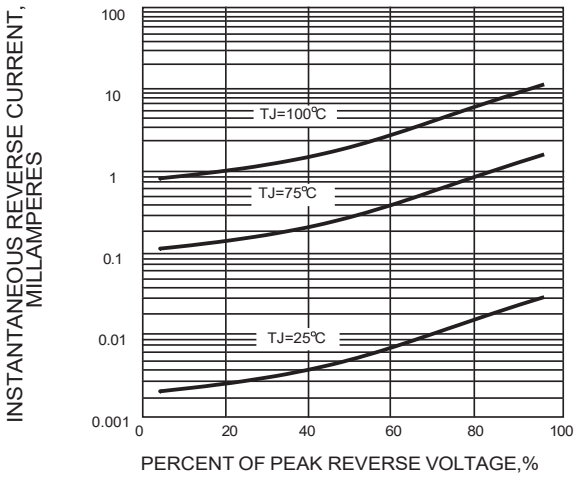



FIG. 5-TYPICAL JUNCTION CAPACITANCE

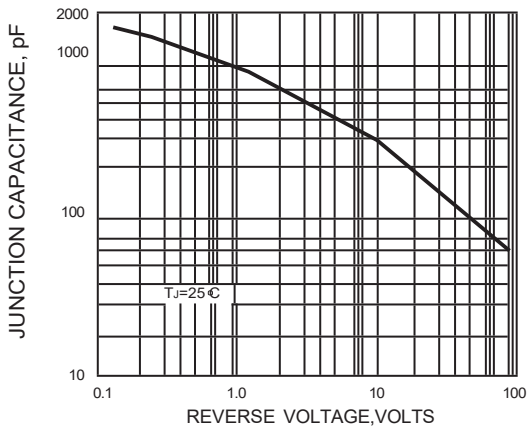
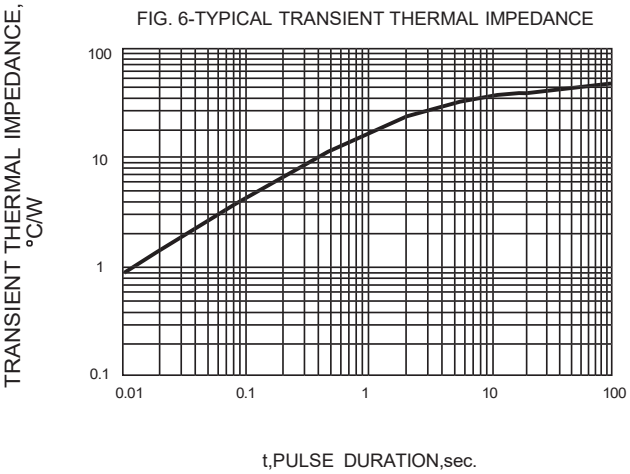



FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE




The curve above is for reference only.