



TAYCHIPST

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

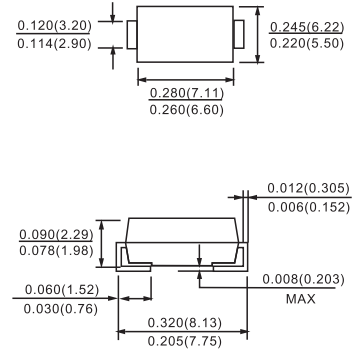
SS32 THRU SS310

20V-100V 3.0A

Features

- For surface mounted application
- Metal to silicon rectifier, majority carrier conduction
- Low forward voltage drop
- Easy pick and place
- High surge current capability
- Plastic material used carriers Underwriters
- Laboratory Classification 94V-0
- Epitaxial construction
- High temperature soldering:
260°C / 10 seconds at terminals

DO-214AB(SMC)



Dimensions in inches and (millimeters)

Absolute Maximum Ratings*

$T_A = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|-----------------------|---|-------------|---------------------------|
| I_o | Average Rectified Current @ $T_A = 75^\circ\text{C}$ | 3.0 | A |
| $i_{f(\text{surge})}$ | Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method) | 100 | A |
| P_D | Total Device Dissipation Derate above 25°C | 2.27 18 | W mW/ $^\circ\text{C}$ |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient** | 55 | $^\circ\text{C}/\text{W}$ |
| $R_{\theta JC}$ | Thermal Resistance, Junction to Case | 17 | $^\circ\text{C}/\text{W}$ |
| T_{stg} | Storage Temperature Range | -55 to +150 | $^\circ\text{C}$ |
| T_J | Operating Junction Temperature | -55 to +150 | $^\circ\text{C}$ |

These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Device mounted on FR-4 PCB 0.55 x 0.55" (14 x 14 mm).

Electrical Characteristics

$T_A = 25^\circ\text{C}$ unless otherwise noted

| Parameter | Device | | | | | | | | Units |
|--|--------|----|----|-----|----|----|-----|-----|-------|
| | 32 | 33 | 34 | 35 | 36 | 38 | 39 | 310 | |
| Peak Repetitive Reverse Voltage | 20 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | V |
| Maximum RMS Voltage | 14 | 21 | 28 | 35 | 42 | 56 | 63 | 70 | V |
| DC Reverse Voltage (Rated V_R) | 20 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | V |
| Maximum Reverse Current $T_A = 25^\circ\text{C}$ | 0.5 | | | | | | | | mA |
| @ rated V_R $T_A = 100^\circ\text{C}$ | 20 | | | | 10 | | | | mA |
| Maximum Forward Voltage @ 3.0 A | 500 | | | 750 | | | 850 | | mV |



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FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

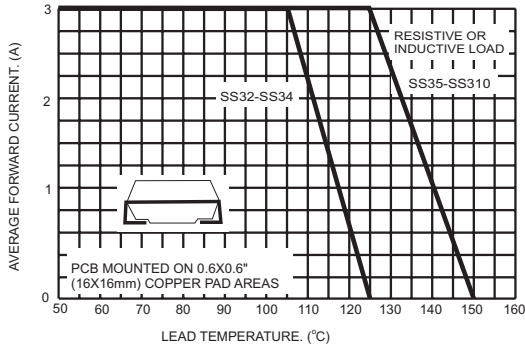


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

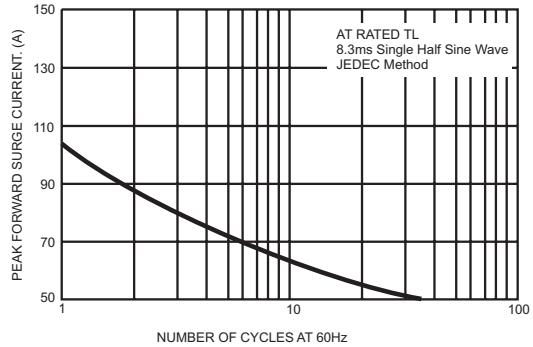


FIG.3- TYPICAL FORWARD CHARACTERISTICS

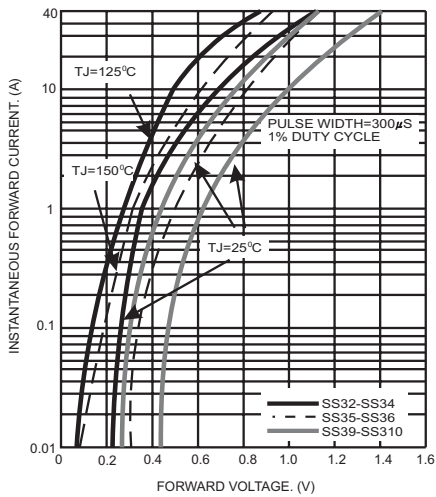


FIG.4- TYPICAL REVERSE CHARACTERISTICS

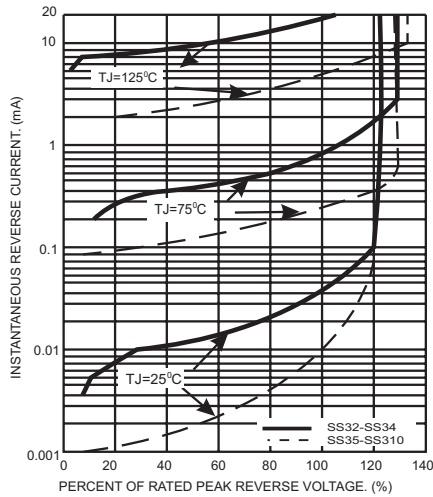


FIG.5- TYPICAL JUNCTION CAPACITANCE

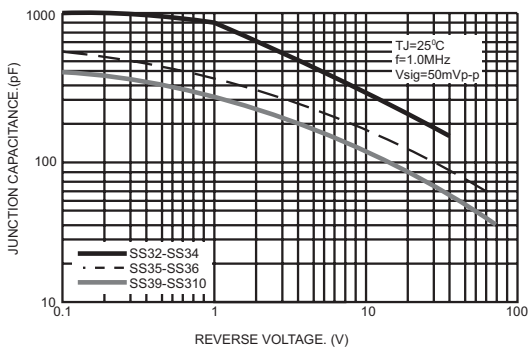


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE

