



DACO SEMICONDUCTOR CO., LTD.

**SC5001
THRU
SC5007**

AUTOMOTIVE SILICON RECTIFIERS TYPE 50A

Features

- High Surge Capability
- High Current Capability
- Types up to 1000V V_{RRM}
- Open junction

Maximum Ratings

Operating Temperature: -50 °C to +150 °C
Storage Temperature: -50 °C to +150 °C

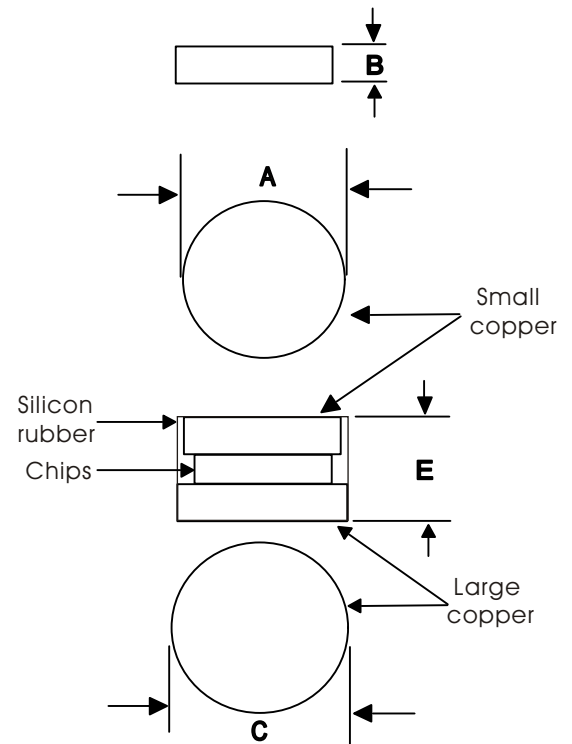
| Part Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-------------|--|---------------------|-----------------------------|
| SC5001 | 50V | 35V | 50V |
| SC5002 | 100V | 70V | 100V |
| SC5003 | 200V | 140V | 200V |
| SC5004 | 400V | 280V | 400V |
| SC5005 | 600V | 420V | 600V |
| SC5006 | 800V | 560V | 800V |
| SC5007 | 1000V | 700V | 1000V |

Electrical Characteristics @ 25 °C Unless Otherwise Specified

| | | | |
|---|-----------------|-----------------|---|
| Average Forward Current | $I_{F(AV)}$ | 50 A | $T_C = 100^\circ C$ |
| Peak Forward Surge Current | I_{FSM} | 800A | 8.3ms, Halfsine |
| Maximum Instantaneous Forward Voltage * | V_F | 1.0V | $I_{FM} = 50A;$ $T_J = 25^\circ C$ |
| Maximum Instantaneous DC Reverse Current At Rated DC Blocking Voltage | I_R | 10 uA 500 uA | $T_J = 25^\circ C$ $T_J = 150^\circ C$ |
| Maximum thermal resistance, junction to Ambient | $R_{\theta JA}$ | 1.0 °C /w | |
| Typical Junction Capacitance | C_j | 300pF | Measured at 1.0MHz, $V_R = 4.0V$ |

*Pulse Test: Pulse Width 300 usec, Duty Cycle 2%

**50Amp
SOZA CELL
50-1000 Volts**



| DIM | INCHES | MM | NOTE |
|-----|--------|-------|------|
| | A | .2580 | |
| B | .0394 | 1.00 | |
| C | .2841 | 7.23 | |
| D | .0295 | .750 | |
| E | .0866 | 2.20 | |



FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

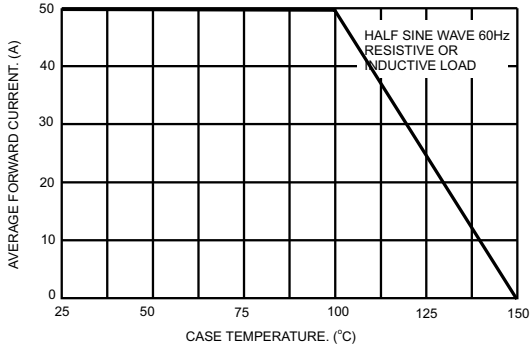


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

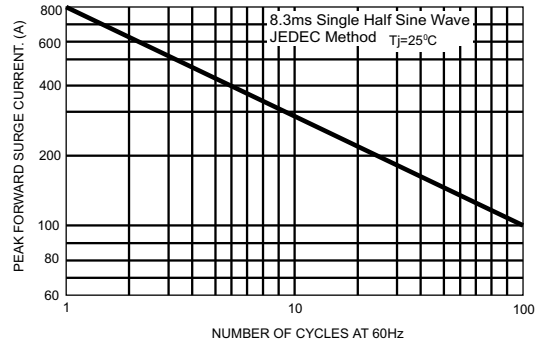


FIG.3- TYPICAL FORWARD CHARACTERISTICS

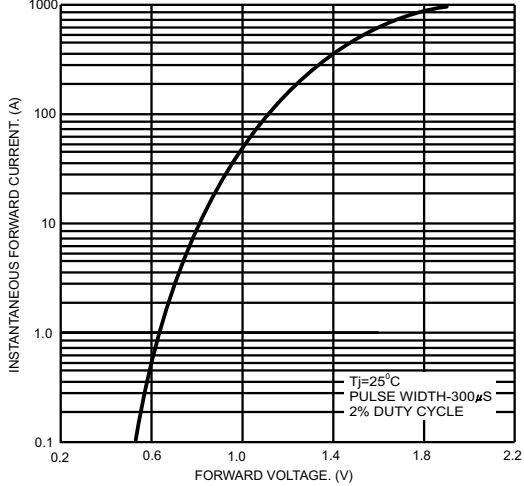


FIG.4- TYPICAL REVERSE CHARACTERISTICS

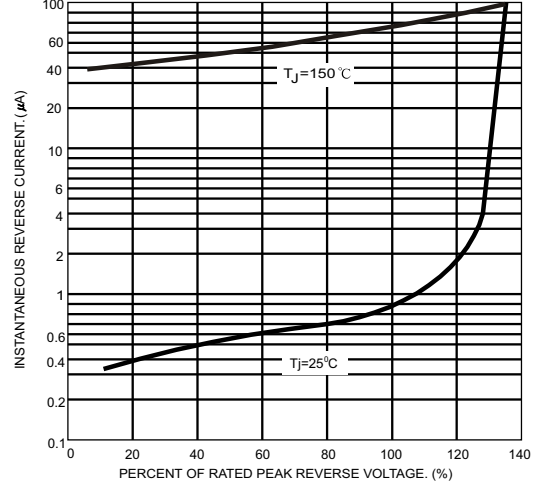


FIG.5- TYPICAL JUNCTION CAPACITANCE

