

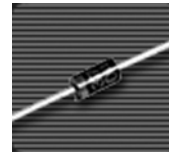


SF11 thru SF19

Glass Passivated Super Fast Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 1.0 Ampere

Features

- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ High reliability
- ◆ High surge current capability

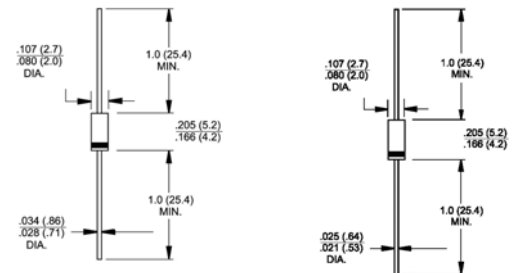


DO-204AL (DO-41)

A-405

Mechanical Data

- ◆ Case: Molded plastic DO-204AL(DO-41)/A-405
- ◆ Epoxy: UL 94V-O rate flame retardant
- ◆ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ◆ Polarity: Color band denotes cathode end
- ◆ High temperature soldering guaranteed:
250°C/10 seconds .375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ◆ Mounting position: Any
- ◆ Weight: DO-41 - 0.012 ounce, 0.335 gram
A-405 - 0.008 ounce, 0.22 gram



Dimensions in inches and (millimeters)

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Note: Lead diameter is 0.025(0.64)/0.021(0.53) for suffix "S" part numbers

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

| Parameter | Symbols | SF11 | SF12 | SF13 | SF14 | SF15 | SF16 | SF17 | SF18 | SF19 | Units | |
|---|------------------------------------|-------------|------|------|------|------|------|------|------|------|------------------|--------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | 800 | 1000 | Volts | |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 105 | 140 | 210 | 280 | 420 | 560 | 700 | Volts | |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | 800 | 1000 | Volts | |
| Maximum average forward rectified current .375" (9.5mm) lead length @ $T_A=55^\circ\text{C}$ | I_{AV} | 1.0 | | | | | | | | | Amp | |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 30.0 | | | | | | | | | Amps | |
| Maximum instantaneous forward voltage @ 1.0A | V_F | 0.95 | | | 1.3 | | | 1.7 | | | Volts | |
| Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage | I_R | | | | | 5.0 | | 100 | | | | μA |
| Maximum reverse recovery time (Note 1) | t_{rr} | | | | | 35 | | | | nS | | |
| Typical junction capacitance (Note 2) | C_J | 40 | | | | 25 | | | | pF | | |
| Typical thermal resistance | $R_{\theta JA}$ $R_{\theta JL}$ | | | | | 60 | | 20 | | | | $^\circ\text{C/W}$ |
| Operating junction temperature range | T_J | -55 to +150 | | | | | | | | | $^\circ\text{C}$ | |
| Storage temperature range | T_{STG} | -55 to +150 | | | | | | | | | $^\circ\text{C}$ | |

- Notes: 1. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

RATINGS AND CHARACTERISTIC CURVES

FIG. 1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

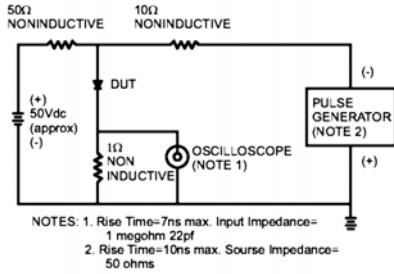


FIG. 2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

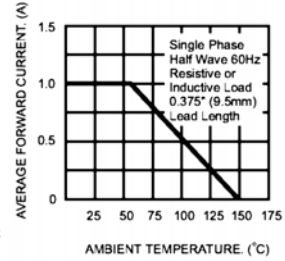


FIG. 3- TYPICAL REVERSE CHARACTERISTICS

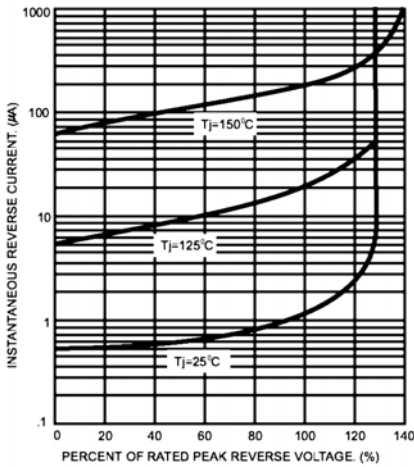


FIG. 4- TYPICAL FORWARD CHARACTERISTICS

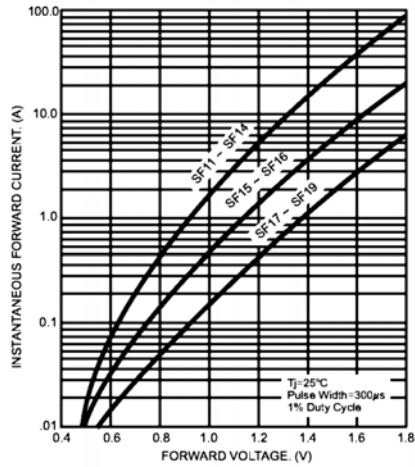


FIG. 5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

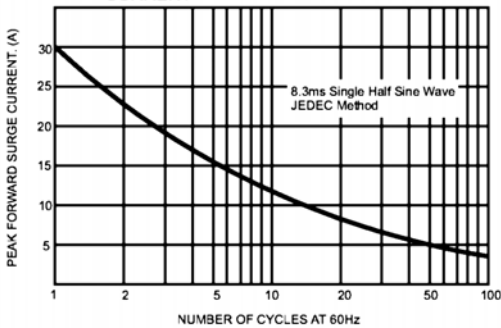


FIG. 6- TYPICAL JUNCTION CAPACITANCE

