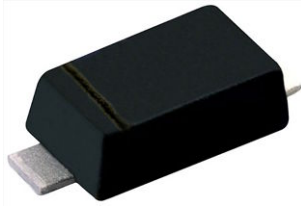




Small Signal Fast Switching Diode



FEATURES

- Silicon epitaxial planar diode
- Fast switching diode
- Base P/N-G3 - green, commercial grade
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?99912



MECHANICAL DATA

Case: SOD-123 FL

Weight: approx. 9.1 mg

Packaging codes/options:

08/3K per 7" reel (8 mm tape), 18K/box

| PARTS TABLE | | | | |
|-------------|-----------------|--------------|-----------------------|---------------|
| PART | ORDERING CODE | TYPE MARKING | INTERNAL CONSTRUCTION | REMARKS |
| 1N4148WFL-G | 1N4148WFL-G3-08 | AH | Single diode | Tape and reel |

| ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified) | | | | |
|--------------------------------------------------------------------------------------|------------------------------------|--------------------|-------|------|
| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
| Reverse voltage | | V _R | 75 | V |
| Repetitive peak reverse voltage | | V _{RRM} | 100 | V |
| Average rectified current half wave rectification with resistive load ⁽¹⁾ | f ≥ 50 Hz | I _{F(AV)} | 150 | mA |
| Surge forward current | t < 1 s and T _j = 25 °C | I _{FSM} | 500 | mA |
| Power dissipation ⁽¹⁾ | | P _{tot} | 350 | mW |

| THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified) | | | | |
|--------------------------------------------------------------------------------|----------------|-------------------|---------------|------|
| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
| Thermal resistance junction to ambient air ⁽¹⁾ | | R _{thJA} | 357 | K/W |
| Junction temperature | | T _j | 150 | °C |
| Storage temperature | | T _{stg} | - 65 to + 150 | |
| Operating temperature range | | T _{op} | - 55 to + 125 | |

Note

⁽¹⁾ Device mounted on FR-4 PCB, landing pad according to footprint recommendation in datasheet drawing



| ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified) | | | | | | |
|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------|------|------|------|---------------|
| PARAMETER | TEST CONDITION | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Forward voltage | $I_F = 10\text{ mA}$ | V_F | | | 1000 | mV |
| | $I_F = 100\text{ mA}$ | V_F | | | 1200 | mV |
| Leakage current | $V_R = 20\text{ V}$ | I_R | | | 25 | nA |
| | $V_R = 75\text{ V}$ | I_R | | | 5 | μA |
| | $V_R = 100\text{ V}$ | I_R | | | 100 | μA |
| | $V_R = 20\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$ | I_R | | | 50 | μA |
| Diode capacitance | $V_F = V_R = 0\text{ V}$ | C_D | | | 4 | pF |
| Reverse recovery time | $I_F = 10\text{ mA}, I_R = 1\text{ mA}, V_R = 6\text{ V}, R_L = 100\text{ }\Omega$ | t_{rr} | | | 4 | ns |

TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

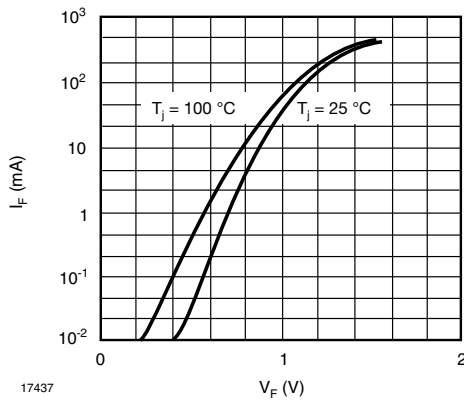


Fig. 1 - Forward Characteristics

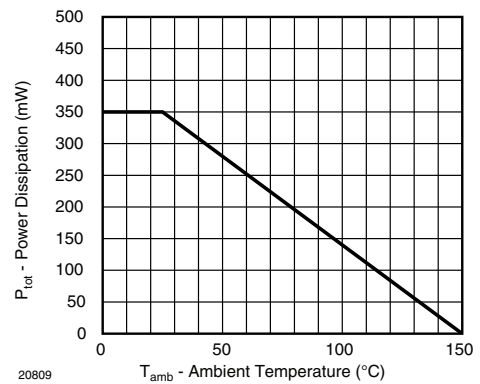


Fig. 3 - Admissible Power Dissipation vs. Ambient Temperature

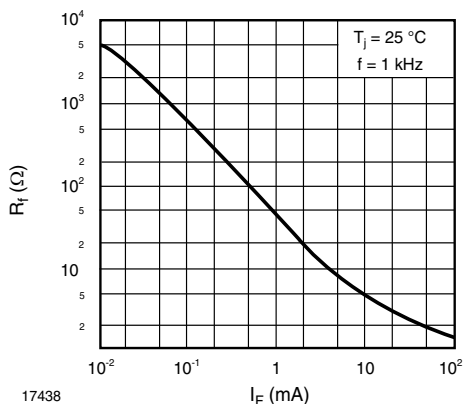


Fig. 2 - Dynamic Forward Resistance vs. Forward Current

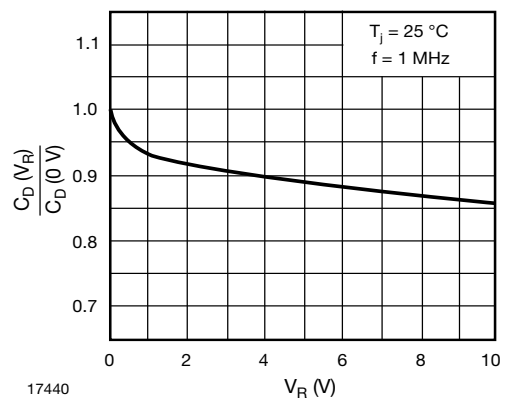


Fig. 4 - Relative Capacitance vs. Reverse Voltage

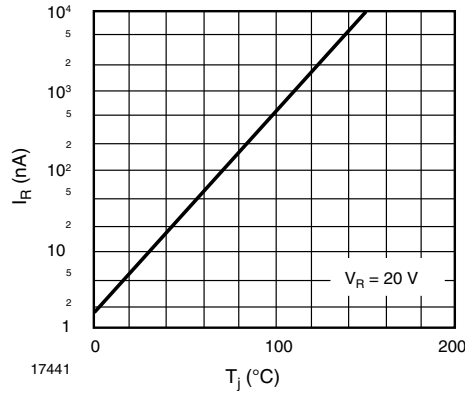


Fig. 5 - Leakage Current vs. Junction Temperature

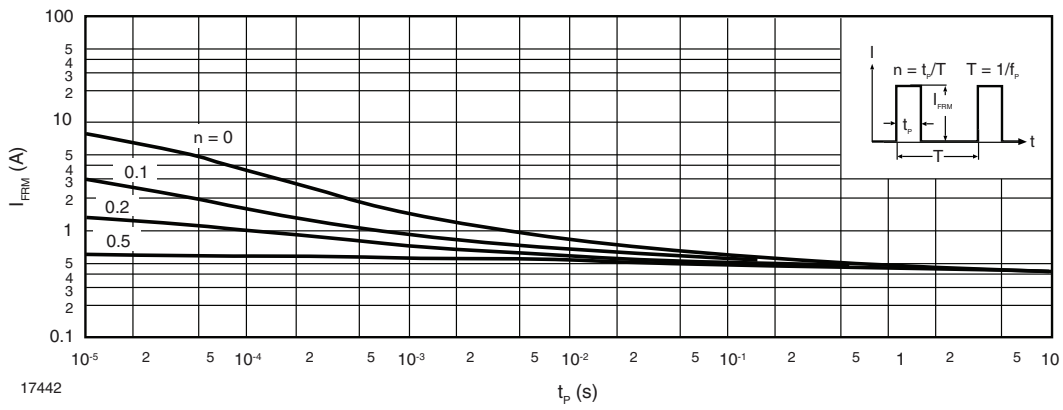
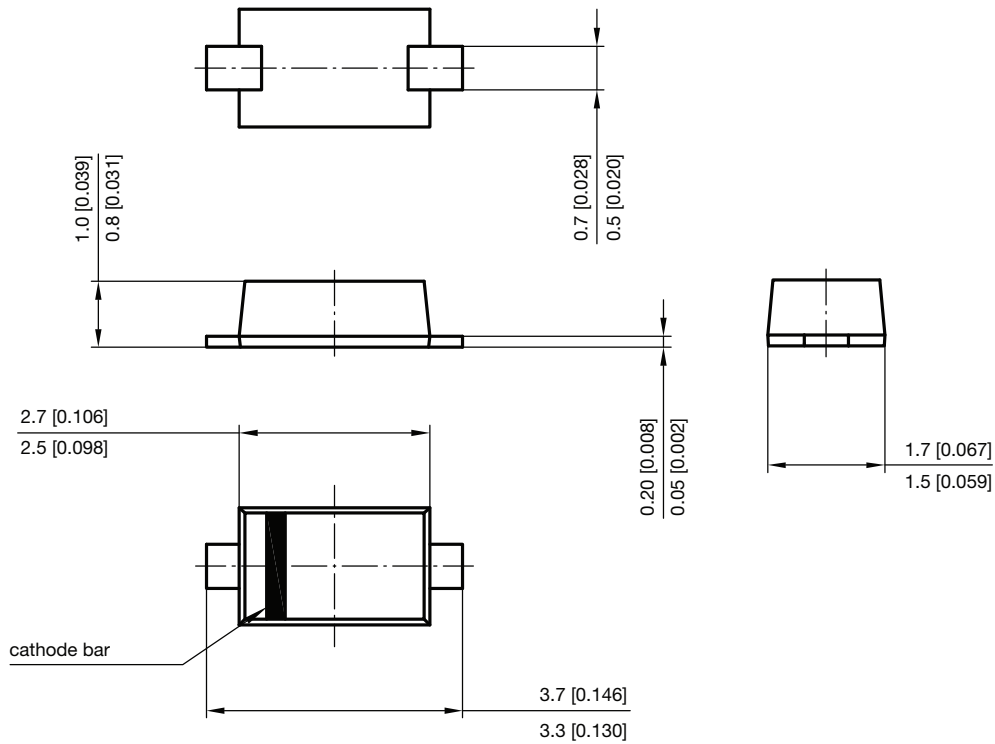


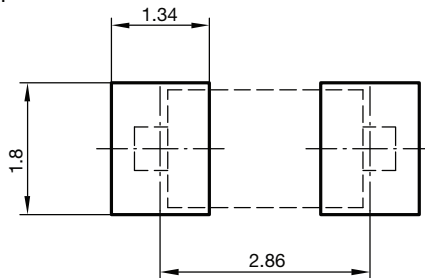
Fig. 6 - Admissible Repetitive Peak Forward Current vs. Pulse Duration



PACKAGE DIMENSIONS in millimeters (inches): SOD-123FL



foot print recommendation:



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