

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



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

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 ($T_{amb} = 25\text{ }^{\circ}\text{C}$, 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⁾	$f \geq 50\text{ Hz}$	$I_{F(AV)}$	150	mA
Surge forward current	$t < 1\text{ s}$ and $T_j = 25\text{ }^{\circ}\text{C}$	I_{FSM}	500	mA
Power dissipation ⁽¹⁾		P_{tot}	350	mW

THERMAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, 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	$^{\circ}\text{C}$
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

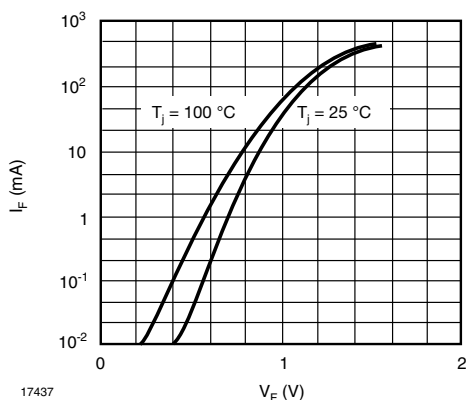
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Forward Characteristics

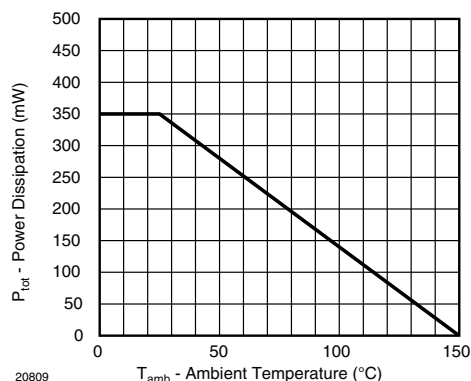


Fig. 3 - Admissible Power Dissipation vs. Ambient Temperature

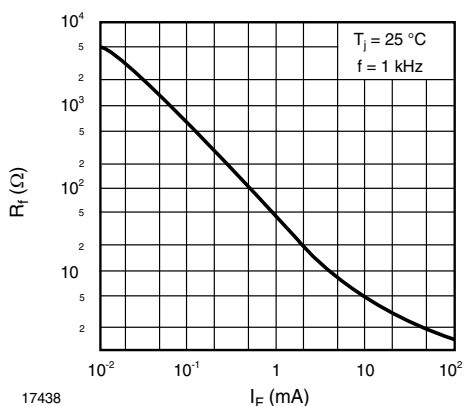


Fig. 2 - Dynamic Forward Resistance vs. Forward Current

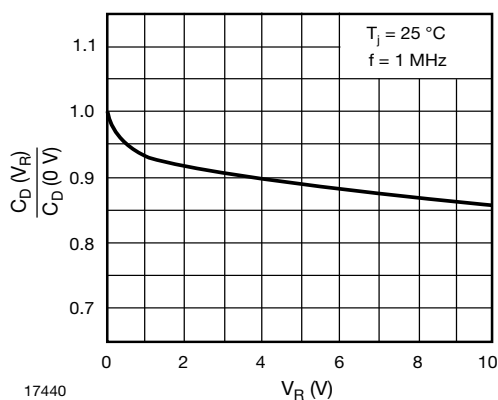


Fig. 4 - Relative Capacitance vs. Reverse Voltage

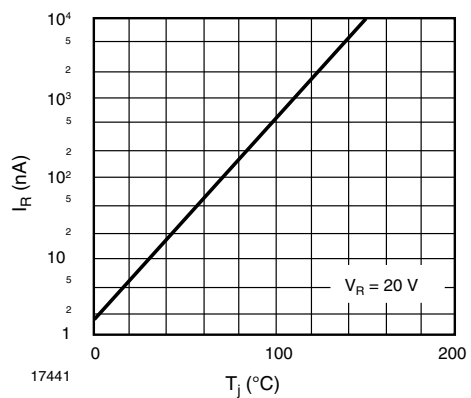


Fig. 5 - Leakage Current vs. Junction Temperature

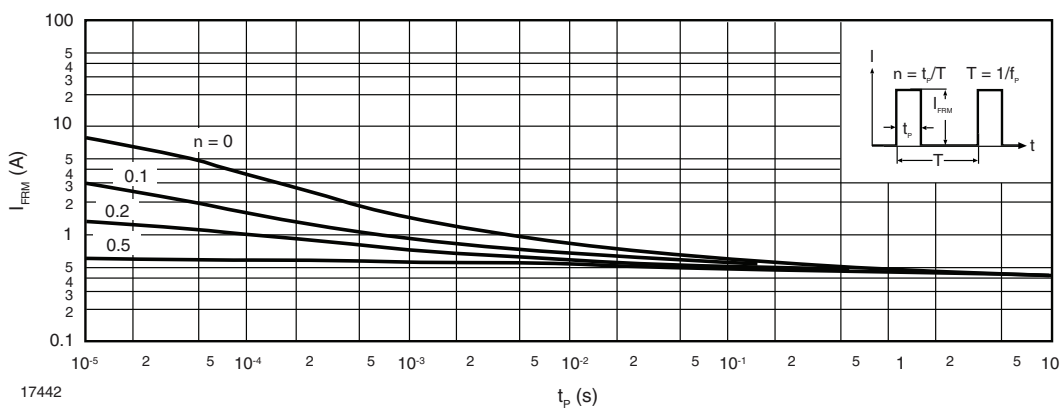
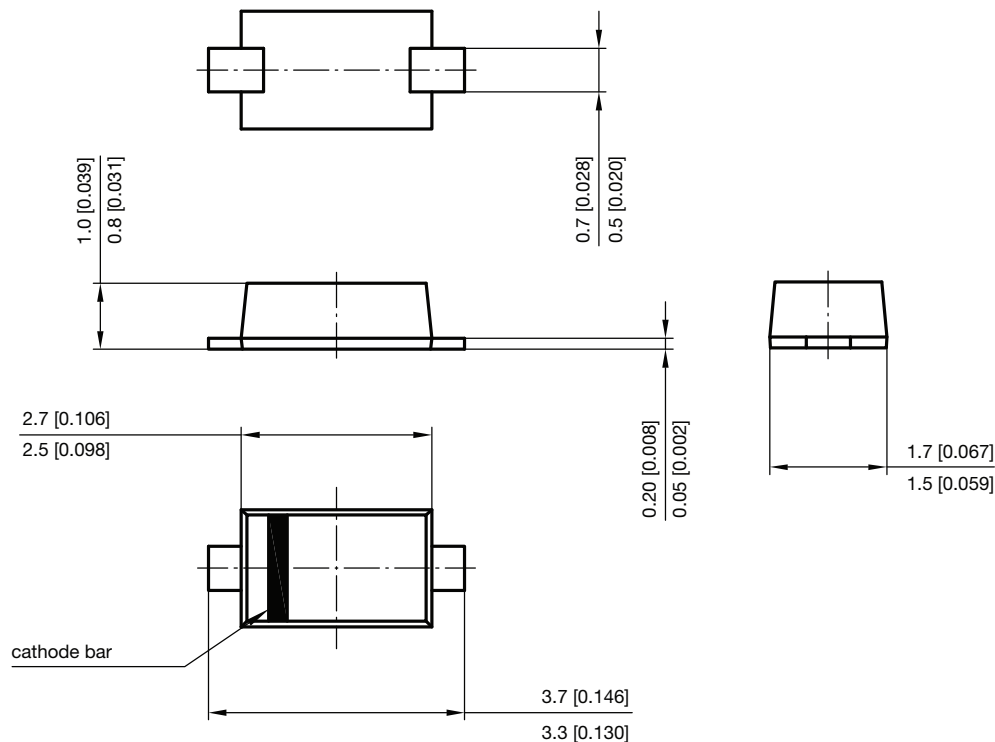


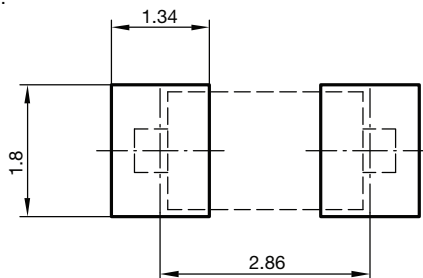
Fig. 6 - Admissible Repetitive Peak Forward Current vs. Pulse Duration



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



foot print recommendation:



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