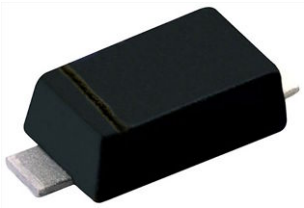
Small Signal Fast Switching Diode



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

Pb-free

e3

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 °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 °C, unless otherwise specified)						
PARAMETER	**TEST CONDITION**	**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Forward voltage	I_F = 10 mA	V_F			1000	mV
	I_F = 100 mA	V_F			1200	mV
Leakage current	V_R = 20 V	I_R			25	nA
	V_R = 75 V	I_R			5	µA
	V_R = 100 V	I_R			100	µA
	V_R = 20 V, T_J = 150 °C	I_R			50	µA
Diode capacitance	V_F = V_R = 0 V	C_D			4	pF
Reverse recovery time	I_F = 10 mA, I_R = 1 mA, V_R = 6 V, R_L = 100 Ω	t_{rr}			4	ns

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

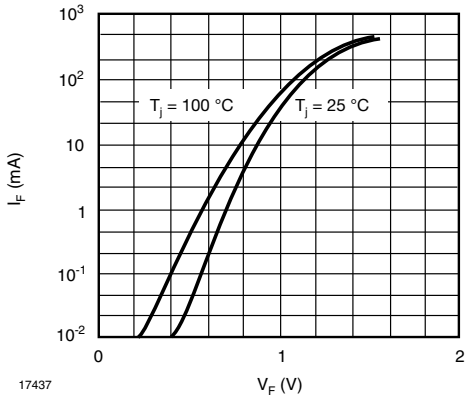


Fig. 1 - Forward Characteristics

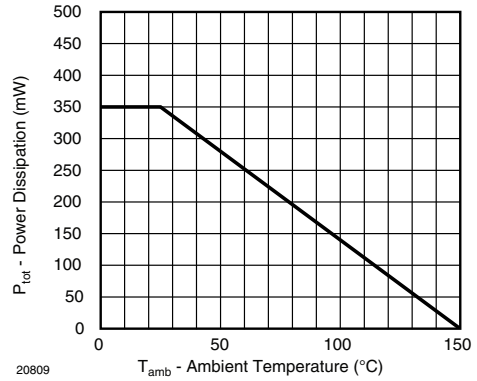


Fig. 3 - Admissible Power Dissipation vs. Ambient Temperature

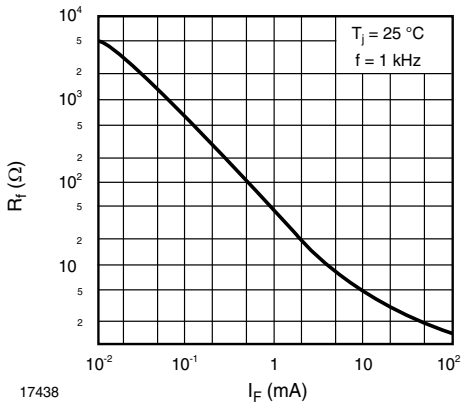


Fig. 2 - Dynamic Forward Resistance vs. Forward Current

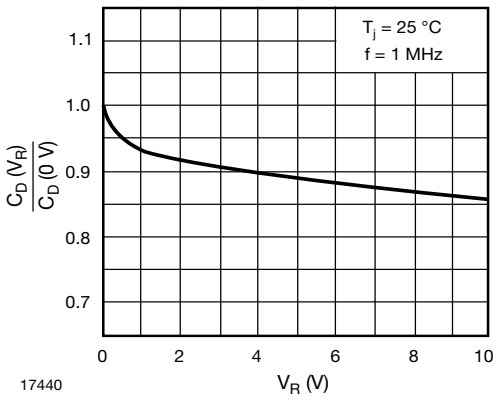


Fig. 4 - Relative Capacitance vs. Reverse Voltage

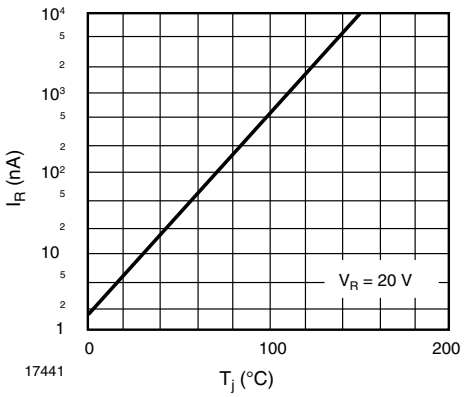


Fig. 5 - Leakage Current vs. Junction Temperature

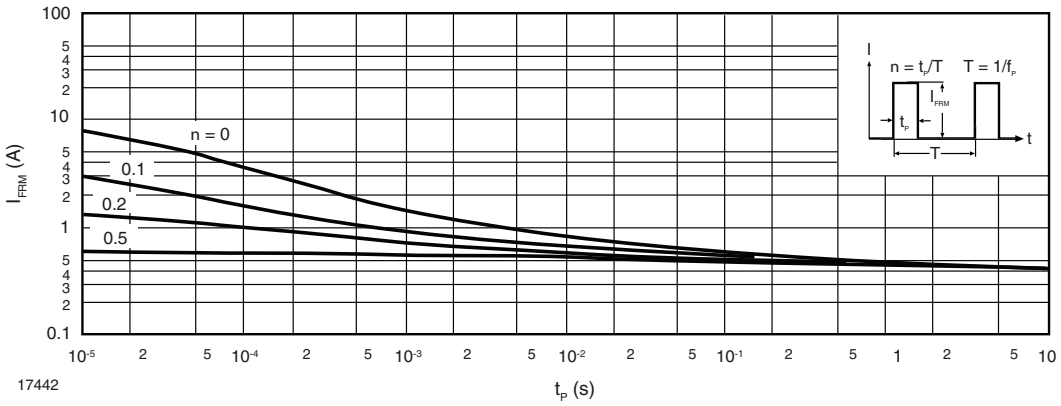
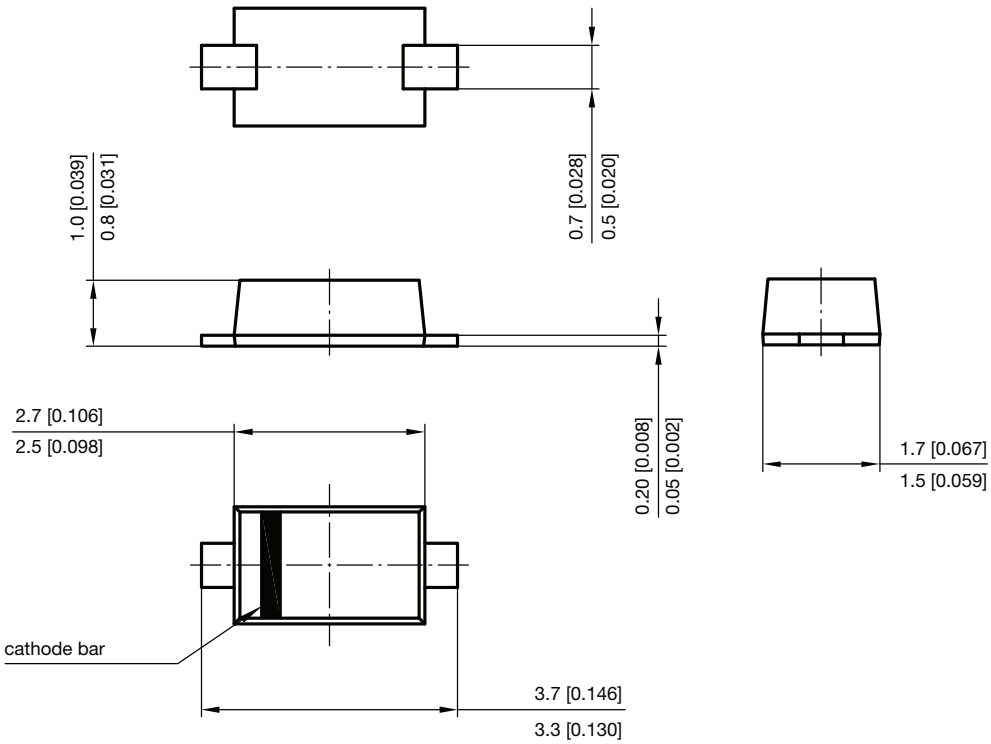
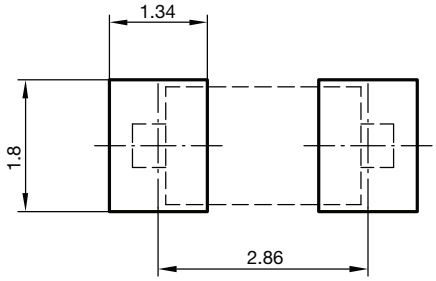


Fig. 6 - Admissible Repetitive Peak Forward Current vs. Pulse Duration

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



foot print recommendation:



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