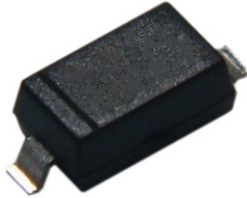


400mW High Speed SMD Switching Diode



RoHS
Compliant



Features:

- Fast switching device ($T_{rr} < 4.0\text{ns}$)
- Surface device type mounting
- Moisture sensitivity level 1
- Matte Tin(Sn) lead finish with Nickel (Ni) under plate
- Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

SOD-123F



Mechanical Data:

Case	: Flat lead SOD-123F small outline plastic package
Terminal	: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
High temperature soldering guaranteed	: $260^{\circ}\text{C}/10\text{s}$
Polarity	: Indicated by cathode band
Weight	: $8.85 \pm 0.5\text{mg}$
Marking Code	: D1

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Parameter	Symbol	Value	Units
Power Dissipation	P_D	100	mW
Non-Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Repetitive Peak Reverse Voltage	V_{RRM}	300	V
Repetitive Peak Forward Current	I_{FRM}	400	mA
Mean Forward Current	I_o	150	mA
Thermal Resistance (Junction to Ambient) (Note 1)	$R_{\theta JA}$	450	$^{\circ}\text{C}/\text{W}$
Junction and Storage Temperature Range	T_J, T_{STG}	-65 to +150	$^{\circ}\text{C}$

Electrical Characteristics

Parameter	Symbol	Min	Max	Units
Reverse Breakdown Voltage $I_R = 100\mu\text{A}$ $I_R = 5\mu\text{A}$	$V_{(BR)}$	100 75	- -	V
Forward Voltage 1N4148W $I_F = 10\text{mA}$	V_F	-	1	V
Reverse Leakage Current $V_R = 20\text{V}$ $V_R = 75\text{V}$	I_R	- -	5 25	nA μA
Junction Capacitance $V_R = 0, f = 1\text{MHz}$	C_J	-	4	pF
Reverse Recovery Time (Note 2)	T_{rr}	-	4	ns

Note 1 : Test Condition : 8.3ms Single half Sine-Wave Superimposed on Rated Load (JEDEC Method)

Note 2 : Reverse Recovery Test Conditions : $I_F = 10\text{mA}$, $I_R = 60\text{mA}$, $R_L = 100\Omega$, $I_{RR} = 1\text{mA}$

400mW High Speed SMD Switching Diode



Ratings And Characteristics Curves

Fig.1 Typical Forward Characteristics

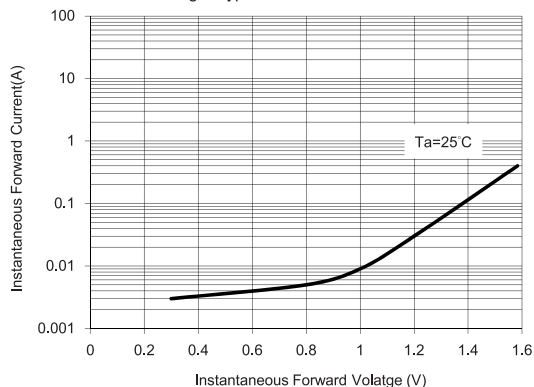


Fig. 2 Reverse Current vs Reverse Voltage

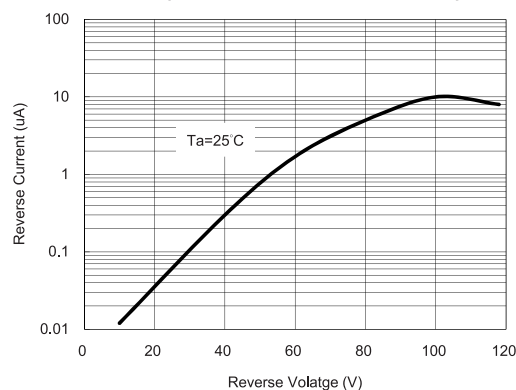


Fig. 3 Admissible Power Dissipation

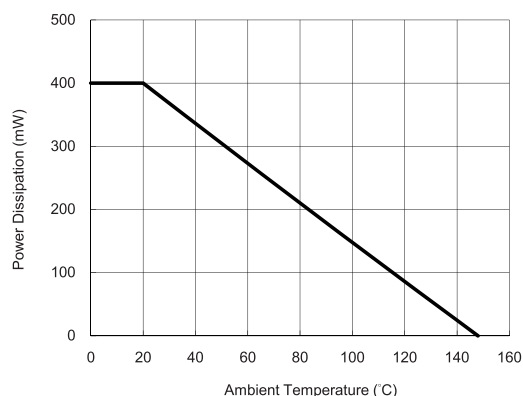


Fig. 4 Typical Junction Capacitance

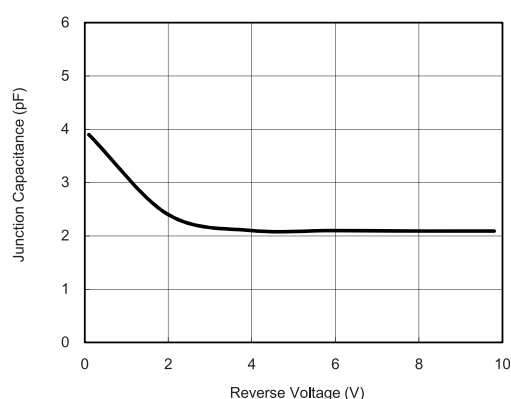
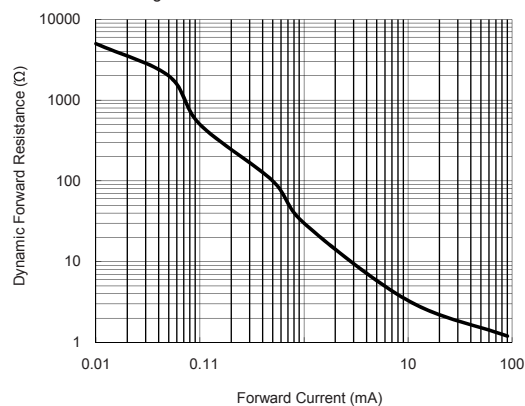


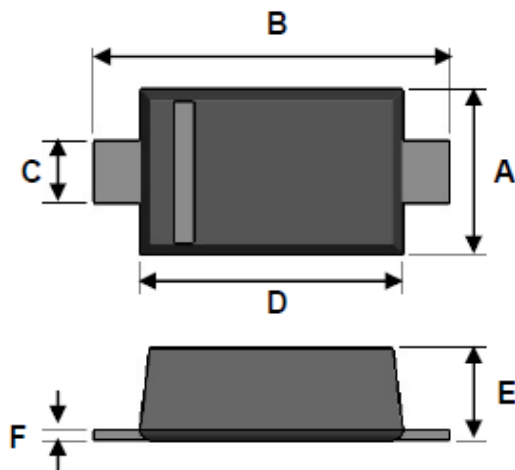
Fig. 5 Forward Resistance vs. Forward Current



400mW High Speed SMD Switching Diode

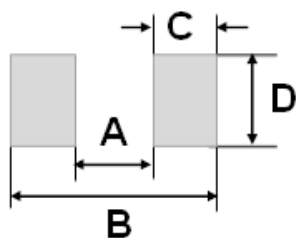


Dimensions



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	1.5	1.7	0.059	0.067
B	3.3	3.9	0.13	0.154
C	0.5	0.7	0.02	0.028
D	2.5	2.7	0.098	0.106
E	0.8	1.15	0.031	0.045
F	0.05	0.2	0.002	0.008

Suggested PAD Layout



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
A	2.36	0.093
B	4.19	0.165
C	0.91	0.036
D	1.22	0.048

Part Number Table

Description	Part Number
Diode, High Speed, SOD-123F	1N4148W

Important Notice : This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell plc 2012.