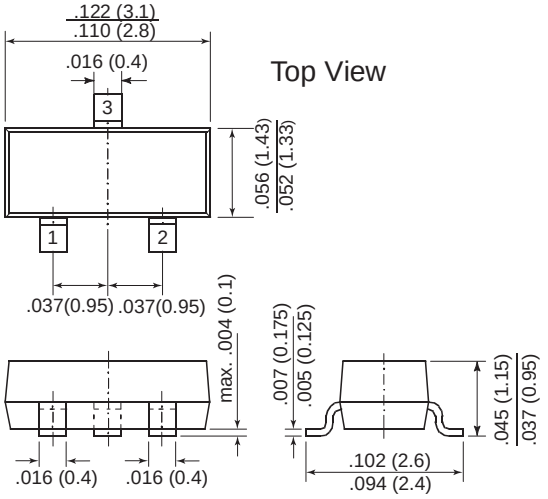
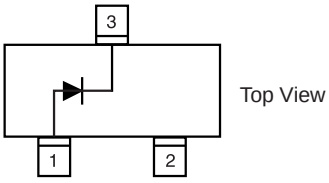
Small-Signal Diode

TO-236AB (SOT-23)

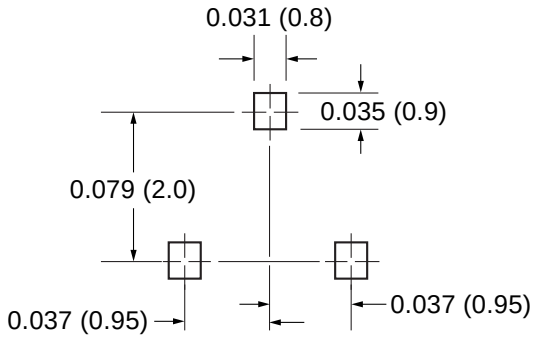


Dimensions in inches and (millimeters)

Marking
A2



Mounting Pad Layout



Features

- Silicon Epitaxial Planar Diodes
- Fast switching diode in case SOT-23, especially suited for automatic insertion.
- This diodes are also available in other case styles including: the DO-35 case with the type designation 1N4148, the Mini-MELF case with the type designation LL4148, and the SOD-123 case with the type designation 1N4148W.

Mechanical Data

Case: SOT-23 Plastic Package

Weight: approx. 0.008g

Packaging Codes/Options:
E8/10K per 13” reel (8mm tape), 30K/box
E9/3K per 7” reel (8mm tape), 30K/box

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	75	V
Peak Reverse Voltage	V_{RM}	100	V
Rectified Current (Average) Half Wave Rectification with Resist. Load at T_{amb} = 25°C and ≥ f ≥ 50Hz	$I_{F(AV)}$	150(1)	mA
Surge Forward Current at t < 1s and T_j = 25°C	I_{FSM}	500	mA
Power Dissipation up to T_{amb} = 25°C	P_{tot}	350(1)	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	450(1)	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	–65 to +150	°C

Note:
(1) Device on fiberglass substrate, see layout on next page.

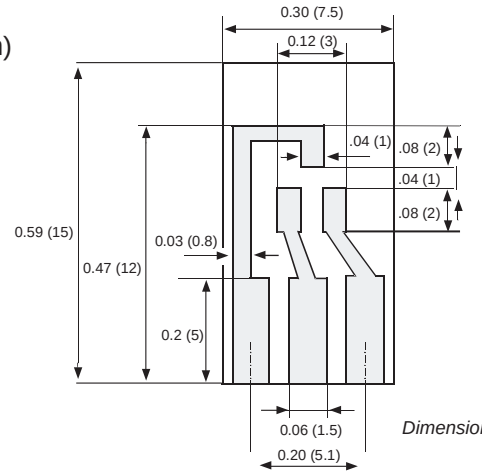
Electrical Characteristics (T_J = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Forward Voltage	V_F	I_F = 10 mA	—	—	1.0	V
Leakage Current	I_R	V_R = 70 V V_R = 70 V, T_j = 150 °C V_R = 25 V, T_j = 150 °C	— — —	— — —	2.5 50 30	µA µA µA
Capacitance	C_{tot}	V_F = V_R = 0	—	—	4	pF
Reverse Recovery Time (see figures)	t_{rr}	I_F = 10 mA, I_R = 10 mA V_R = 6 V, R_L = 100 Ω	—	—	4	ns

(1)Device on fiberglass substrate, see layout (SOT-23).

Layout for R_{thJA} test

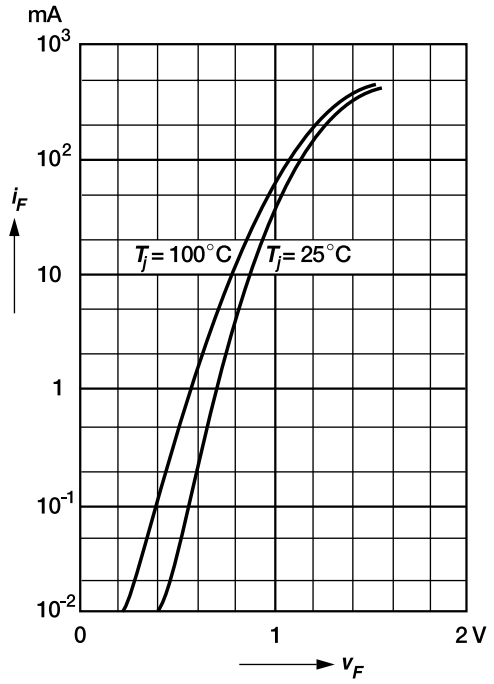
Thickness: Fiberglass 0.059 in. (1.5 mm)
Copper leads 0.012 in. (0.3 mm)



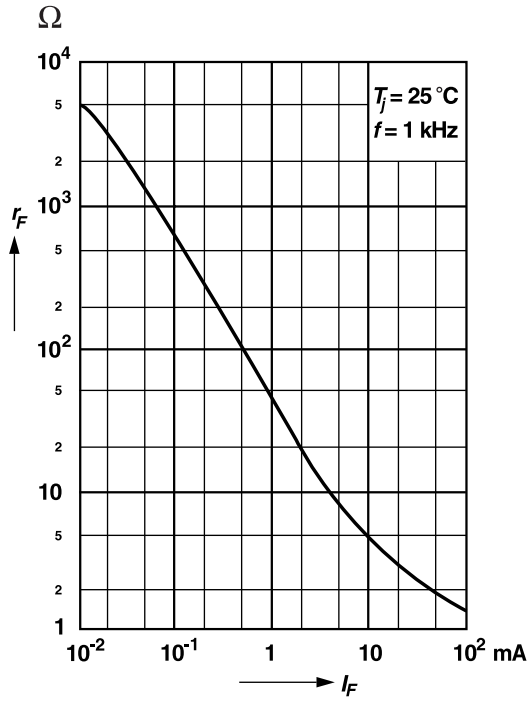
Dimensions in inches (millimeters)

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

Forward characteristics

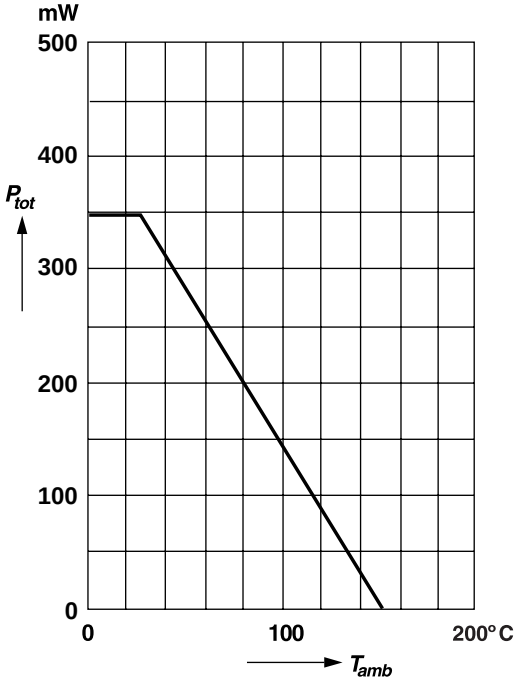


Dynamic forward resistance versus forward current

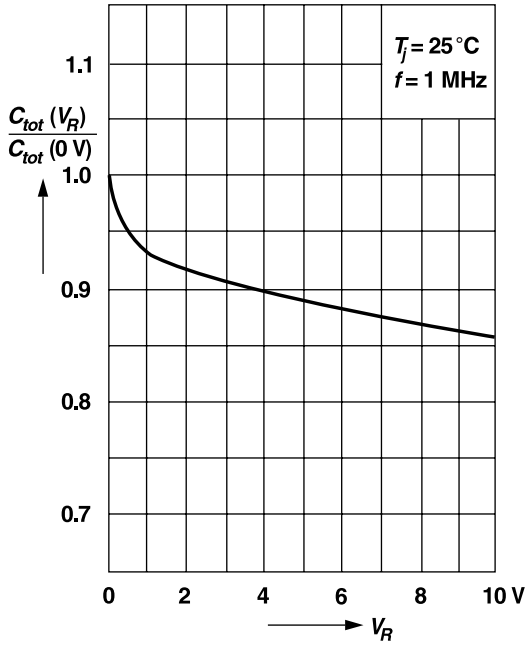


Admissible power dissipation versus ambient temperature

For conditions, see footnote in table "Absolute Maximum Ratings"

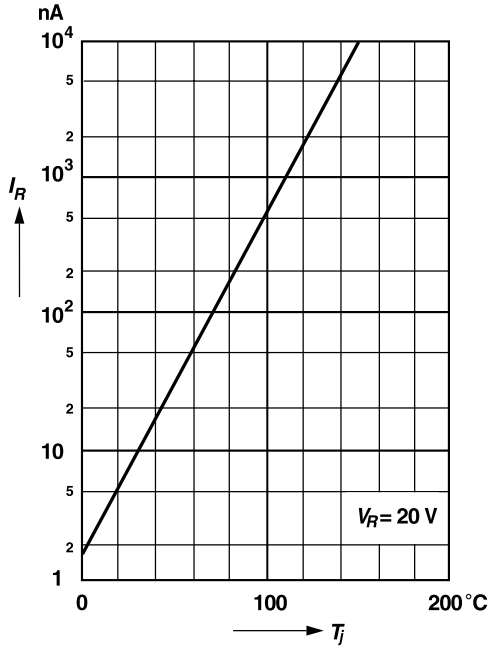


Relative capacitance versus reverse voltage



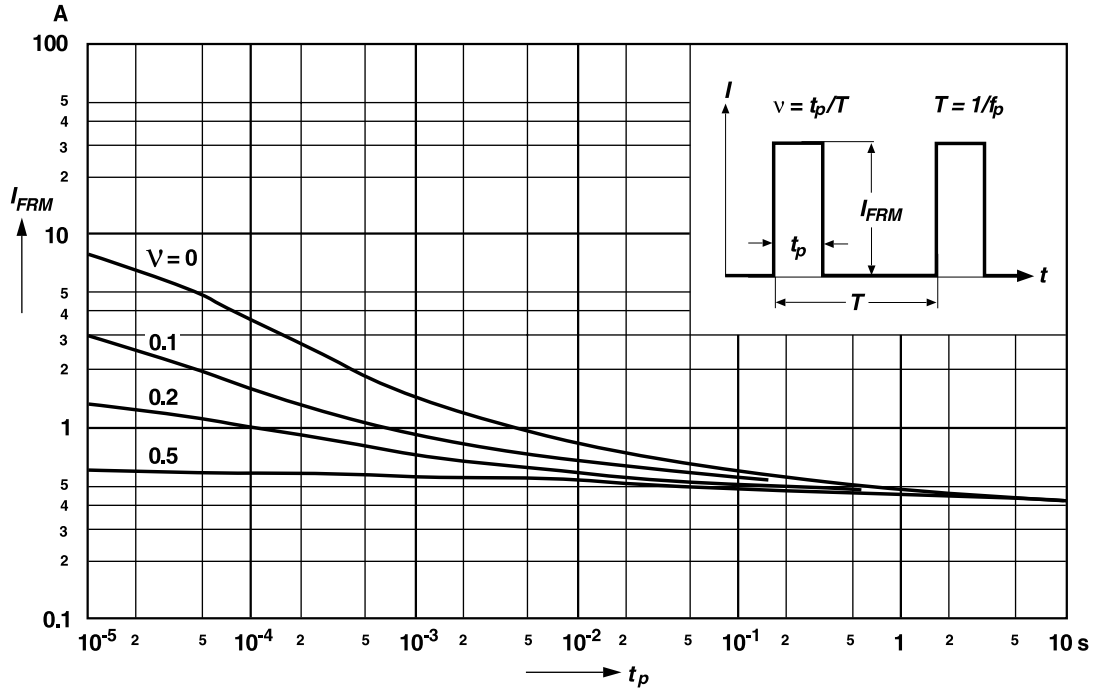
Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Leakage current versus junction temperature



Admissible repetitive peak forward current versus pulse duration

For conditions, see footnote in table "Absolute Maximum Ratings"



littlediode
COMPONENTS FOR ALL

Littlediode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.