



New Product Announcement

SOD123F Switching Diodes

SOD123F Switching Diodes offer Improved Thermal Performance for Power Electronics

Diodes Incorporated announces the introduction of a new switching diode series housed in the compact SOD123F package.

This state-of-the-art flat-lead package improves the thermal performance which minimizes device breakdown for portable products.

The initial releases of the series are:

- BAV116HWF: ultra-low leakage, and low total capacitance diode.
- BAV21HWF: high-voltage, high average rectified output current and very-fast reverse recovery time diode.

Both are ideally suitable for a wide range of power applications that require superb system performance.

Delivering superior performance, these devices are ideally suited for today's high-speed fully-automated assembly processes.

The SOD123F package is fully green and RoHS compliant. (See diodes.com for further details).



The Diodes' Advantage

■ Superior Thermal Transfer Characteristics

The flat lead design of the SOD123F package (3.5mm x 1.8mm typical) improves the thermal performance of the adopting portable products.

■ Ultra-Low Leakage Current; Low Total Capacitance

BAV116HWF has an ultra-low leakage current ($I_{R_MAX}=5nA$ @ $V_R=75V$) which extends battery life by reducing the power consumption of the diode during reverse-mode operation, and low total capacitance ($C_{T_TYP}=2pF$).

■ High Reverse Breakdown Voltage; High Average Rectified Current

BAV21HWF has a high reverse breakdown voltage ($V_{BR_MIN}=250V$), which is ideal for high voltage applications and a high average rectified output current ($I_{O_MAX}=200mA$).

■ Very-Fast Reverse Recovery Time for High-Power Efficiency

The very-fast switching speed of BAV21HWF ($t_{r_MAX}=50ns$) reduces switching loss and increases power efficiency. It is ideally suited for applications like SMPS (switched-mode power supplies), PFC (power factor correction) and other fast-switching applications.

Circuit Functions

- Very-fast Switching (BAV21HWF)
- Very-fast Reverse Recovery Time (BAV21HWF)
- Ultra-low Leakage Current (BAV116HWF)
- High Reverse Breakdown Voltage (BAV21HWF)

Target Markets

- Portable Electronics
- Mobile Communication
- Consumer Products



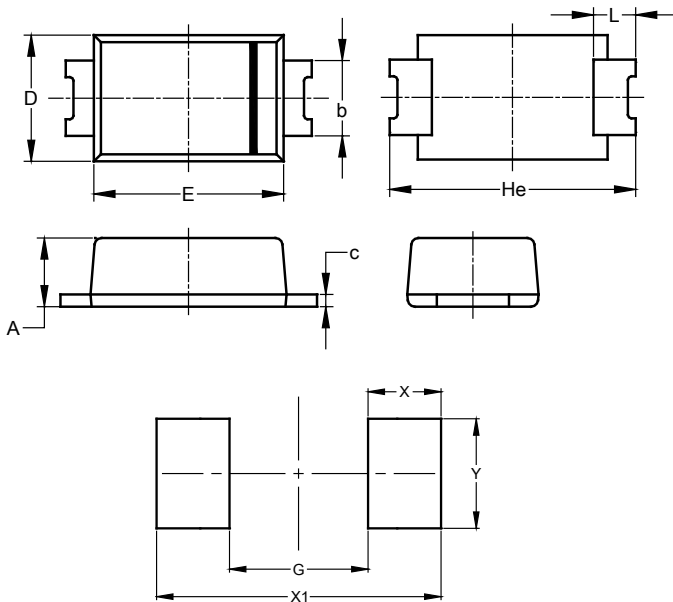
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Product Portfolio

Part Number	Recovery Switching Speed	Max Average Rectified Current I_o (A)	Peak Repetitive Reverse Voltage V_{RRM} (V)	Maximum Forward Voltage Drop V_F (V)	Maximum Reverse Current I_R (nA)	Maximum Peak Forward Surge Current I_{FSM} (A)	Maximum Reverse Recovery Time t_{rr} (ns)	Typical Total Capacitance C_T (pF)	Maximum Power Dissipation P_d (W)
BAV21HWF	Very fast	0.2	250	1.25	100	9	50	5	0.375
BAV116HWF	Standard	0.15	85	1.25	5.0	4	3,000	2	0.375

Package Outline Dimensions & Suggested Pad Layout



SOD123F (Type B)			
Dim	Min	Max	Typ
A	0.81	1.15	--
b	0.80	1.35	--
c	0.05	0.30	--
D	1.70	1.90	1.80
E	2.60	2.80	2.70
He	3.30	3.70	3.50
L	0.35	0.85	--
All Dimensions in mm			

Dimensions	Value (in mm)
G	1.90
X	1.00
X1	3.90
Y	1.50

Cross Reference

Diodes Device	Competitors	Cross Reference
BAV21HWF	NXP, Vishay	BAS21H, BAV21W-G
BAV116HWF	NXP	BAS116H