Small Signal Switching Diodes, High Voltage

Features

- Silicon Epitaxial Planar Diodes
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

Pb

e2

RoHS COMPLIANT

HALOGEN FREE

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Applications

- General purposes

Mechanical Data

Case: DO-35
Weight: approx. 125 mg
Cathode Band Color: black

Packaging Codes/Options:
TR/10 k per 13" reel (52 mm tape), 50 k/box
TAP/10 k per Ammopack (52 mm tape), 50 k/box

Parts Table

Part	Type differentiation	Ordering code	Type Marking	Remarks
BAV17	V_{RRM} = 25 V	BAV17-TR or BAV17-TAP	BAV17	Tape and Reel/Ammopack
BAV18	V_{RRM} = 60 V	BAV18-TR or BAV18-TAP	BAV18	Tape and Reel/Ammopack
BAV19	V_{RRM} = 120 V	BAV19-TR or BAV19-TAP	BAV19	Tape and Reel/Ammopack
BAV20	V_{RRM} = 200 V	BAV20-TR or BAV20-TAP	BAV20	Tape and Reel/Ammopack
BAV21	V_{RRM} = 250 V	BAV21-TR or BAV21-TAP	BAV21	Tape and Reel/Ammopack

Absolute Maximum Ratings

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Part	Symbol	Value	Unit
Peak reverse voltage		BAV17	V_{RRM}	25	V
		BAV18	V_{RRM}	60	V
		BAV19	V_{RRM}	120	V
		BAV20	V_{RRM}	200	V
		BAV21	V_{RRM}	250	V
Reverse voltage		BAV17	V_R	20	V
		BAV18	V_R	50	V
		BAV19	V_R	100	V
		BAV20	V_R	150	V
		BAV21	V_R	200	V
Forward continuous current			I_F	250	mA
Peak forward surge current	t_p = 1 s, T_j = 25 °C		I_{FSM}	1	A
Forward peak current	f = 50 Hz		I_{FRM}	625	mA
Power dissipation			P_{tot}	500	mW

For technical questions within your region, please contact one of the following:
DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

Thermal Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Junction to ambient air	l = 4 mm, T_L = constant	R_{thJA}	300	K/W
Junction temperature		T_j	175	°C
Storage temperature range		T_{stg}	- 65 to + 175	°C

Electrical Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Part	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	I_F = 100 mA		V_F			1000	mV
Reverse current	V_R = 20 V	BAV17	I_R			100	nA
	V_R = 50 V	BAV18	I_R			100	nA
	V_R = 100 V	BAV19	I_R			100	nA
	V_R = 150 V	BAV20	I_R			100	nA
	V_R = 200 V	BAV21	I_R			100	nA
	T_j = 100 °C, V_R = 20 V	BAV17	I_R			15	µA
	T_j = 100 °C, V_R = 50 V	BAV18	I_R			15	µA
	T_j = 100 °C, V_R = 100V	BAV19	I_R			15	µA
	T_j = 100 °C, V_R = 150 V	BAV20	I_R			15	µA
	T_j = 100 °C, V_R = 200 V	BAV21	I_R			15	µA
Breakdown voltage	I_R = 100 µA, t_p/T = 0.01, t_p = 0.3 ms	BAV17	$V_{(BR)}$	25			V
		BAV18	$V_{(BR)}$	60			V
		BAV19	$V_{(BR)}$	120			V
		BAV20	$V_{(BR)}$	200			V
		BAV21	$V_{(BR)}$	250			V
Diode capacitance	V_R = 0, f = 1 MHz		C_D		1.5		pF
Differential forward resistance	I_F = 10 mA		r_f		5		Ω
Reverse recovery time	I_F = I_R = 30 mA, i_R = 3 mA, R_L = 100 Ω		t_{rr}			50	ns

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DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

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Typical Characteristics

T_{amb} = 25 °C unless otherwise specified

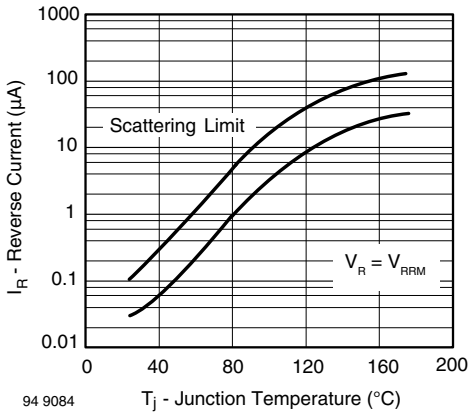


Figure 1. Reverse Current vs. Junction Temperature

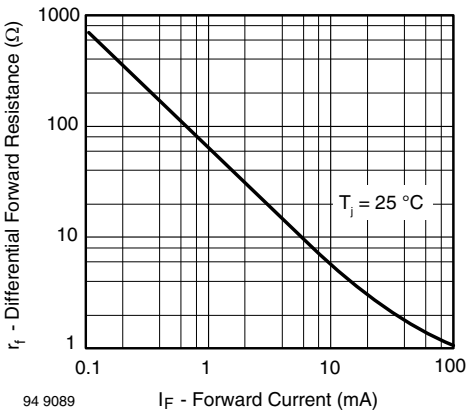


Figure 3. Differential Forward Resistance vs. Forward Current

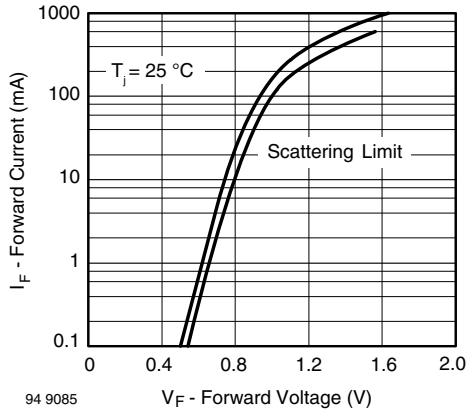
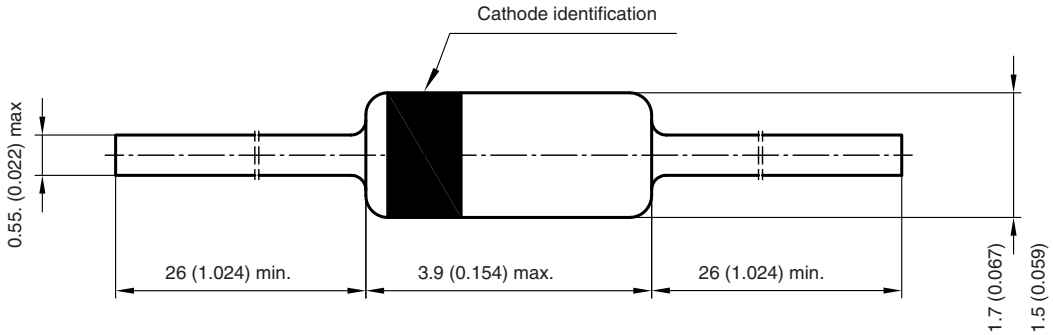


Figure 2. Forward Current vs. Forward Voltage

Package Dimensions in millimeters (inches): DO-35



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