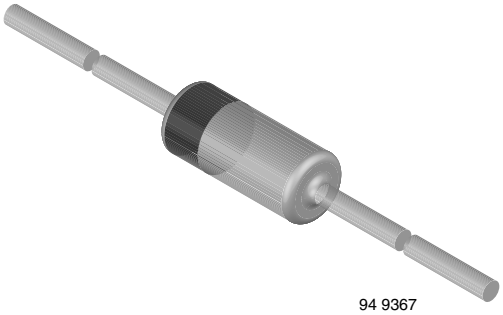
Small Signal Switching Diode, High Voltage

Features

- Silicon Epitaxial Planar Diode
- 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

RoHS COMPLIANT
HALOGEN FREE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Applications

- General purpose

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	Ordering code	Type Marking	Remarks
BAY80	BAY80-TR or BAY80-TAP	BAY80	Tape and Reel/Ammopack

Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Repetitive peak reverse voltage		V_{RRM}	150	V
Reverse voltage		V_R	120	V
Peak forward surge current	t_p = 1 µs	I_{FSM}	1	A
Repetitive peak forward current		I_{FRM}	625	mA
Forward continuous current		I_F	250	mA
Average forward current		I_{FAV}	200	mA

Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air	l = 4 mm, T_L = constant	R_{thJA}	350	K/W
Junction to ambient air		T_j	+ 175	°C
Storage temperature range		T_{stg}	- 65 to + 175	°C

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

Electrical Characteristics

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

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	I_F = 0.1 mA	V_F	400		520	mV
	I_F = 10 mA	V_F	630		780	mV
	I_F = 50 mA	V_F	730		920	mV
	I_F = 100 mA	V_F	780		1000	mV
	I_F = 150 mA	V_F			1070	mV
Reverse current	V_R = 120 V	I_R			100	nA
	V_R = 120 V, T_j = 150 °C	I_R			100	µA
Breakdown voltage	I_R = 100 µA, t_p/T = 0.01, t_p = 0.3 ms	$V_{(BR)}$	150			V
Diode capacitance	V_R = 0, f = 1 MHz	C_D		1.5	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

Typical Characteristics

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

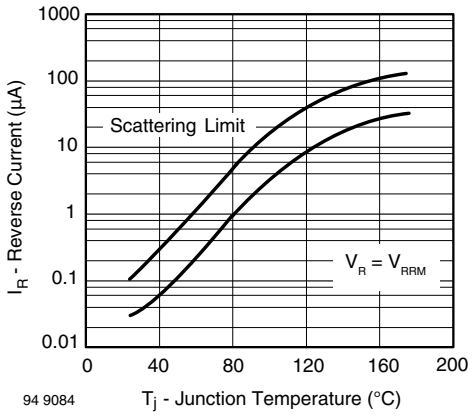

Figure 1. Reverse Current vs. Junction Temperature

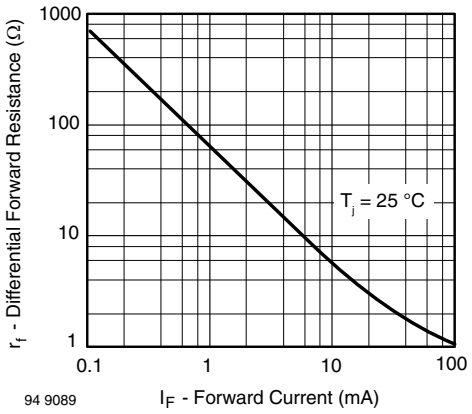

Figure 3. Differential Forward Resistance vs. Forward Current

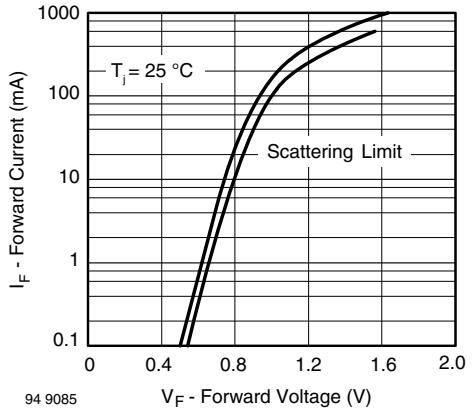

Figure 2. Forward Current vs. Forward Voltage

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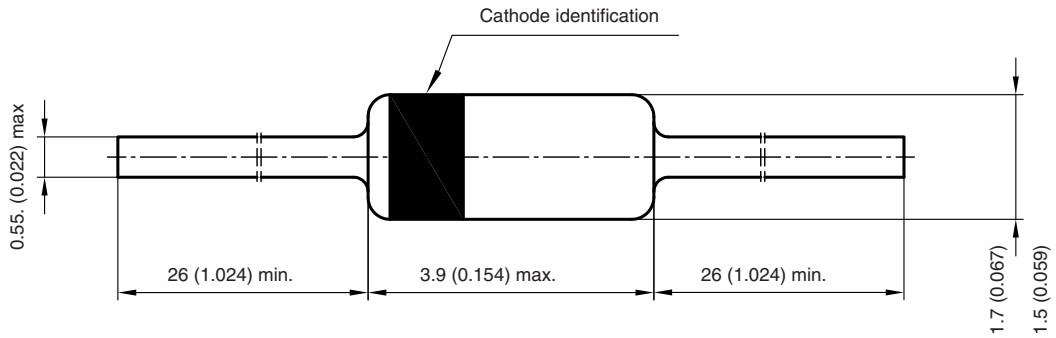
Package Dimensions in millimeters (inches): DO-35



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