

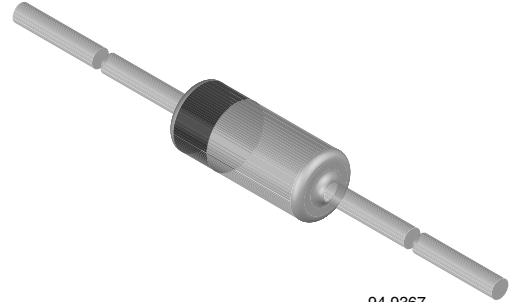
Small Signal Switching Diode, High Voltage

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



94 9367

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

$T_{amb} = 25\text{ }^{\circ}\text{C}$, 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	$t_p = 1\text{ }\mu\text{s}$	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

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

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

Electrical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	$I_F = 0.1\text{ mA}$	V_F	400		520	mV
	$I_F = 10\text{ mA}$	V_F	630		780	mV
	$I_F = 50\text{ mA}$	V_F	730		920	mV
	$I_F = 100\text{ mA}$	V_F	780		1000	mV
	$I_F = 150\text{ mA}$	V_F			1070	mV
Reverse current	$V_R = 120\text{ V}$	I_R			100	nA
	$V_R = 120\text{ V}, T_j = 150\text{ }^{\circ}\text{C}$	I_R			100	μA
Breakdown voltage	$I_R = 100\text{ }\mu\text{A}, t_p/T = 0.01,$ $t_p = 0.3\text{ ms}$	$V_{(BR)}$	150			V
Diode capacitance	$V_R = 0, f = 1\text{ MHz}$	C_D		1.5	5	pF
Differential forward resistance	$I_F = 10\text{ mA}$	r_f		5		Ω
Reverse recovery time	$I_F = I_R = 30\text{ mA}, i_R = 3\text{ mA},$ $R_L = 100\text{ }\Omega$	t_{rr}			50	ns

Typical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

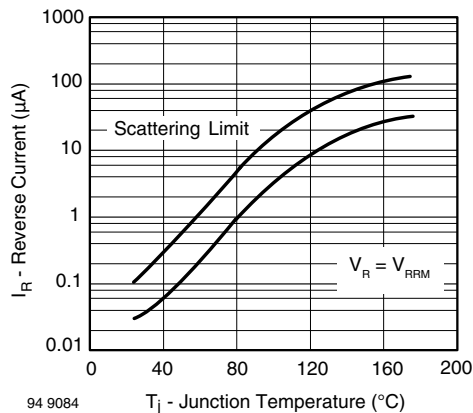


Figure 1. Reverse Current vs. Junction Temperature

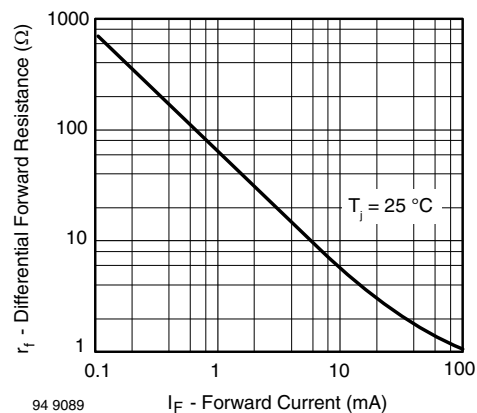


Figure 3. Differential Forward Resistance vs. Forward Current

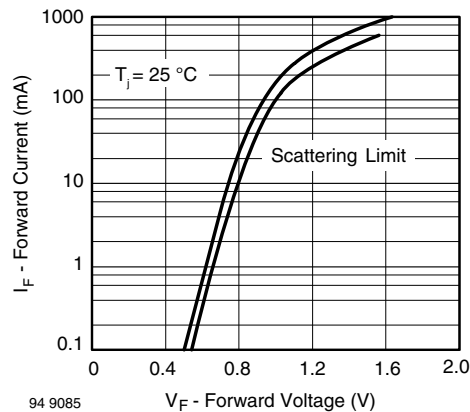
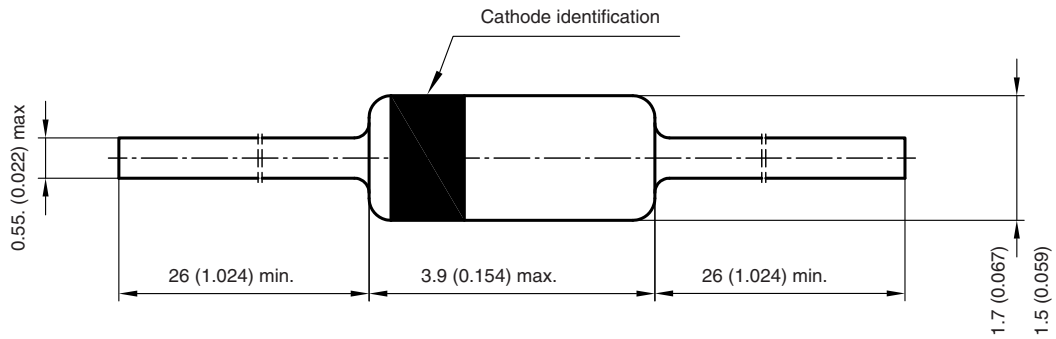


Figure 2. Forward Current vs. Forward Voltage

Package Dimensions in millimeters (inches): **DO-35**



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