

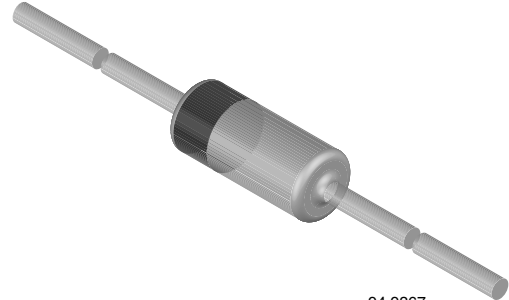
## Small Signal Switching Diodes

### Features

- Silicon Planar Diodes
- Very low reverse current
- 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

- Protection circuits, time delay circuits, peak follower circuits, logarithmic amplifiers

### 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
BAS33	$V_{RRM} = 40\text{ V}$	BAS33-TAP or BAS33-TR	BAS33	Ammopack/Tape and Reel
BAS34	$V_{RRM} = 70\text{ V}$	BAS34-TAP or BAS34-TR	BAS34	Ammopack/Tape and Reel

### Absolute Maximum Ratings

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

Parameter	Test condition	Part	Symbol	Value	Unit
Reverse voltage		BAS33	$V_R$	30	V
		BAS34	$V_R$	60	V
Peak forward surge current	$t_p = 1\text{ }\mu\text{s}$		$I_{FSM}$	2	A
Forward continuous current			$I_F$	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 temperature		$T_j$	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	Part	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	$I_F = 100\text{ mA}$		$V_F$			1000	mV
Reverse current	$E \leq 300\text{ lx}$ , $V_R$		$I_R$		1	3	nA
	$E \leq 300\text{ lx}$ , $V_R$ , $T_j = 125\text{ }^{\circ}\text{C}$		$I_R$			0.5	$\mu\text{A}$
	$E \leq 300\text{ lx}$ , $V_R = 15\text{ V}$	BAS33	$I_R$		0.5	1	nA
	$E \leq 300\text{ lx}$ , $V_R = 30\text{ V}$	BAS34	$I_R$		0.5	1	nA
Breakdown voltage	$I_R = 5\text{ }\mu\text{A}$ , $t_p/T = 0.01$ , $t_p = 0.3\text{ ms}$	BAS33	$V_{(BR)}$	40			V
		BAS34	$V_{(BR)}$	70			V
Diode capacitance	$V_R = 0$ , $f = 1\text{ MHz}$		$C_D$			3	pF

### Typical Characteristics

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

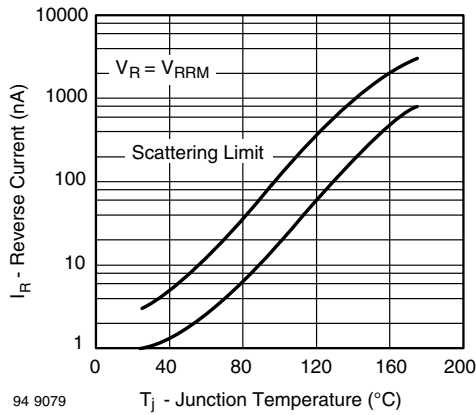


Figure 1. Reverse Current vs. Junction Temperature

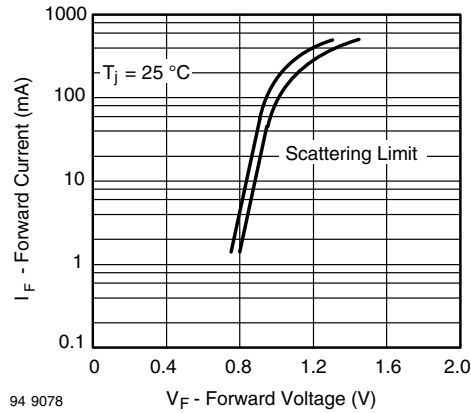
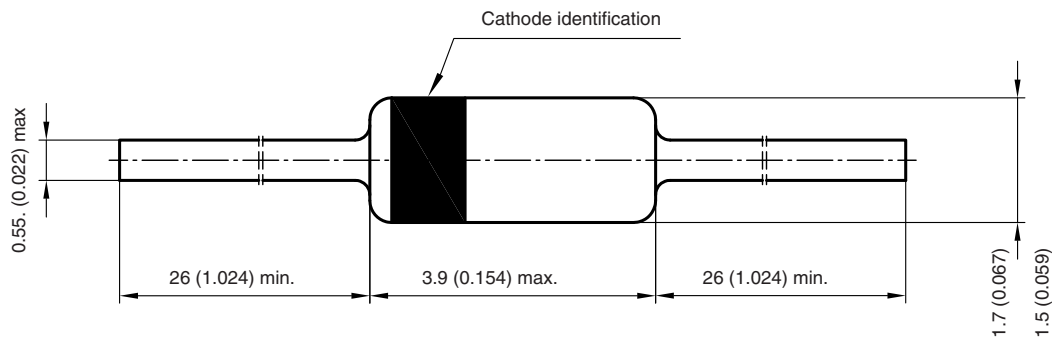


Figure 2. Forward Current vs. Forward Voltage

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



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