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 V	BAS33-TAP or BAS33-TR	BAS33	Ammopack/Tape and Reel
BAS34	V_{RRM} = 70 V	BAS34-TAP or BAS34-TR	BAS34	Ammopack/Tape and Reel

Absolute Maximum Ratings

T_{amb} = 25 °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 µs		I_{FSM}	2	A
Forward continuous current			I_F	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 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	E ≤ 300 lx, V_R		I_R		1	3	nA
	E ≤ 300 lx, V_R, T_j = 125 °C		I_R			0.5	µA
	E ≤ 300 lx, V_R = 15V	BAS33	I_R		0.5	1	nA
	E ≤ 300 lx, V_R = 30 V	BAS34	I_R		0.5	1	nA
Breakdown voltage	I_R = 5 µA, t_p/T = 0.01, t_p = 0.3 ms	BAS33	$V_{(BR)}$	40			V
		BAS34	$V_{(BR)}$	70			V
Diode capacitance	V_R = 0, f = 1 MHz		C_D			3	pF

Typical Characteristics

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

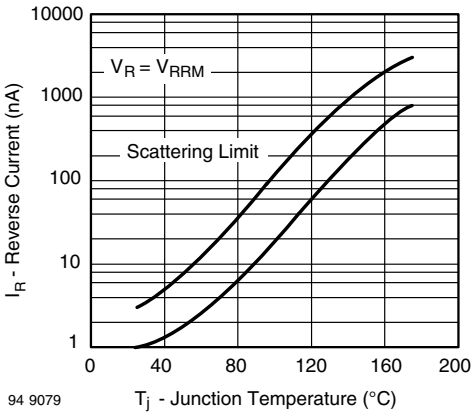


Figure 1. Reverse Current vs. Junction Temperature

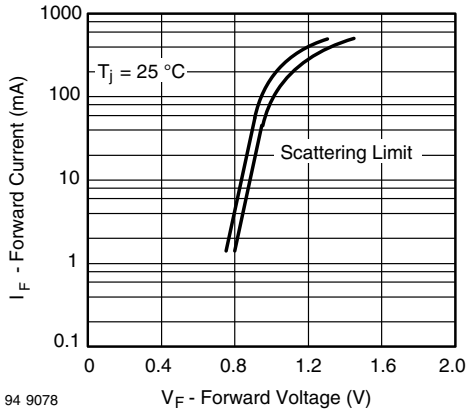
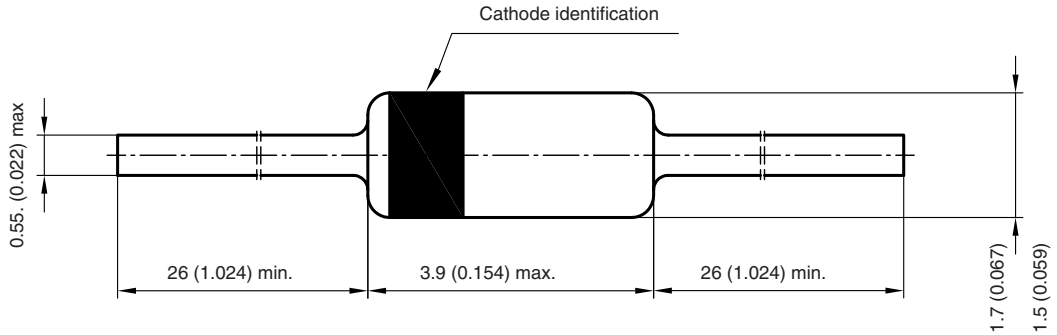


Figure 2. Forward Current vs. Forward Voltage

Package Dimensions in millimeters (inches): DO-35



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94 9366

For technical questions within your region, please contact one of the following:
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