

Small Signal Switching Diodes



FEATURES

- Silicon planar diodes
- Very low reverse current
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

APPLICATIONS

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

LINKS TO ADDITIONAL RESOURCES



MECHANICAL DATA

Case: DO-35 (DO-204AH)

Weight: approx. 125 mg

Cathode band color: black

Packaging codes / options:

TR/10K per 13" reel (52 mm tape), 50K/box

TAP/10K per ammpack (52 mm tape), 50K/box

PARTS TABLE

PART	TYPE DIFFERENTIATION	ORDERING CODE	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS
BAS33	$V_{RRM} = 40\text{ V}$	BAS33-TAP or BAS33-TR	BAS33	Single	Tape and reel / ammpack
BAS34	$V_{RRM} = 70\text{ V}$	BAS34-TAP or BAS34-TR	BAS34	Single	Tape and reel / ammpack

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		BAS33	V_{RRM}	40	V
		BAS34	V_{RRM}	70	V
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			1	V
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	μA
	$E \leq 300\text{ lx}$, $V_R = 15\text{ V}$	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	$V_R = 0\text{ V}$, $f = 1\text{ MHz}$		C_D			3	pF

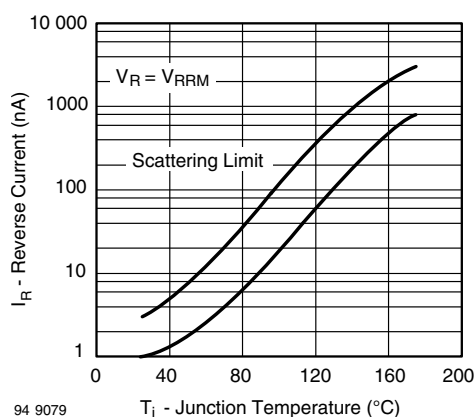
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Reverse Current vs. Junction Temperature

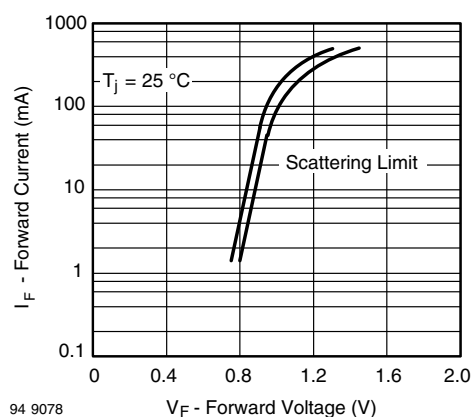
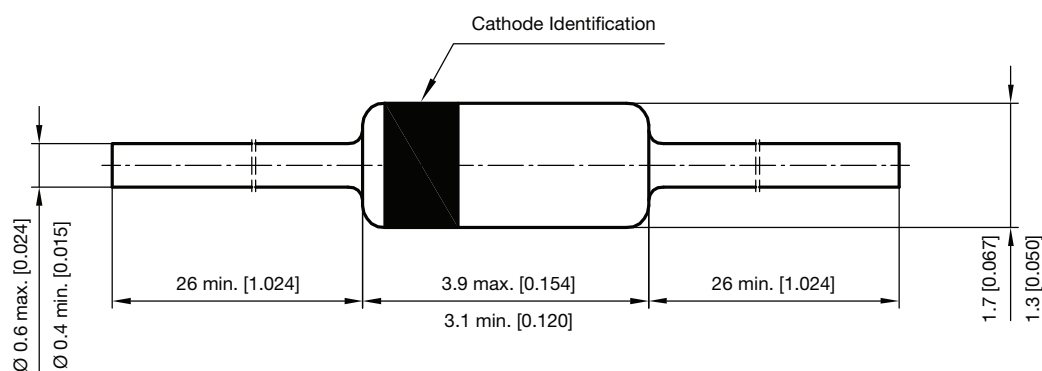


Fig. 2 - Forward Current vs. Forward Voltage

PACKAGE DIMENSIONS in millimeters (inches): **DO-35 (DO-204AH)**


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