

## Vishay Semiconductors

# **Small Signal Fast Switching Diode**



#### **FEATURES**

- Silicon epitaxial planar diode
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

# (e2)

# RoHS

#### **APPLICATIONS**

· Extreme fast switches

#### ROHS COMPLIANT HALOGEN FREE

#### **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 ammopack (52 mm tape), 50K/box

PARTS TABLE						
PART	ORDERING CODE	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS		
BAW76	BAW76-TR or BAW76-TAP	BAW76	Single	Tape and reel / ammopack		

<b>ABSOLUTE MAXIMUM RATINGS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Repetitive peak reverse voltage		$V_{RRM}$	75	V	
Reverse voltage		V <sub>R</sub>	50	V	
Peak forward surge current	t <sub>p</sub> = 1 μs	I <sub>FSM</sub>	2	Α	
Repetitive peak forward current		I <sub>FRM</sub>	450	mA	
Forward continuous current		I <sub>F</sub>	300	mA	
Average forward current	$V_R = 0$	I <sub>F(AV)</sub>	150	mA	
Dower dissipation	I = 4 mm, T <sub>L</sub> = 45 °C	P <sub>tot</sub>	440	mW	
Power dissipation	I = 4 mm, T <sub>L</sub> ≤ 25 °C	P <sub>tot</sub>	500	mW	

THERMAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT		
Thermal resistance junction to ambient air	I = 4 mm, T <sub>L</sub> = constant	R <sub>thJA</sub>	350	K/W		
Junction temperature		Tj	175	°C		
Storage temperature range		T <sub>stg</sub>	-65 to +175	°C		

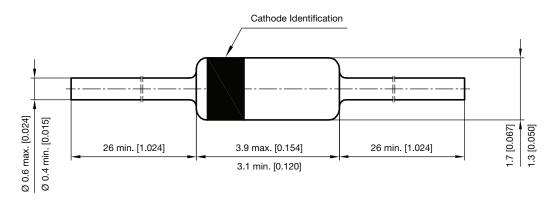


#### www.vishay.com

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<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT	
Forward voltage	I <sub>F</sub> = 100 mA	V <sub>F</sub>			1	V	
Reverse current	$V_R = 50 \text{ V}$	I <sub>R</sub>			100	nA	
neverse current	$V_R = 50 \text{ V}, T_j = 150 ^{\circ}\text{C}$	I <sub>R</sub>			100	μΑ	
Breakdown voltage	$I_R = 5 \mu A, t_p/T = 0.01,$ $t_p = 0.3 \text{ ms}$	V <sub>(BR)</sub>	75			٧	
Diode capacitance	$V_R = 0 V$ , $f = 1 MHz$ , $V_{HF} = 50 mV$	C <sub>D</sub>		1.7	2	pF	
	$I_F = I_R = 10 \text{ mA}, i_R = 1 \text{ mA}$	t <sub>rr</sub>			4	ns	
Reverse recovery time	$I_F$ = 10 mA, $V_R$ = 6 V, $i_R$ = 1 mA, $R_L$ = 100 $\Omega$	t <sub>rr</sub>			2	ns	

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



Rev. 6 - Date: 19. December 2011 Document no.: SB-V-3906.04-031(4)

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