

# Vishay Semiconductors

# **Small Signal Switching Diode**



#### **FEATURES**

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

## **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:

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

PARTS TABLE					
PART	ORDERING CODE	TYPE MARKING CIRCUIT CONFIGURATION RE		REMARKS	
BAW75	BAW75-TAP	BAW75	Single	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 <sub>RRM</sub>	35	V	
Reverse voltage		V <sub>R</sub>	25	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 <sub>R</sub> = 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	

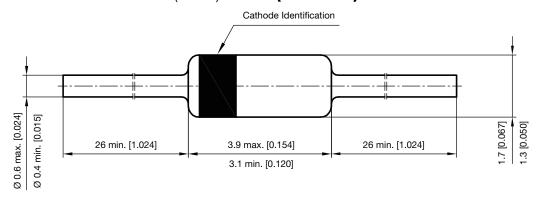


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<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I <sub>F</sub> = 30 mA	V <sub>F</sub>			1	V
Reverse current	V <sub>R</sub> = 25 V	I <sub>R</sub>			100	nA
neverse current	V <sub>R</sub> = 25 V, T <sub>j</sub> = 150 °C	I <sub>R</sub>			100	μA
Breakdown voltage	$I_R = 5 \mu A, t_p/T = 0.01,$ $t_p = 0.3 \text{ ms}$	V <sub>(BR)</sub>	35			V
Diode capacitance	$V_R = 0 \text{ V, f} = 1 \text{ MHz,}$ $V_{HF} = 50 \text{ mV}$	C <sub>D</sub>			4	pF
	$I_F = I_R = 10 \text{ mA}, i_R = 1 \text{ mA}$	t <sub>rr</sub>			4	ns
Reverse recovery time	$I_F = 10 \text{ mA}, V_R = 6 \text{ V},$ $I_R = 1 \text{ mA}, R_L = 100 \Omega$	t <sub>rr</sub>			2	ns

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



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