

# Vishay Semiconductors

# **Small Signal Switching Diode**



### **FEATURES**

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





FREE

## **APPLICATIONS**

· Extreme fast switches

### **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	NG CIRCUIT CONFIGURATION REMA		
BAW75	BAW75-TAP	BAW75	Single	Ammopack	

ABSOLUTE MAXIMUM RATINGS (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Repetitive peak reverse voltage		$V_{RRM}$	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	$V_R = 0$	I <sub>F(AV)</sub>	150	mA	
Davier dissination	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	$R_{thJA}$	350	K/W	
Junction temperature		T <sub>j</sub>	175	°C	
Storage temperature range		T <sub>stg</sub>	-65 to +175	°C	

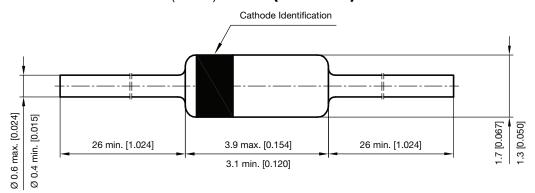


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<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I <sub>F</sub> = 30 mA	V <sub>F</sub>			1	V
Reverse current	V <sub>R</sub> = 25 V	I <sub>R</sub>			100	nA
neverse current	$V_R = 25 \text{ V}, T_j = 150 ^{\circ}\text{C}$	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>	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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