

## Small Signal Switching Diode



### FEATURES

- Silicon epitaxial planar diode
- Low forward voltage drop
- High forward current capability
- AEC-Q101 qualified
- Material categorization:  
For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
**HALOGEN**  
**FREE**

### APPLICATIONS

- High speed switch and general purpose use in computer and industrial applications

### MECHANICAL DATA

**Case:** DO-35

**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	ORDERING CODE	TYPE MARKING	INTERNAL CONSTRUCTION	REMARKS
BAW27	BAW27-TR or BAW27-TAP	BAW27	Single diode	Tape and reel/ammpack

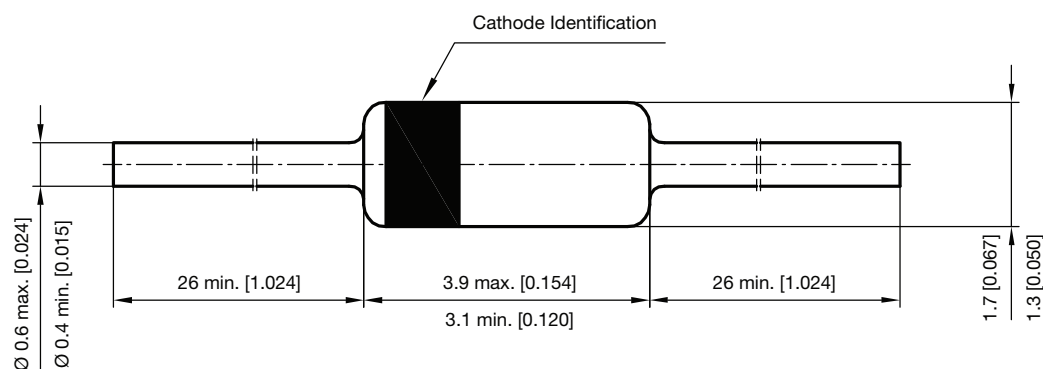
### ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		$V_{RRM}$	75	V
Reverse voltage		$V_R$	60	V
Peak forward surge current	$t_p = 1 \mu\text{s}$	$I_{FSM}$	4	A
Forward continuous current		$I_F$	600	mA
Average forward current	$V_R = 0$	$I_{F(AV)}$	300	mA
Power dissipation	$l = 4 \text{ mm}, T_L = 45^{\circ}\text{C}$	$P_{tot}$	440	mW
	$l = 4 \text{ mm}, T_L \leq 25^{\circ}\text{C}$	$P_{tot}$	500	mW

### THERMAL CHARACTERISTICS ( $T_{amb} = 25^{\circ}\text{C}$ , 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	$^{\circ}\text{C}$

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 10\text{ mA}$	$V_F$		0.670	0.750	V
	$I_F = 50\text{ mA}$	$V_F$		800	850	mV
	$I_F = 200\text{ mA}$	$V_F$		950	1000	mV
	$I_F = 400\text{ mA}$	$V_F$		1120	1250	mV
Reverse current	$V_R = 60\text{ V}$	$I_R$			100	nA
	$V_R = 60\text{ V}$ , $T_J = 100\text{ }^{\circ}\text{C}$	$I_R$			50	$\mu\text{A}$
Breakdown voltage	$I_R = 5\text{ }\mu\text{A}$ , $t_p/T = 0.01$ , $t_p = 0.3\text{ ms}$	$V_{(BR)}$	75			V
Diode capacitance	$V_R = 0\text{ V}$ , $f = 1\text{ MHz}$ , $V_{HF} = 50\text{ mV}$	$C_D$			4	pF
Reverse recovery time	$I_F = I_R = 10\text{ mA}$ , $i_R = 0.1 \times I_R$	$t_{rr}$			6	ns

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


Rev. 6 - Date: 19. December 2011  
 Document no.: SB-V-3906.04-031(4)  
 94 9366



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