

Vishay Semiconductors

Small Signal Switching Diode

Features

- Silicon Epitaxial Planar Diode
- Low forward voltage drop
- High forward current capability
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
 FREE
- Halogen-free according to IEC 61249-2-21
 definition

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/10 k per 13" reel (52 mm tape), 50 k/box TAP/10 k per Ammopack (52 mm tape), 50 k/box

Parts Table

Part	Ordering code	Type Marking	Remarks	
BAW27	BAW27-TR or BAW27-TAP	BAW27	Tape and Reel/Ammopack	

RoHS

Absolute Maximum Ratings

T_{amb} = 25 °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 μs	I _{FSM}	4	А
Forward continuous current		۱ _F	600	mA
Average forward current	V _R = 0	I _{FAV}	300	mA
Power dissipation	l = 4 mm, T _L = 45 °C	P _{tot}	440	mW
rower uissipalioli	$I = 4 \text{ mm}, \text{ T}_{L} \leq 25 ^{\circ}\text{C}$	P _{tot}	500	mW

Thermal Characteristics

 $T_{amb} = 25 \ ^{\circ}C$, unless otherwise specified

Parameter	Test condition Symbol		Value	Unit
Thermal resistance junction to ambient air	$I = 4 \text{ mm}, T_L = \text{constant}$	R _{thJA}	350	K/W
Junction temperature		Tj	175	°C
Storage temperature range		T _{stg}	- 65 to + 175	°C

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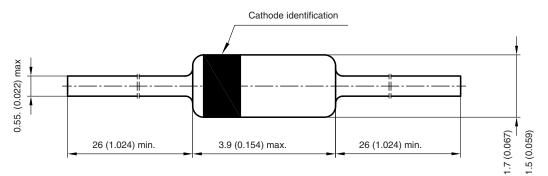


Electrical Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Min.	Тур.	Max.	Unit
Forward voltage	I _F = 10 mA	V _F		670	750	mV
	I _F = 50 mA	V _F		800	850	mV
	I _F = 200 mA	V _F		950	1000	mV
	I _F = 400 mA	V _F		1120	1250	mV
Deverae eurrent	V _R = 60 V	I _R			100	nA
Reverse current	$V_{R} = 60 \text{ V}, \text{ T}_{j} = 100 ^{\circ}\text{C}$	I _R			50	μA
Breakdown voltage	$I_R = 5 \ \mu A, \ t_p/T = 0.01,$ $t_p = 0.3 \ ms$	V _(BR)	75			V
Diode capacitance	V _R = 0, f = 1 MHz, V _{HF} = 50 mV	C _D			4	pF
Reverse recovery time	$I_F = I_R = 10 \text{ mA to } 100 \text{ mA},$ $i_R = 0.1 \text{ x } I_R$	t _{rr}			6	ns

Package Dimensions in millimeters (inches): DO-35



Rev. 6 - Date: 29. January 2007 Document no.: 6.560-5004.02-4 94 9366



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