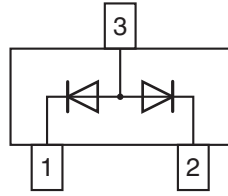


## Small Signal Switching Diode, Dual



### FEATURES

- Silicon epitaxial planar diode
- Fast switching dual diode with common anode
- AEC-Q101 qualified available
- Base P/N-E3 - RoHS-compliant, commercial grade
- Base P/N-HE3 - RoHS-compliant, AEC-Q101 qualified
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**DESIGN SUPPORT TOOLS** click logo to get started



### MECHANICAL DATA

**Case:** SOT-23

**Weight:** approx. 8.8 mg

**Packaging codes / options:**

18/10K per 13" reel (8 mm tape), 10K/box

08/3K per 7" reel (8 mm tape), 15K/box

PARTS TABLE				
PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS
BAW56	BAW56-E3-08 or BAW56-E3-18	Common anode	JD	Tape and reel
	BAW56-HE3-08 or BAW56-HE3-18			

ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage = working peak reverse voltage = DC blocking voltage		$V_R = V_{RRM}$	70	V
Forward continuous current		$I_F$	250	mA
Non repetitive peak forward current	$t_p = 1\text{ }\mu\text{s}$	$I_{FSM}$	2	A
	$t_p = 1\text{ ms}$	$I_{FSM}$	1	A
	$t_p = 1\text{ s}$	$I_{FSM}$	0.5	A
Power dissipation <sup>(1)</sup>		$P_{tot}$	350	mW

THERMAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air		$R_{thJA}$	430	K/W
Junction temperature		$T_j$	150	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	-65 to +150	$^{\circ}\text{C}$
Operating temperature range		$T_{op}$	-55 to +150	$^{\circ}\text{C}$

### Note

<sup>(1)</sup> Device on fiberglass substrate, see layout

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 1\text{ mA}$	$V_F$			0.715	V
	$I_F = 10\text{ mA}$	$V_F$			0.855	V
	$I_F = 50\text{ mA}$	$V_F$			1	V
	$I_F = 150\text{ mA}$	$V_F$			1.25	V
Reverse current	$V_R = 70\text{ V}$	$I_R$			2500	nA
	$V_R = 70\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$	$I_R$			100	$\mu\text{A}$
	$V_R = 25\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$	$I_R$			30	$\mu\text{A}$
Diode capacitance	$V_F = V_R = 0\text{ V}, f = 1\text{ MHz}$	$C_D$			2	pF
Reverse recovery time	$I_F = 10\text{ mA}$ to $i_R = 1\text{ mA}$ , $V_R = 6\text{ V}, R_L = 100\ \Omega$	$t_{rr}$			6	ns

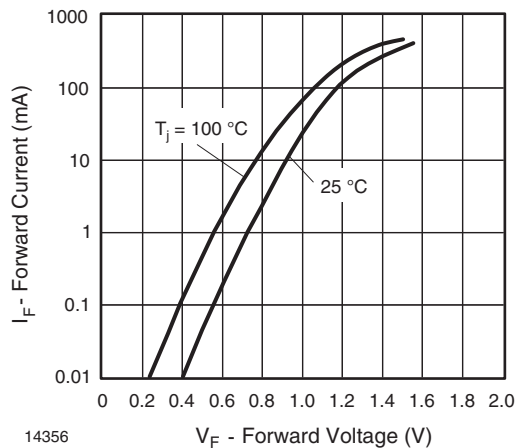
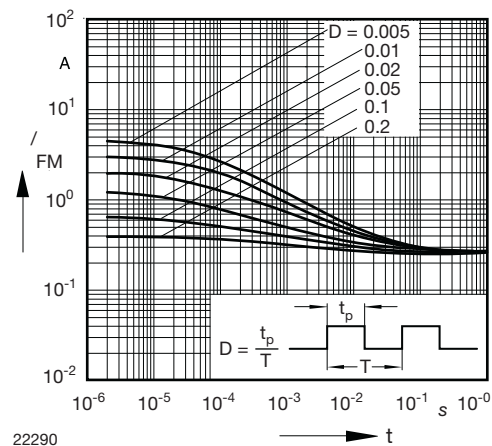
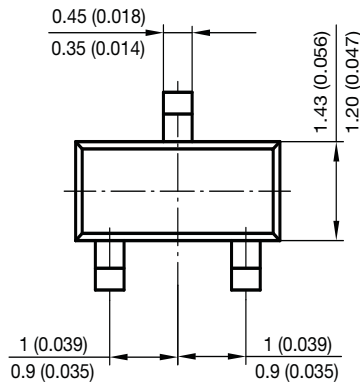
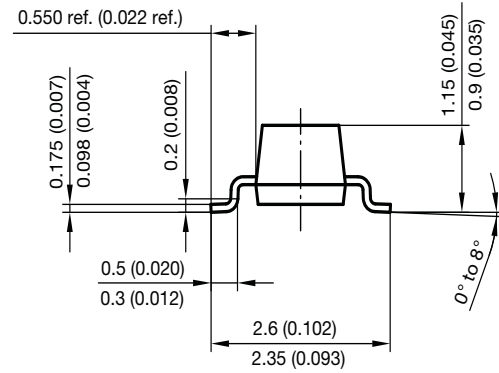
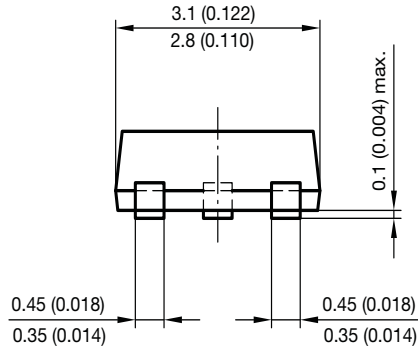
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)


Fig. 1 - Forward Current vs. Forward Voltage

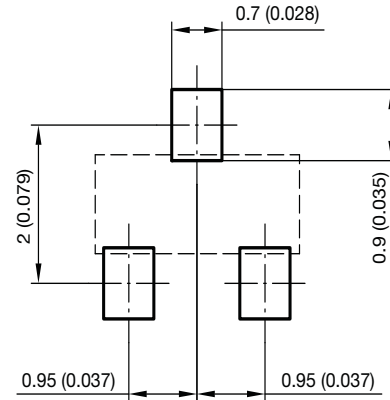

 Fig. 2 - Peak Forward Current  $I_{FM} = f(t_p)$



PACKAGE DIMENSIONS in millimeters (inches): SOT-23



Foot print recommendation:



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