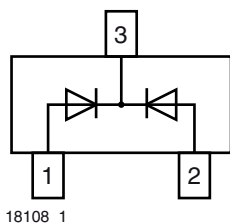
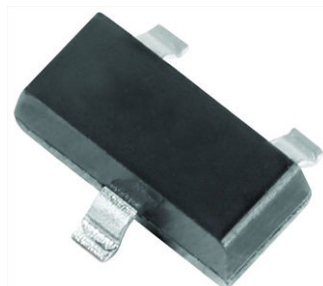


## Small Signal Switching Diode, Dual



18108\_1

### FEATURES

- Silicon epitaxial planar diode
- Fast switching dual diode with common cathode
- AEC-Q101 qualified available
- Molding compound meets UL 94 V-0 flammability rating
- Moisture sensitivity level (MSL) 1
- Base P/N-E3 - RoHS-compliant, commercial grade
- Base P/N-HE3\_A - RoHS-compliant, AEC-Q101 qualified
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

### LINKS TO ADDITIONAL RESOURCES



3D Models



Models



Marking



Parametric Search



Order Samples

### MECHANICAL DATA

**Case:** SOT-23

**Weight:** approx. 9.2 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	AEC-Q101 QUALIFIED	TYPE MARKING	CIRCUIT CONFIGURATION	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY
BAV23C	BAV23C-E3-08	no	KT7	Common cathode	3 000 (8 mm tape on 7" reel)	15 000
	BAV23C-HE3_A-08	yes				
BAV23C	BAV23C-E3-18	no			10 000 (8 mm tape on 13" reel)	10 000
	BAV23C-HE3_A-18	yes				

### PACKAGE

PACKAGE NAME	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
SOT-23	9.2 mg	UL 94 V-0	MSL 1 (according J-STD-020)	Peak temperature max. 260 °C

### ABSOLUTE MAXIMUM RATINGS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Continuous reverse voltage		V <sub>R</sub>	200	V
Repetitive peak reverse voltage		V <sub>RRM</sub>	250	V
Non-repetitive peak forward current <sup>(1)</sup>	t = 1 μs	I <sub>FSM</sub>	9	A
Non-repetitive peak forward surge current <sup>(1)</sup>	t = 1 s	I <sub>FSM</sub>	0.5	A
Maximum average forward rectified current <sup>(1)</sup>	f ≥ 50 Hz	I <sub>F(AV)</sub>	200	mA
Forward continuous current <sup>(1)</sup>		I <sub>F</sub>	400	mA
Repetitive peak forward current		I <sub>FRM</sub>	625	mA
Power dissipation	on FR-4 board with recommended soldering footprint	P <sub>tot</sub>	300	mW
	Infinite heatsink		500	mW

#### Note

<sup>(1)</sup> Infinite heatsink



<b>THERMAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air	according to JEDEC® 51-3 on FR-4 board with recommended soldering footprint	$R_{thJA}$	420	K/W
Thermal resistance junction to lead	Infinite heatsink	$R_{thJL}$	250	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	$^{\circ}\text{C}$

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 100\text{ }\mu\text{A}$ , $t_p = 300\text{ ms}$	$V_{(BR)}$	250			V
Forward voltage	$I_F = 100\text{ mA}$	$V_F$			1	V
	$I_F = 200\text{ mA}$	$V_F$			1.25	V
Reverse current	$V_R = 200\text{ V}$	$I_R$			100	nA
	$V_R = 200\text{ V}$ , $T_j = 150\text{ }^{\circ}\text{C}$	$I_R$			100	$\mu\text{A}$
Dynamic forward resistance	$I_F = 10\text{ mA}$	$r_f$		5		$\Omega$
Diode capacitance	$V_R = 0\text{ V}$ , $f = 1\text{ MHz}$	$C_D$			5	pF
Reverse recovery time	$I_F = I_R = 30\text{ mA}$ , $R_L = 100\text{ }\Omega$ $i_R = 3\text{ mA}$	$t_{rr}$			50	ns

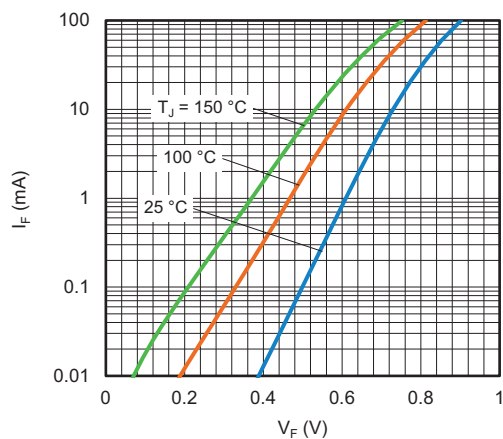
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)


Fig. 1 - Typical Forward Current vs. Forward Voltage

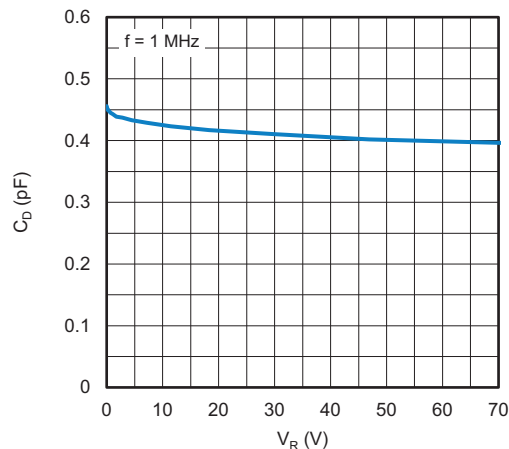


Fig. 3 - Typical Capacitance vs. Reverse Voltage

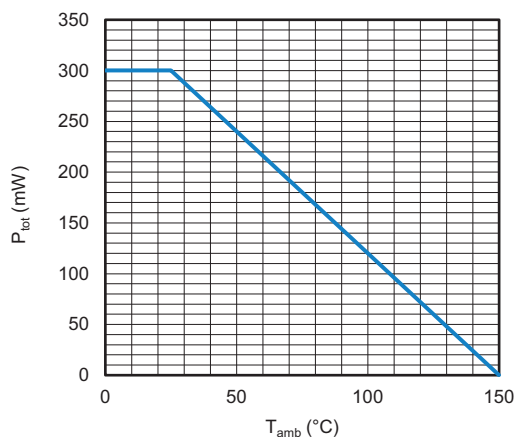


Fig. 2 - Admissible Power Dissipation vs. Ambient Temperature

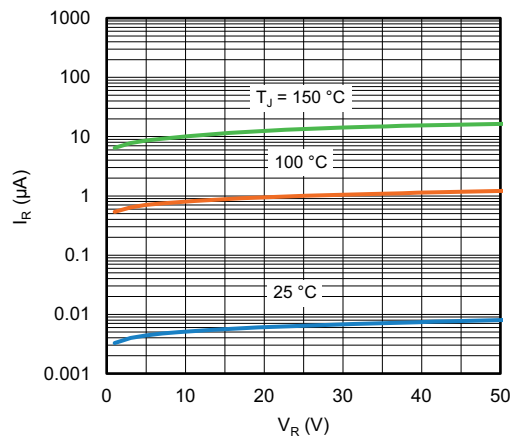
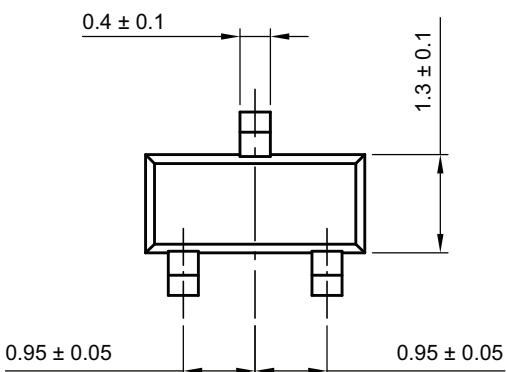
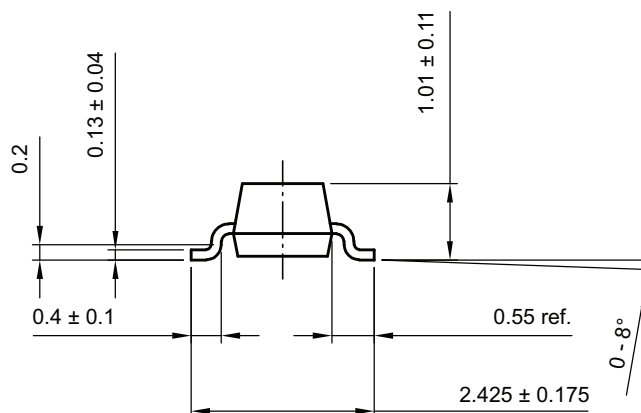
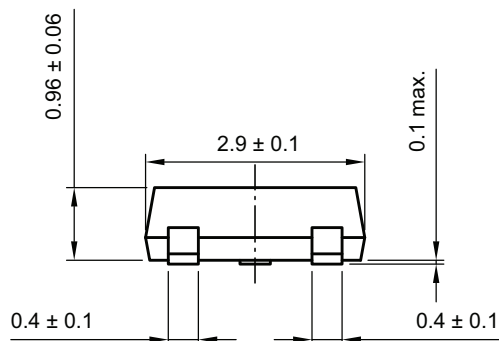
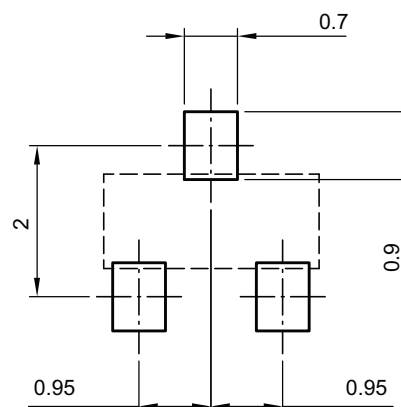


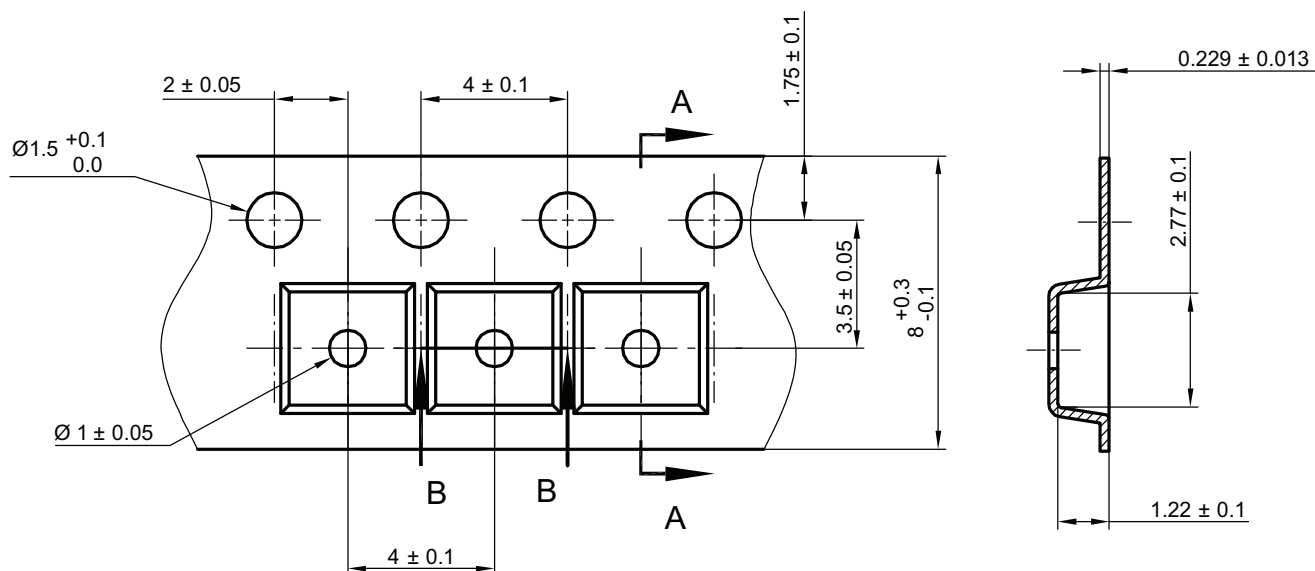
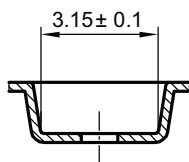
Fig. 4 - Typical Reverse Leakage Current vs. Reverse Voltage

**PACKAGE DIMENSIONS** in millimeters: **SOT-23**


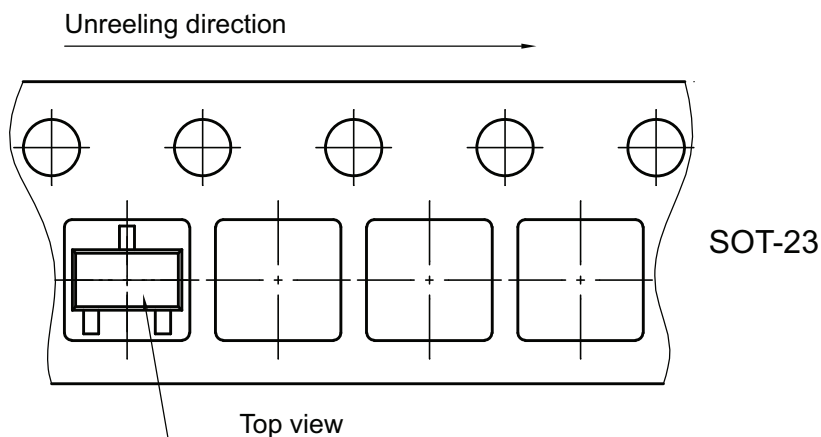
footprint recommendation:



Created - Date: 18-Oct-2021  
Rev. 01 - Date: 18-Jan-2022  
S8-V-3929.01-009 (4)

**CARRIER TAPE SOT-23**

**B-B Section**


Created Date: 04-Feb-2010  
Rev. Date: 07-Feb-2022  
S8-V-3929.01-005 (4)

**ORIENTATION IN CARRIER TAPE SOT-23**


Created Date: 04-Feb-2010  
Rev. Date: 07-Nov-2022  
S8-V-3929.01-005 (4)



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