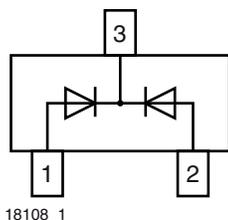


Small Signal Switching Diode, Dual



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

 AUTOMOTIVE
GRADE
Available

RoHS
COMPLIANT

LINKS TO ADDITIONAL RESOURCES



3D Models

SPICE

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 _{amb} = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Continuous reverse voltage		V _R	200	V
Repetitive peak reverse voltage		V _{RRM}	250	V
Non-repetitive peak forward current ⁽¹⁾	t = 1 μs	I _{FSM}	9	A
Non-repetitive peak forward surge current ⁽¹⁾	t = 1 s	I _{FSM}	0.5	A
Maximum average forward rectified current ⁽¹⁾	f ≥ 50 Hz	I _{F(AV)}	200	mA
Forward continuous current ⁽¹⁾		I _F	400	mA
Repetitive peak forward current		I _{FRM}	625	mA
Power dissipation	on FR-4 board with recommended soldering footprint	P _{tot}	300	mW
	Infinite heatsink		500	mW

Note
⁽¹⁾ Infinite heatsink



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

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, 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	μA
Dynamic forward resistance	$I_F = 10\text{ mA}$	r_f		5		Ω
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)

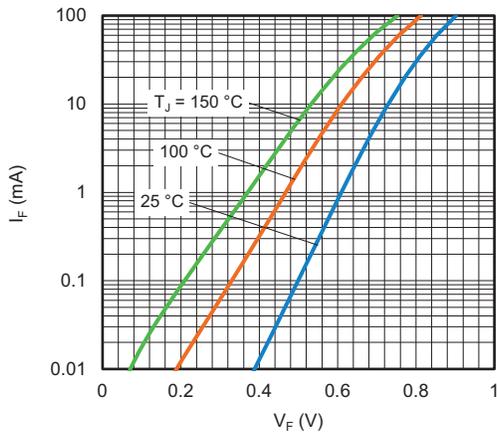


Fig. 1 - Typical Forward Current vs. Forward Voltage

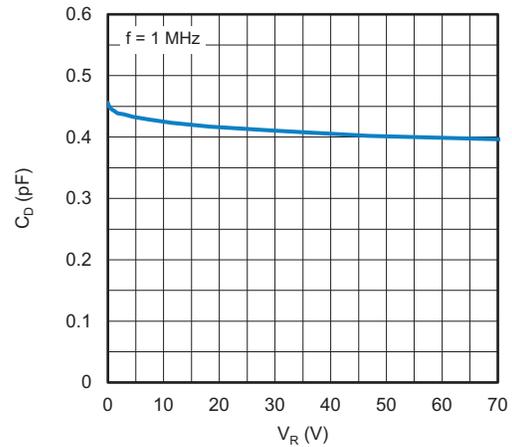


Fig. 3 - Typical Capacitance vs. Reverse Voltage

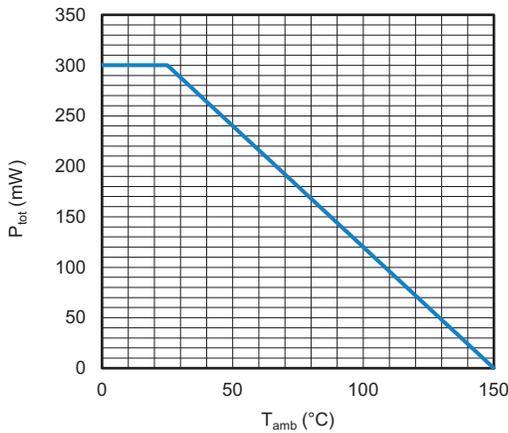


Fig. 2 - Admissible Power Dissipation vs. Ambient Temperature

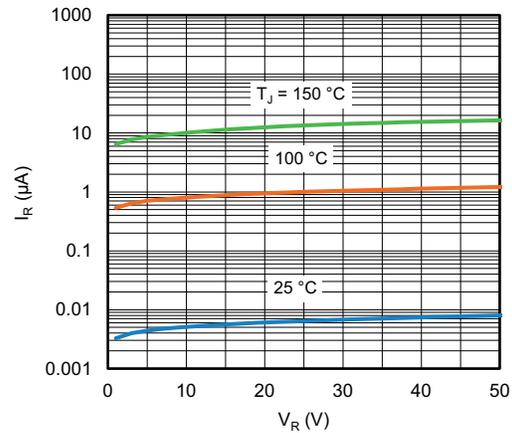
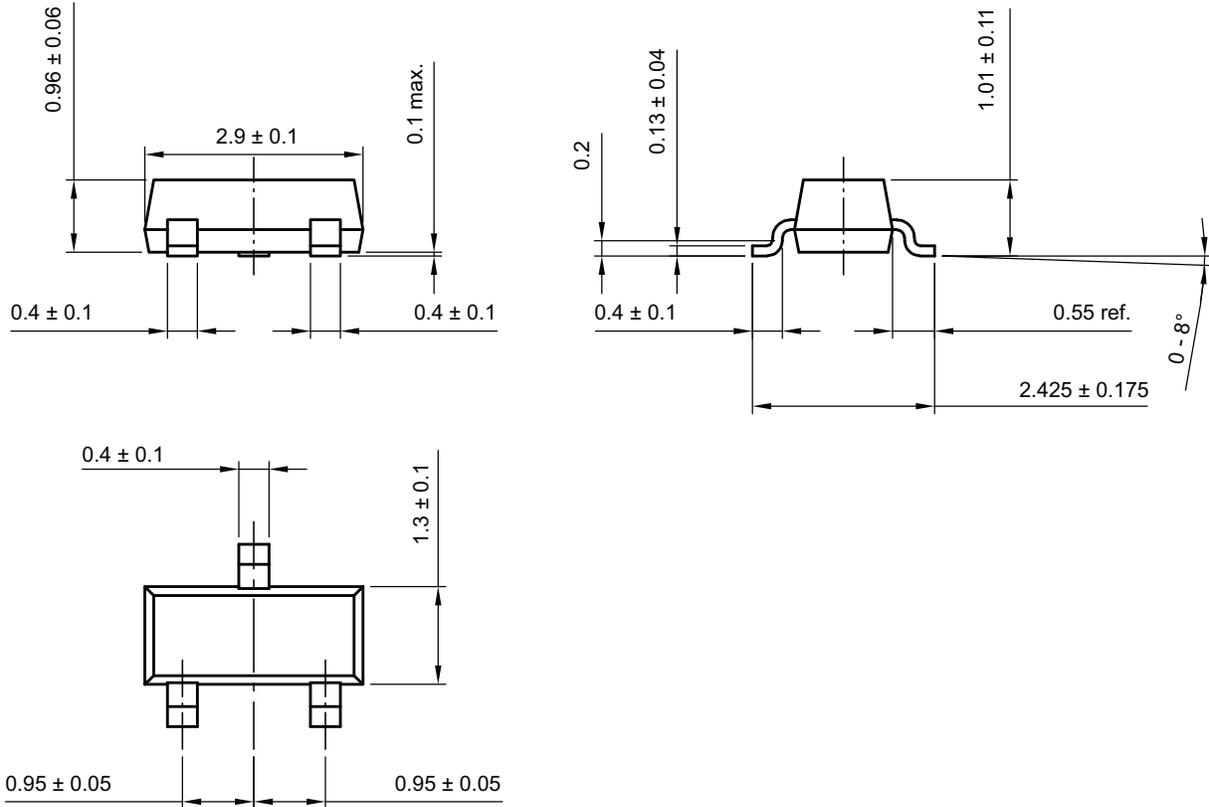


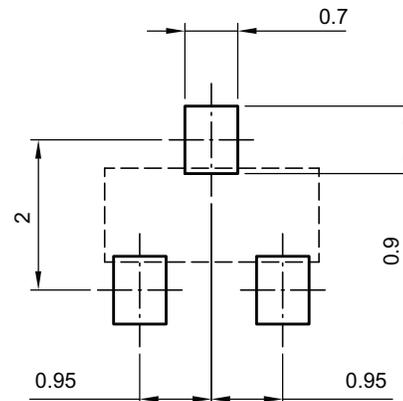
Fig. 4 - Typical Reverse Leakage Current vs. Reverse Voltage



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

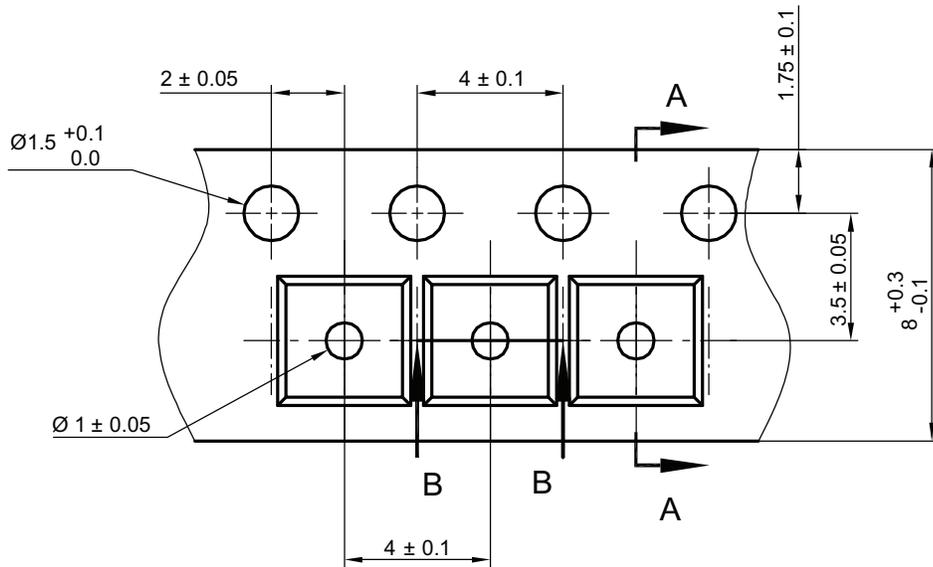


footprint recommendation:

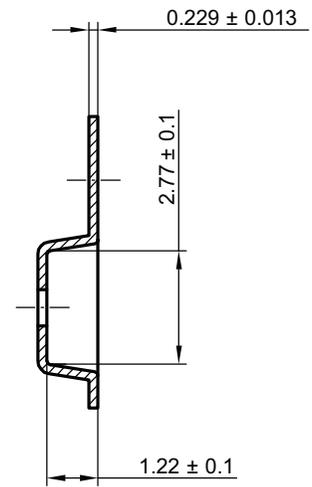


Created - Date: 18-Oct-2021
Rev. 01 - Date: 18-Jan-2022
S8-V-3929.01-009 (4)

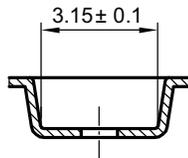
CARRIER TAPE SOT-23



A-A Section



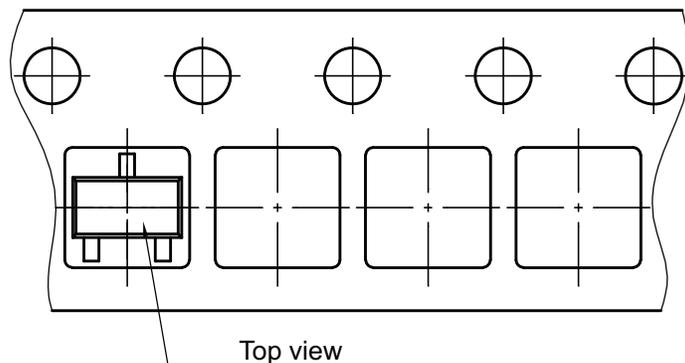
B-B Section



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

ORIENTATION IN CARRIER TAPE SOT-23

Unreeling direction →



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



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