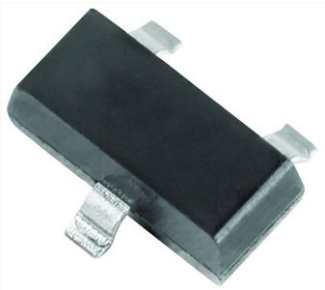
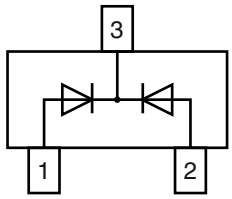
Small Signal Switching Diode, Dual





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

AUTOMOTIVE GRADE Available

Pb-free

e3

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_{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 °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	°C
Storage temperature range		T_{stg}	-65 to +150	°C
Operating temperature range		T_{op}	-55 to +150	°C

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

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

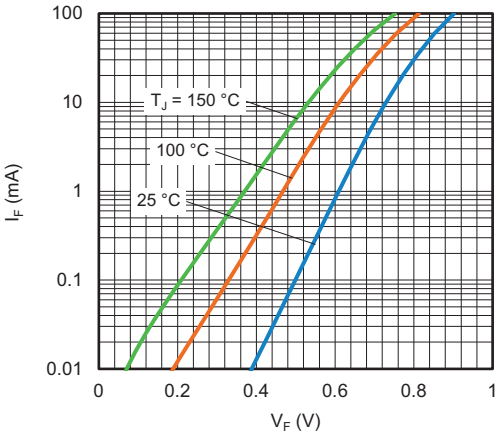


Fig. 1 - Typical Forward Current vs. Forward Voltage

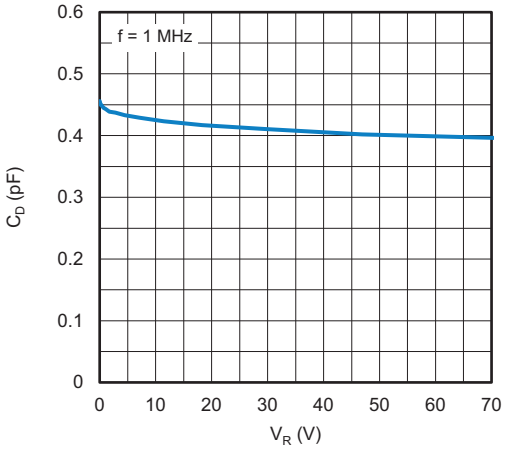


Fig. 3 - Typical Capacitance vs. Reverse Voltage

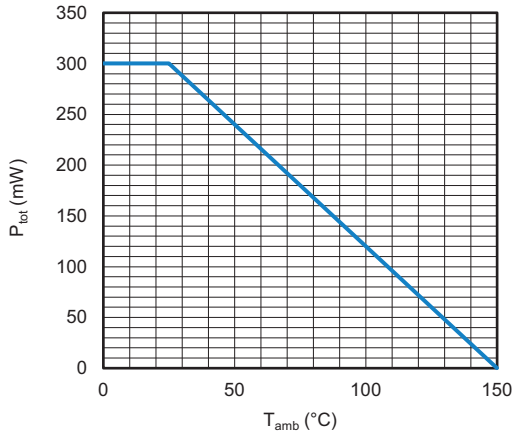


Fig. 2 - Admissible Power Dissipation vs. Ambient Temperature

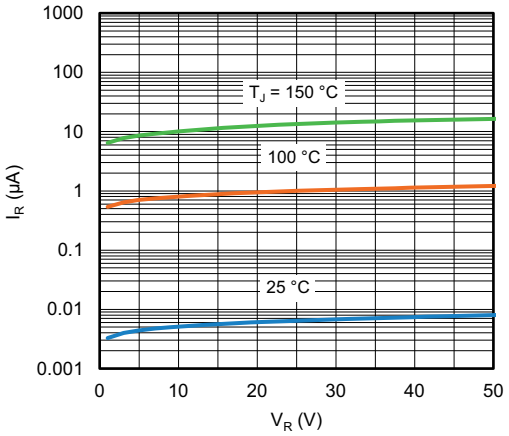
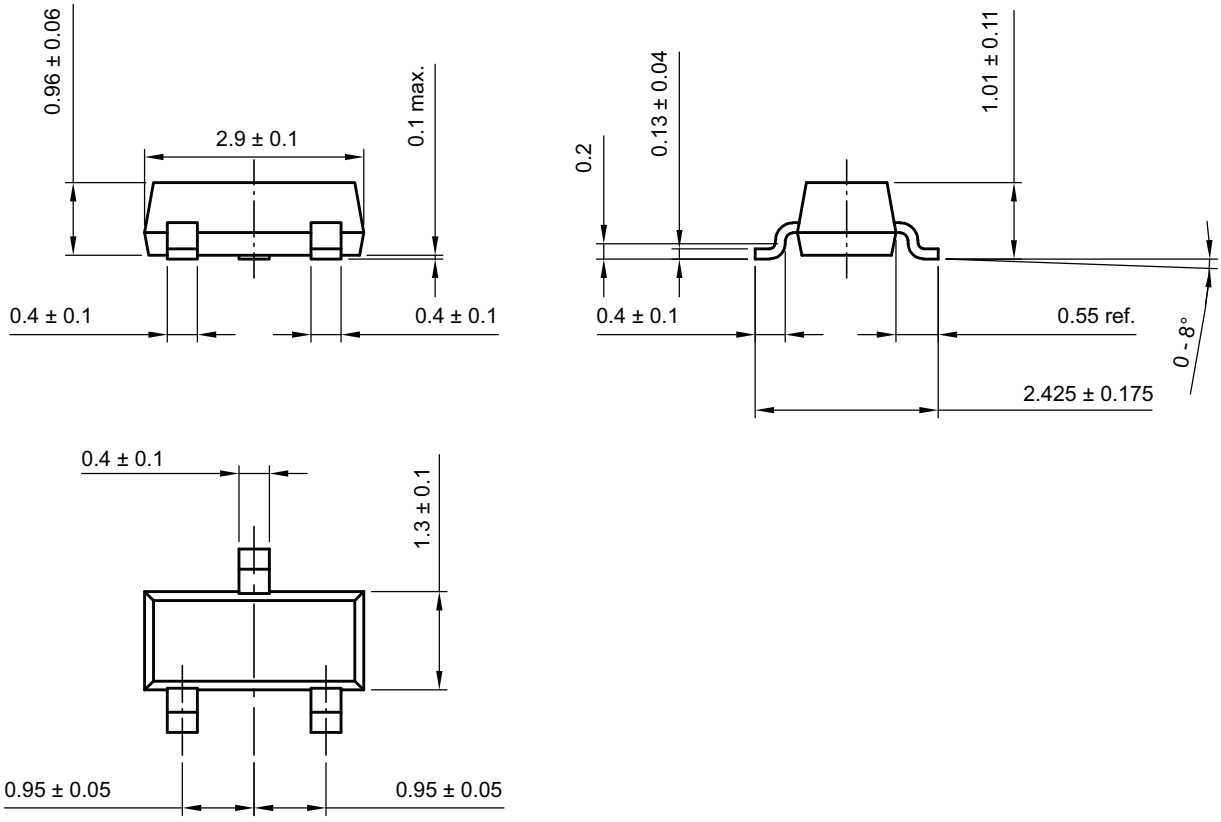
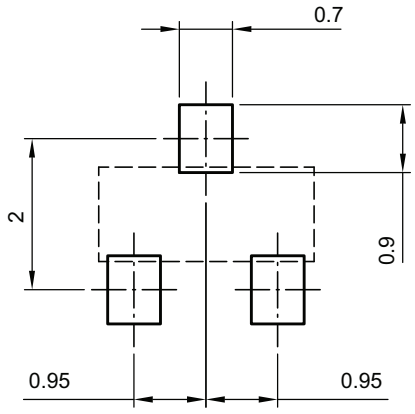


Fig. 4 - Typical Reverse Leakage Current vs. Reverse Voltage

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



footprint recommendation:



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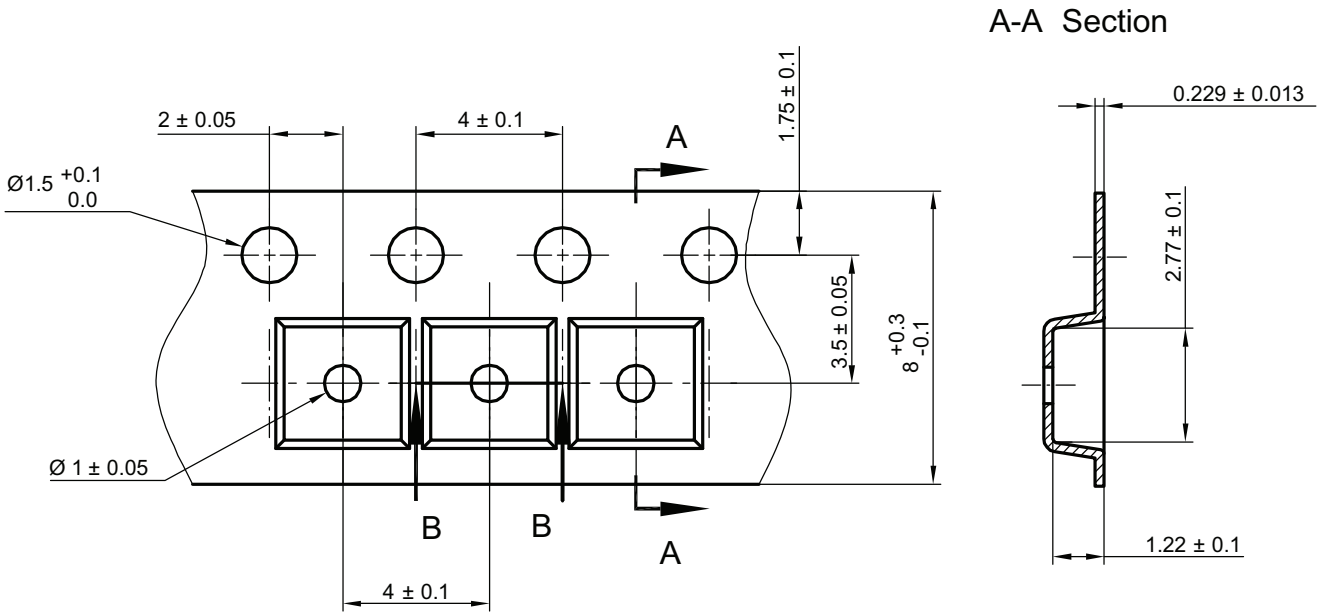
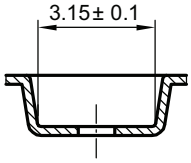
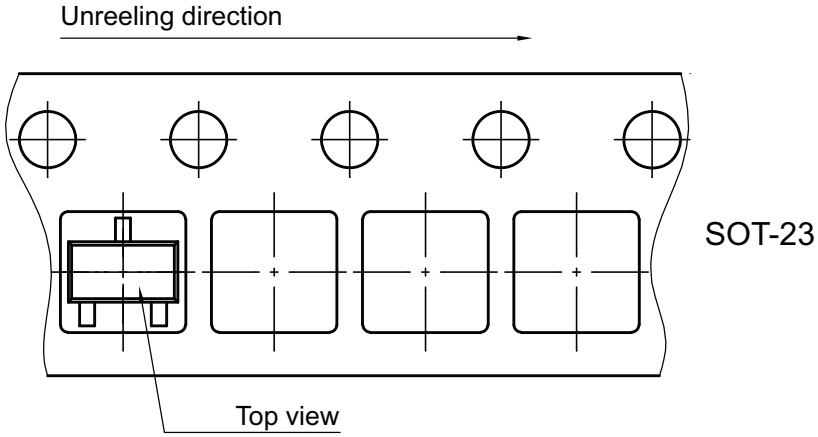
CARRIER TAPE SOT-23





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

ORIENTATION IN CARRIER TAPE SOT-23



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Rev. Date: 07-Nov-2022
S8-V-3929.01-005 (4)

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