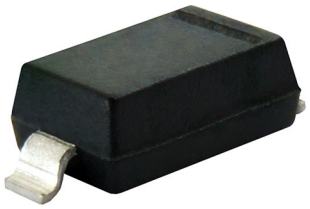
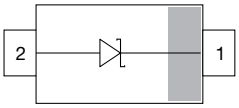
Small Signal Schottky Diode





FEATURES

- Schottky diode for high-speed switching
- Circuit protection
- Voltage clamping
- High-level detecting and mixing
- AEC-Q101 qualified available
- 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 | SPICE Models | Marking | Parametric Search | Order Samples

MECHANICAL DATA

Case: SOD-323
Weight: approx. 4 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
BAS170WS	BAS170WS-E3-08	no	7D	Single	3 000 (8 mm tape on 7" reel)	15 000
	BAS170WS-HE3_A-08	yes				
	BAS170WS-E3-18	no			10 000 (8 mm tape on 13" reel)	10 000
	BAS170WS-HE3_A-18	yes				

PACKAGE

PACKAGE NAME	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
SOD-323	4 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
Repetitive peak reverse voltage		V_{RRM}	70	V
Forward continuous current		I_F	70	mA
Surge forward current	t_p < 1 s	I_{FSM}	600	mA
Power dissipation (1)		P_{tot}	150	mW

Note
(1) Infinite heatsink

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

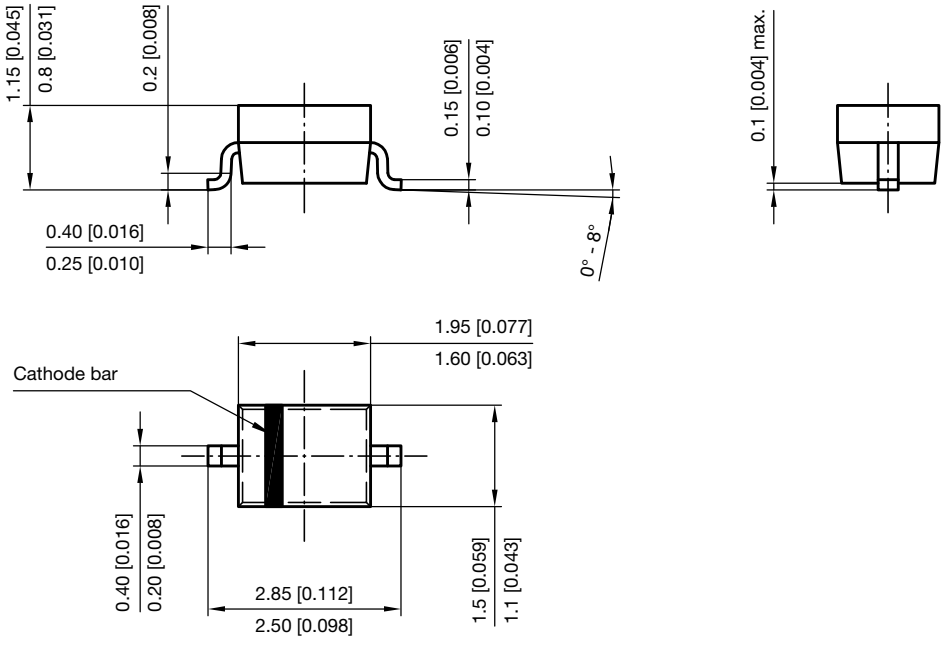
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air	infinite heatsink	R_{thJL}	650	K/W
Junction temperature		T_j	125	°C
Operating temperature range		T_{op}	-55 to +125	°C
Storage temperature range		T_{stg}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)						
PARAMETER	**TEST CONDITION**	**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Reverse breakdown voltage	I_R = 10 µA (pulsed)	$V_{(BR)}$	70			V
Leakage current	V_R = 50 V	I_R			0.1	µA
	V_R = 70 V	I_R			10	µA
Forward voltage	I_F = 1 mA	V_F		375	410	mV
	I_F = 10 mA	V_F		705	750	mV
Forward voltage [1]	I_F = 15 mA	V_F		880	1000	mV
Diode capacitance	V_R = 0 V, f = 1 MHz	C_D		1.5	2	pF
Differential forward resistance	I_F = 5 mA, f = 10 kHz	r_f		34		Ω

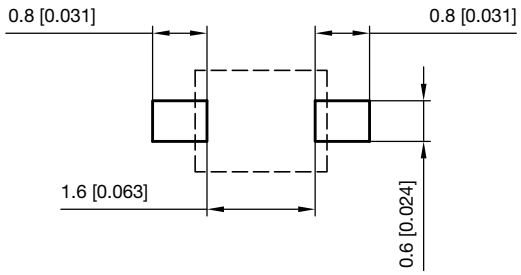
Note

(1) Pulse test; $t_p \leq 300$ µs

PACKAGE DIMENSIONS in millimeters (inches): SOD-323



Footprint recommendation:



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