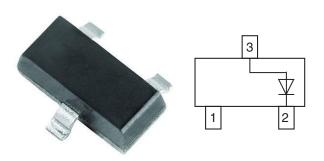


Vishay Semiconductors

Small Signal Fast Switching Diode



DESIGN SUPPORT TOOLS click logo to get started



MECHANICAL DATA

Case: SOT-23

Weight: approx. 8.8 mg
Packaging codes / options:

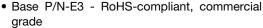
18/10K per 13" reel (8 mm tape), 10K/box 08/3K per 7" reel (8 mm tape), 15K/box

FEATURES

- · Fast switching speed
- · Surface mount package







please see www.vishay.com/doc?99912



- COMPLIAI
- Base P/N-HE3 RoHS-compliant, AEC-Q101 qualified
 Material categorization: for definitions of compliance

PARTS TABLE						
PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS		
BAL99	BAL99-E3-08 or BAL99-E3-18	Single		Tape and reel		
	BAL99-HE3-08 or BAL99-HE3-18	Single	JF	rape and reel		

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Repetitive peak reverse voltage = working peak reverse voltage = DC blocking voltage		$V_{RRM} = V_{RWM} = V_{R}$	70	V	
	t _p = 1 μs	I _{FSM}	2	А	
Peak forward surge current	t _p = 1 ms	I _{FSM}	1	А	
	t _p = 1 s	I _{FSM}	0.5	А	
Average forward current		I _{FAV}	250	mA	
Power dissipation	On fiberglass substrate 30 mm x 10 mm x 1.6 mm	P _{tot}	350	mW	

THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Thermal resistance junction to ambient air	On fiberglass substrate 30 mm x 10 mm x 1.6 mm	R _{thJA}	357	K/W	
Junction temperature		Tj	150	°C	
Storage temperature range		T _{stg}	-55 to +150	°C	
Operating temperature range		T _{op}	-55 to +150	°C	

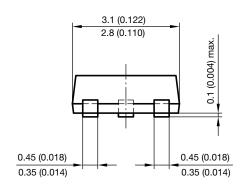


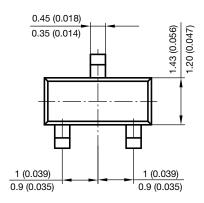
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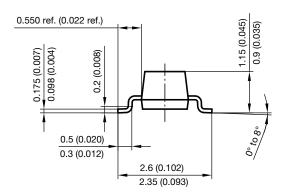
ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
	I _F = 1 mA	V _F			0.715	V
Forward voltage	I _F = 10 mA	V _F			0.855	V
Forward voltage	I _F = 50 mA	V _F			1	V
	I _F = 150 mA	V _F			1.25	V
	V _R = 70 V	I _R			2500	nA
Reverse current	V _R = 70 V, T _j = 150 °C	I _R			100	μΑ
	V _R = 25 V, T _j = 150 °C	I _R			30	μA
Diode capacitance	$V_F = V_R = 0$, $f = 1$ MHz	C _D			1.5	pF
Reverse recovery time	$I_F = I_R = 10 \text{ mA}, i_R = 1 \text{ mA}$	t _{rr}			6	ns

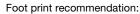
PACKAGE DIMENSIONS in millimeters (inches): SOT-23

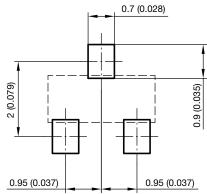




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