Small Signal Fast Switching Diode

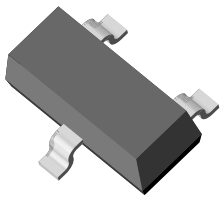
Features

- Fast switching speed
- Surface mount package
- Well suited for automated assembly process
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

Pb-free

e3

RoHS COMPLIANT



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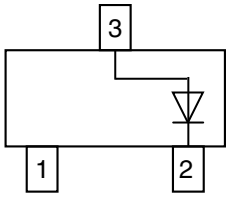


Mechanical Data

Case: SOT-23

Weight: approx. 8 mg

Packaging Codes/Options:

GS18/10 k per 13" reel (8 mm tape), 10 k/box

GS08/3 k per 7" reel (8 mm tape), 15 k/box

Parts Table

Part	Ordering code	Type Marking	Remarks
BAL99-V	BAL99-V-GS18 or BAL99-V-GS08	JF	Tape 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
Peak forward surge current	t = 1 µs	I_{FSM}	2	A
	t = 1 ms	I_{FSM}	1	A
	t = 1 s	I_{FSM}	0.5	A
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

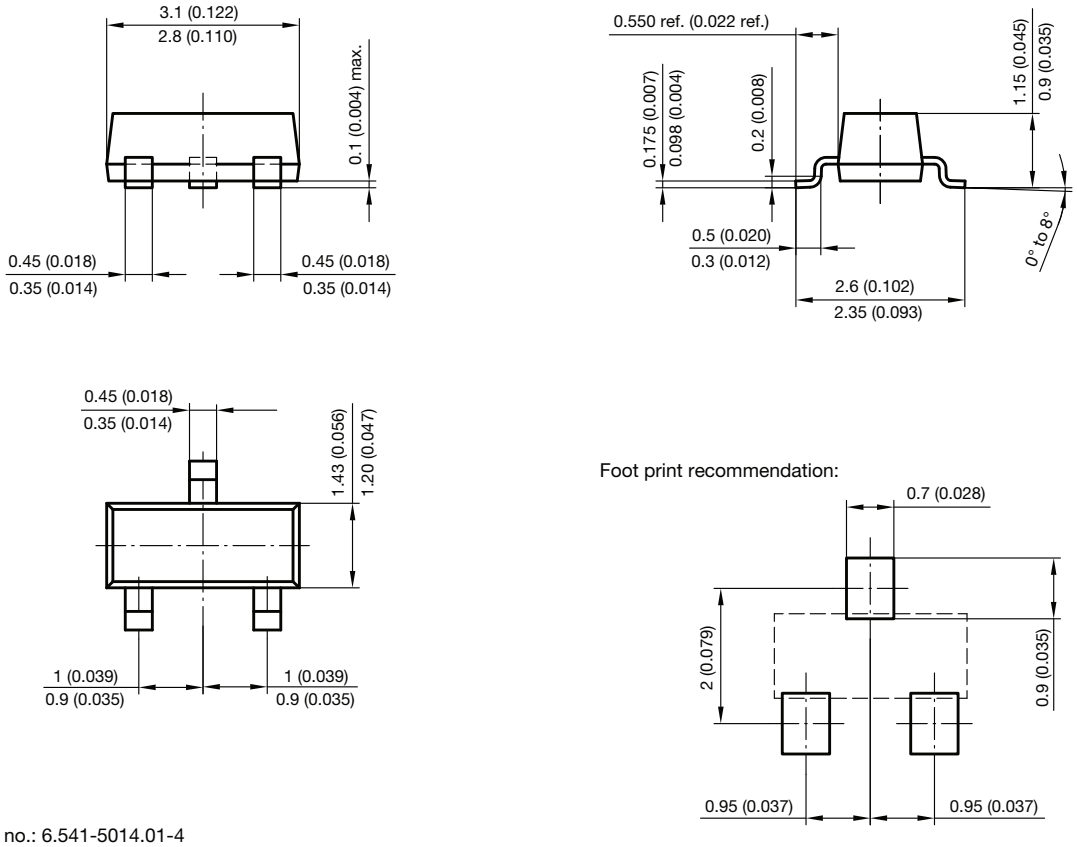
Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air	On fiberglass substrate 30 mm x 10 mm x 1.6 mm	R_{thJA}	357	K/W
Junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	- 55 to + 150	°C

Electrical Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	I_F = 1 mA	V_F			715	mV
	I_F = 10 mA	V_F			855	mV
	I_F = 50 mA	V_F			1000	mV
	I_F = 150 mA	V_F			1250	mV
Reverse current	V_R = 70 V	I_R			2.5	µA
	V_R = 70 V, T_j = 150 °C	I_R			100	µA
	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 mA to I_R = 1 mA, R_L = 100 Ω, V_R = 6 V	t_{rr}			6	ns

Package Dimensions in millimeters (inches): SOT-23



Document no.: 6.541-5014.01-4
Rev. 8 - Date: 23.Sept.2009
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