Dual In-Series Small-Signal High-Voltage Switching Diode

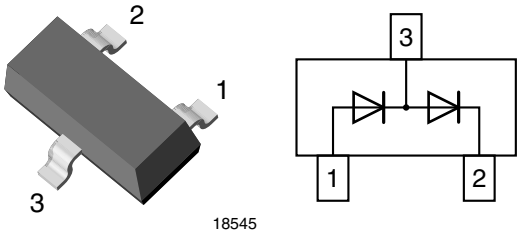
Features

- Silicon Epitaxial Planar Diode
- Fast switching dual in-series diode, especially suited for applications requiring high voltage capability
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

Pb-free

e3

RoHS COMPLIANT



Mechanical Data

Case: SOT-23
Weight: approx. 8.8 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	Marking	Remarks
GSD2004S-V	GSD2004S-V-GS18 or GSD2004S-V-GS08	DB6	Tape and Reel

Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Continuous reverse voltage		V_R	240	V
Peak repetitive reverse voltage		V_{RRM}	300	V
Forward current (continuous)		I_F	225	mA
Peak repetitive forward current		I_{FRM}	625	mA
Non-repetitive peak forward current	t_p = 1 µs	I_{FSM}	4.0	A
	t_p = 1 s	I_{FSM}	1.0	A
Power dissipation		P_{tot}	350[1)]	mW

[1)] Device on Fiberglass Substrate, see layout on second page

Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Typical thermal resistance junction to ambient air		R_{thJA}	357[1)]	°C/W
Junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	- 65 to + 150	°C

[1)] Device on Fiberglass Substrate, see layout on second page

Electrical Characteristics

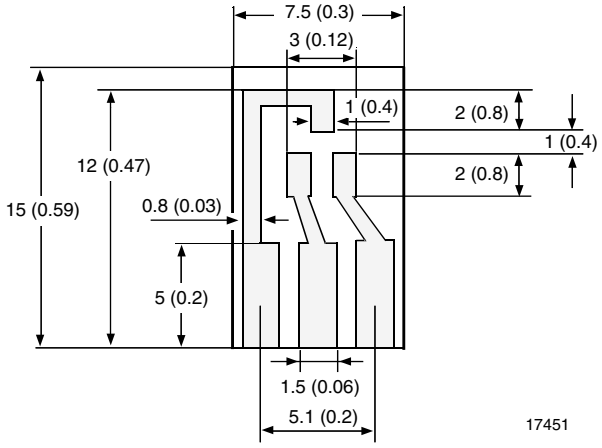
T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	I_R = 100 µA	V_{BR}	300			V
Leakage current	V_R = 240 V	I_R			100	nA
	V_R = 240 V, T_j = 150 °C	I_R			100	µA
Forward voltage	I_F = 20 mA	V_F		0.83	0.87	V
	I_F = 100 mA	V_F			1.00	V
Diode capacitance	$V_F = V_R$ = 0, f = 1 MHz	C_D			5.0	pF
Reverse recovery time	$I_F = I_R$ = 30 mA, I_{rr} = 3.0 mA, R_L = 100 Ω	t_{rr}			50	ns

[1)] Device on Fiberglass Substrate, see layout

Layout for R_{thJA} test

Thickness:
Fiberglass 1.5 mm (0.059 in.)
Copper leads 0.3 mm (0.012 in.)



For technical questions within your region, please contact one of the following:
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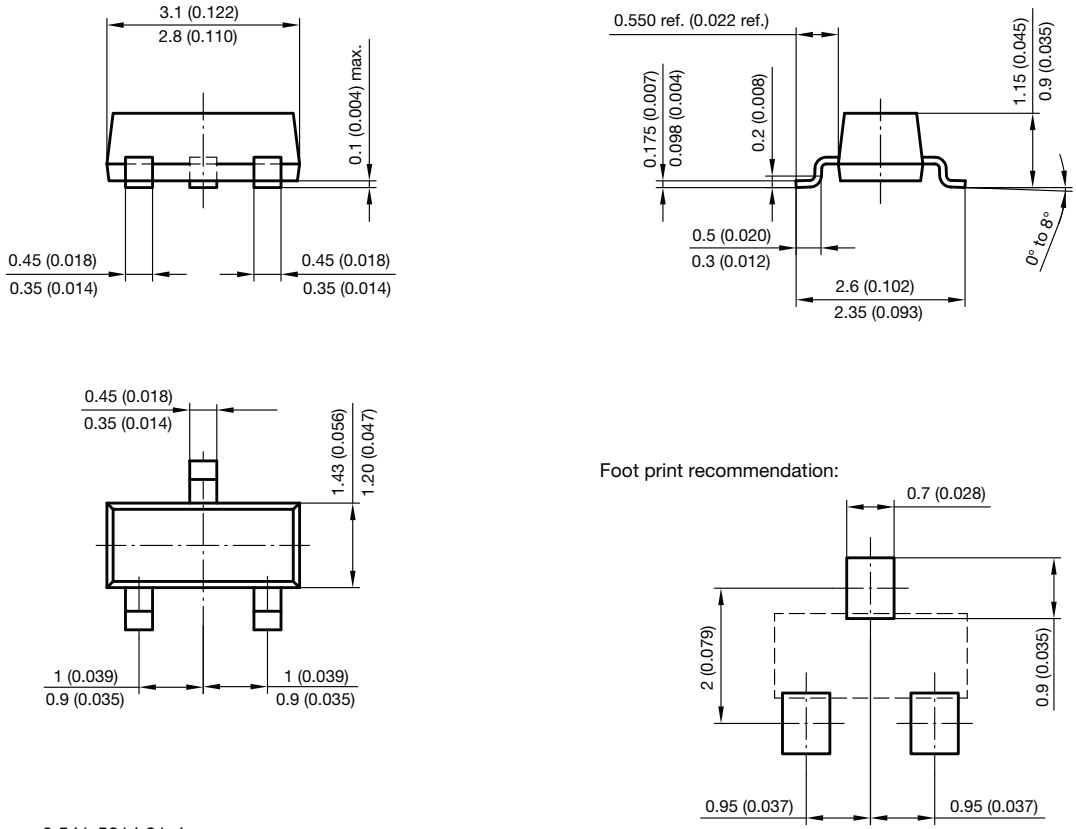
Package Dimensions in millimeters (inches): **SOT-23**



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