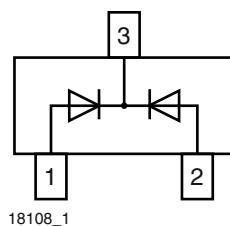


Dual Common Cathode Small Signal High Voltage Switching Diode



FEATURES

- Silicon epitaxial planar diode
- Fast switching dual common cathode diode, especially suited for applications requiring high voltage capability
- AEC-Q101 qualified
- Base P/N-E3 - RoHS-compliant, commercial grade
- Base P/N-HE3 - RoHS-compliant, AEC-Q101 qualified
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

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

PARTS TABLE				
PART	ORDERING CODE	INTERNAL CONSTRUCTION	TYPE MARKING	REMARKS
GSD2004C	GSD2004C-E3-08 or GSD2004C-E3-18	Dual diodes common cathode	DBC	Tape and reel
	GSD2004C-HE3-08 or GSD2004C-HE3-18			

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25^{\circ}\text{C}$, 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	$t_p = 1 \mu\text{s}$	I_{FSM}	4	A
	$t_p = 1 \text{ s}$		1	A
Power dissipation (1)		P_{tot}	350	mW

THERMAL CHARACTERISTICS ($T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Typical thermal resistance junction to ambient air (1)		R_{thJA}	357	°C/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

Note

(1) Device on fiberglass substrate

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25^\circ C$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 100 \mu A$	V_{BR}	300			V
Leakage current	$V_R = 240 V$	I_R			100	nA
	$V_R = 240 V, T_J = 150^\circ C$	I_R			100	μA
Forward voltage	$I_F = 20 mA$	V_F		0.83	0.87	V
	$I_F = 100 mA$	V_F			1	V
Diode capacitance	$V_F = V_R = 0, f = 1 MHz$	C_D			5	pF
Reverse recovery time	$I_F = I_R = 30 mA, i_R = 3 mA, R_L = 100 \Omega$	t_{rr}			50	ns

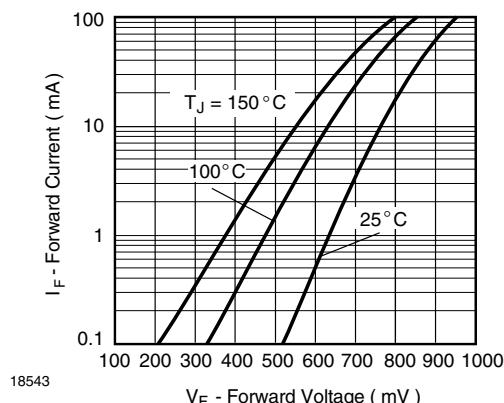
TYPICAL CHARACTERISTICS ($T_{amb} = 25^\circ C$, unless otherwise specified)


Fig. 1 - Typical Instantaneous Forward Characteristics

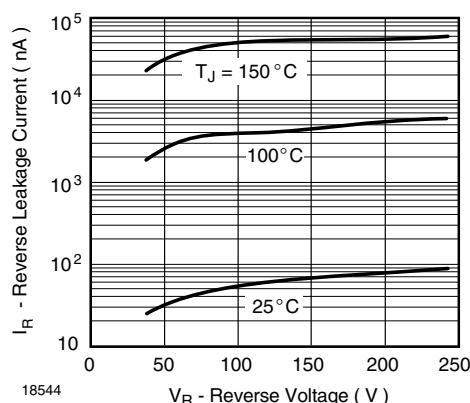


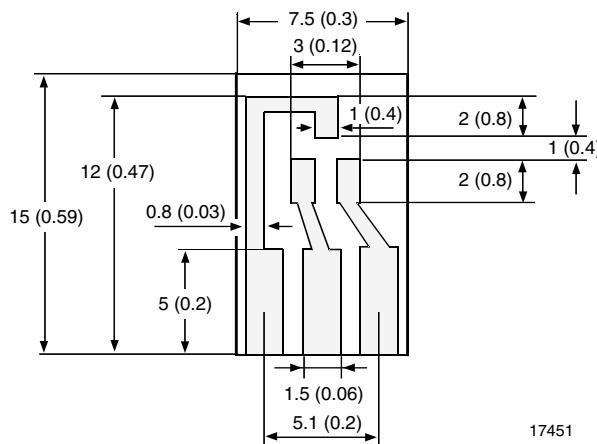
Fig. 2 - Typical Reverse Characteristics

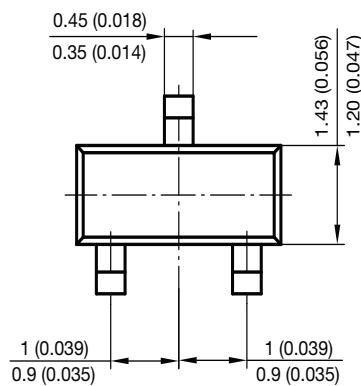
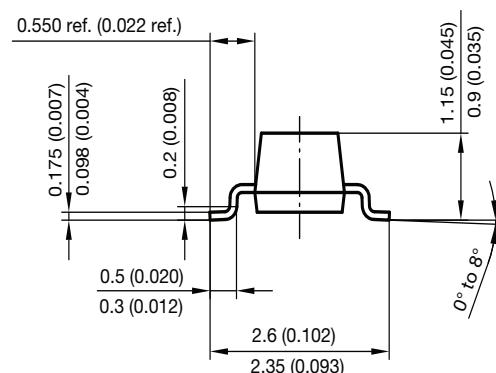
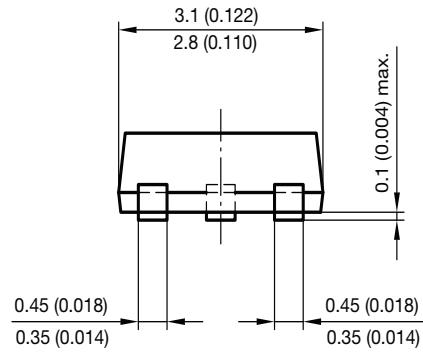
Layout For RthJA test

Thickness:

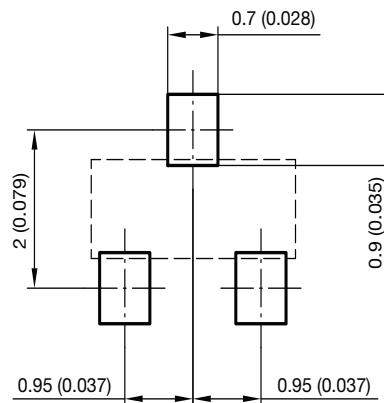
Fiberglass 1.5 mm (0.059 in.)

Copper leads 0.3 mm (0.012 in.)



PACKAGE DIMENSIONS in millimeters (inches): **SOT-23**


Foot print recommendation:



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 Rev. 8 - Date: 23.Sept.2009
 17418

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