

Erratum to: Design principles and considerations for the ‘ideal’ silicon piezoresistive pressure sensor: a focused review

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Erratum to: Microsyst Technol (2014) 20:1213–1247 DOI:10.1007/s00542-014-2215-7

Unfortunately, the author has overlooked the below changes in the publication of the original article. The corrected details are listed below.

- The Eqs. 23 and 24 are incorrect. The Eqs. 23 and 24 should read as follows:

$$w = 0.0213P \frac{a^4}{16D} \left(1 - \frac{4x^2}{a^2}\right)^2 \left(1 - \frac{4y^2}{a^2}\right)^2 \quad (23)$$

$$w = P \frac{a^4}{16D} \left(1 - \frac{4x^2}{a^2}\right)^2 \left(1 - \frac{4y^2}{a^2}\right)^2 \times \left[0.02023 + 0.0214 \frac{x^2 + y^2}{a^2} + 0.1 \frac{x^2 y^2}{a^4}\right] \quad (24)$$

- The denominator of the second term in the LHS of Eq. 27 should be corrected. The correct Eq. 27 is
- $$\frac{\partial^4 W}{\partial x^4} + 2\alpha \frac{\partial^4 W}{\partial x^2 \partial y^2} + \frac{\partial^4 W}{\partial y^4} = \frac{P}{D} \quad (27)$$
- In the line following Eq. 27, the parameter ‘G’ in anisotropy coefficient (α) refers to shear modulus.

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- The last term of Eq. 37 should be taken as its absolute value. The Eq. 37 should read as:

$$V_{out} = \frac{V}{2} \pi_{44} |\sigma_y - \sigma_x| \quad (37)$$

- In the RHS of Eq. 40, the term ‘3.14’ should be replaced with ‘3.41’
- The last line of the paragraph which follows Eq. 70 on page 1242 should read as: ‘C is a correction factor which depends on W, L, l and s’.
- In Fig. 20, the y-axis label should be read as: Piezoresistive coefficient, π_{44} (10^{-11} Pa $^{-1}$).
- In Fig. 32, a parameter ‘l’ should be included. The corrected figure is:

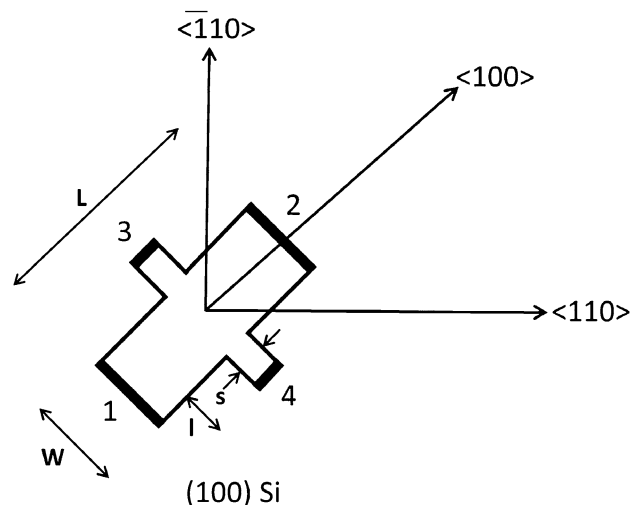


Fig. 32 Single element shear strain gauge