Corrections to "Unified Theory of Linear Noisy Two-Ports"

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In the above paper [1, Table II and eq. (57)], the expression for reverse power gain G_{pr} is incorrect and should be replaced as follows:

$$G_{pr} = \left| \frac{y_{12}}{y_{11} + Y_{\text{opt}}^{M}} \right|^2 \frac{G_{\text{opt}}^{M}}{G_{\text{out}}} \tag{1}$$

where

$$G_{\text{opt}}^{M} = \text{Re}\left[Y_{\text{opt}}^{M} \right] \tag{2}$$

$$G_{\text{out}} = \text{Re}\left[Y_{\text{out}} \right] \tag{3}$$

$$Y_{\text{out}} = y_{22} - \frac{y_{12} y_{21}}{y_{11} + Y_{\text{opt}}^{M}} . \tag{4}$$

The corrected equation (1) allows the use of amplifier *y*-parameters before the addition of an interstage matching network in accordance with text immediately following [1, eq. (57)]. The subsequent discussion [1, Sec. IV-C] that includes G_{pr} is not affected by this correction.

REFERENCES

[1] J. L. Dietrich, "Unified theory of linear noisy two-ports," *IEEE Trans. Microw. Theory Techn.*, vol. 61, no. 11, pp. 3986–3997, Nov. 2013.

Manuscript received November 26, 2014.

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