so we have the integral of (1) in the form

$$I=\int_{\omega_1}^{\omega_2} P(\omega)\,d\omega=(P_0\omega_0)/2\left[\int_{x_1}^{x_2}\left(1+Q_L^2x^2\right)^{-1}dx \pm\int_{x_1}^{x_2} x\left(1+Q_L^2x^2\right)^{-1}\left(x^2+4\right)^{-1/2}dx\right] \quad (3)$$

where $x_1=\omega_1/\omega_0-\omega_0/\omega_1$ and $x_2=\omega_2/\omega_0-\omega_0/\omega_2$. Limits of the integration fulfill the relations $x_1<0$ and $x_2>0$, if assumptions $\omega_1<\omega_0$ and $\omega_2>\omega_0$ are valid. The function in the second integral in (3) is odd, so the value of this integral can be made zero choosing the symmetrical limits of the integration $x_1=-x_2$.

Hence

$$I=(P_0\omega_0)/2\int_{-x_2}^{x_2}\left(1+Q_L^2x^2\right)^{-1}dx=P_0\omega_0\int_0^{x_2}\left(1+Q_L^2x^2\right)^{-1}dx = P_0\omega_0Q_L^{-1}\tan^{-1}(Q_Lx_2). \quad (4)$$

Using notation $\omega_s=\omega_2-\omega_1$, $\omega_s\ll\omega_0$, we have $x_2\approx\omega_s/\omega_0$, and (4) has the final form

$$I=P_0\omega_0Q_L^{-1}\tan^{-1}\left(Q_L\omega_s\omega_0^{-1}\right).$$

References

[1] I. Kneppo, "Integration method of measuring Q of the microwave resonators," *IEEE Trans. Microwave Theory Tech.*, vol. MTT-26, no. 2, Feb. 1978.

[2] C. G. Montgomery, R. H. Dicke, and E. M. Purcell, *Principles of Microwave Circuits* New York: Dover, 1965, ch. 7, sec. 7.14, cyn 67, p. 239.

[3] I. S. Gradshteyn and I. M. Ryzhik, *Table of Integrals, Series, and Products*, 4th ed. New York: Academic, 1965, sec. 2.161, no. 3, p. 67.

Corrections to "A Quasi-Optical Polarization Duplexed Balanced Mixer for Millimeter-Wave Applications"

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In the above referenced paper[1], the following corrections should be made.

On page 166, the first full sentence should read, "...using the saddlepoint equations given in [4] ..."

On page 166, equation (21) should be

$$P=\iint_{\text{sphere}}\frac{\frac{1}{2}\left(|E_\theta|^2+|E_\phi|^2\right)}{Z_{fs}}\,ds.$$

On page 168, the first sentence of the second full paragraph should read, "Using the measured antenna patterns for the 10-GHz model, an approximate directivity on the dielectric side was calculated to be 5.5 dB ..."

On page 169, Table II, line 10 should read "Measured conversion loss: 6.5 dB$\pm$3 dB."

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[1] K. Stephan, N. Camilleri and T. Itoh, *IEEE Trans. Microwave Theory Tech.*, vol. MTT-31, pp. 164–170, Feb. 1983.

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