Correction to “InP Bipolar ICs: Scaling Roadmaps, Frequency Limits, Manufacturable Technologies”

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In the above paper [1], we wish to call the attention of the readership to errors that appear in Section II-C, p. 276. The values of the semiconductor dielectric relaxation \( \omega_d \) frequencies were not printed. The values are as follows: for N-type InGaAs at \( \sim 3.5 \cdot 10^{19} / \text{cm}^3 \) doping, \( \omega_d / 2\pi = 800 \text{ THz} \), while for P-type InGaAs at \( \sim 7 \cdot 10^{19} / \text{cm}^3 \) doping, \( \omega_d / 2\pi = 80 \text{ THz} \).

The expression giving the variation with frequency of the semiconductor bulk resistivity \( \rho(j\omega) \) was also mis-printed. The text should read “Because \( \omega_d \) and \( \omega_p \) far exceed anticipated HBT bandwidths, the emitter, base and subcollector bulk resistivities all can be approximated as \( \rho(j\omega) \sim \rho_{\text{DC}}(1 + j\omega/\omega_c) \).” ■

REFERENCES