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Author Correction: Coherent photonic Terahertz transmitters compatible with direct comb modulation

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Correction to: *Scientific Reports* <https://doi.org/10.1038/s41598-022-13618-y>, published online 09 June 2022

The original version of this Article contained typographical errors.

Parts of Figure 1, 2, 3 and Figure 5 did not display correctly.

The original Figure 1, 2, 3 and Figure 5 and their accompanying legends appear below.

Additionally, equations 1, 18 and 19 contained an error, where “ $-\beta^2$ ” should read “ β^2 ”.

The original Article has been corrected.

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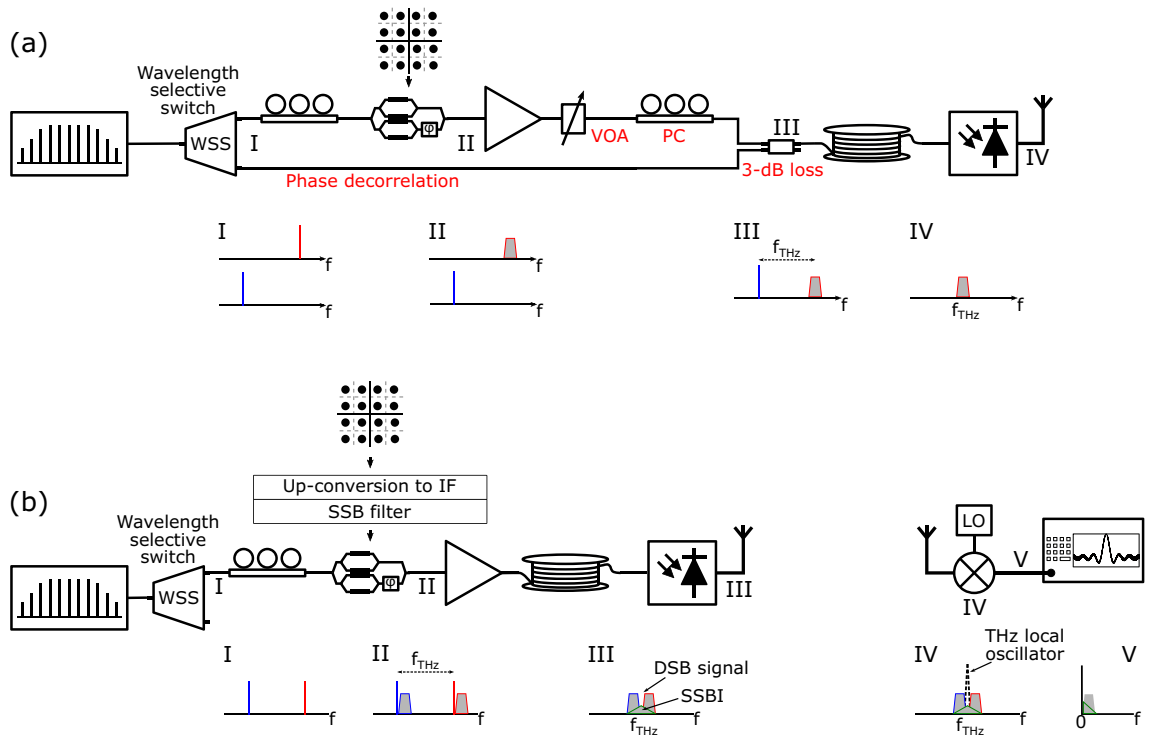


Figure 1. THz transmitters: (a) heterodyne transmitter, (b) proposed single-path THz transmitter with SSB-C optical modulation and DSB receiver. SSB-C: single sideband with carrier, DSB: double sideband, IF: intermediate frequency, SSBI: signal-signal beat interference.

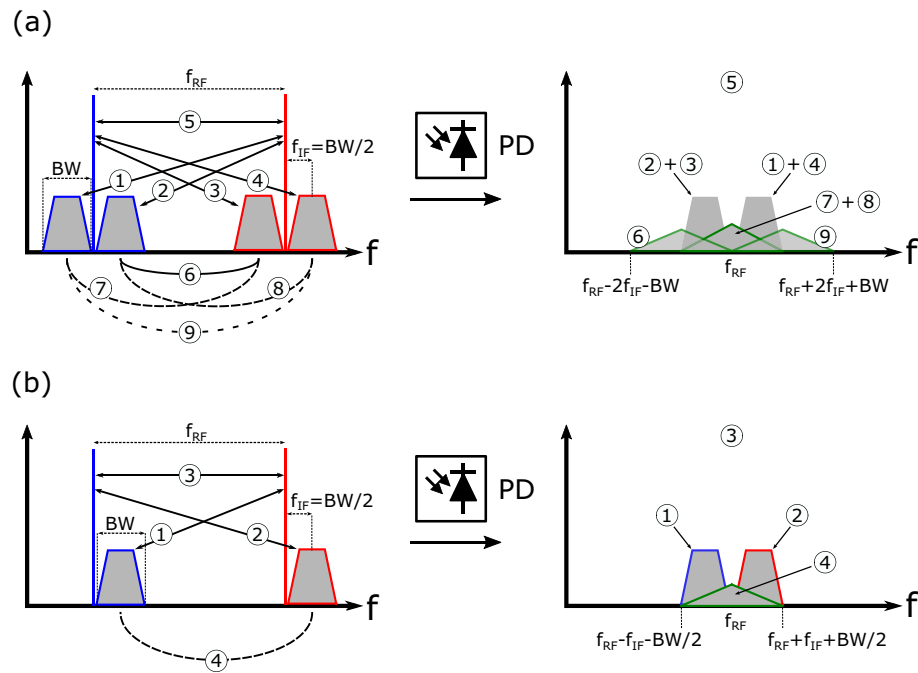


Figure 2. RF beatings generated with (a) DSB-C optical modulation, and (b) with SSB-C optical modulation.

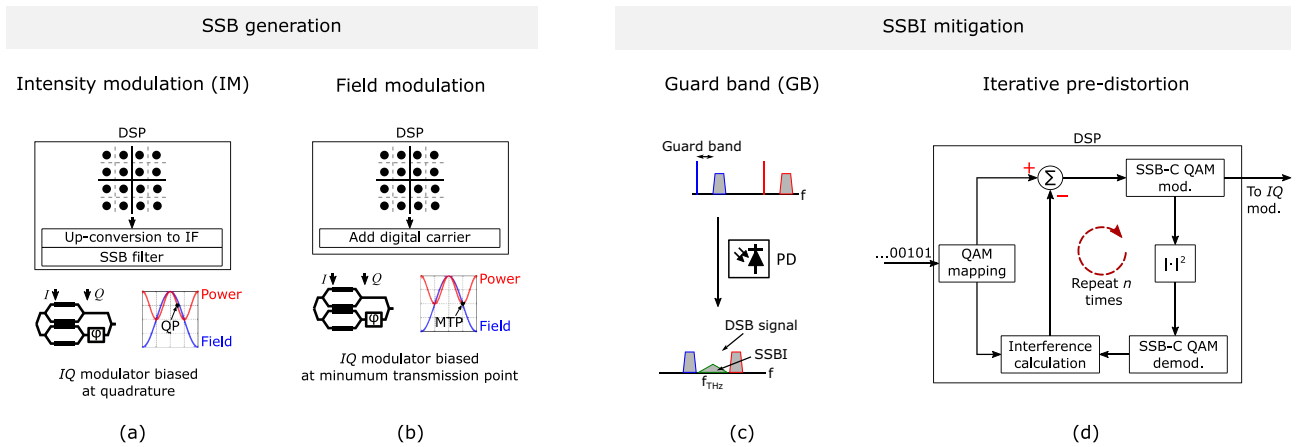


Figure 3. Techniques for the generation of SSB-C signals: (a) IM SSB-C, and (b) field SSB-C; and techniques for the mitigation of the signal-signal beat interference (SSBI): (c) setting a guard band (GB) between carrier and sideband, and (d) iterative pre-distortion.

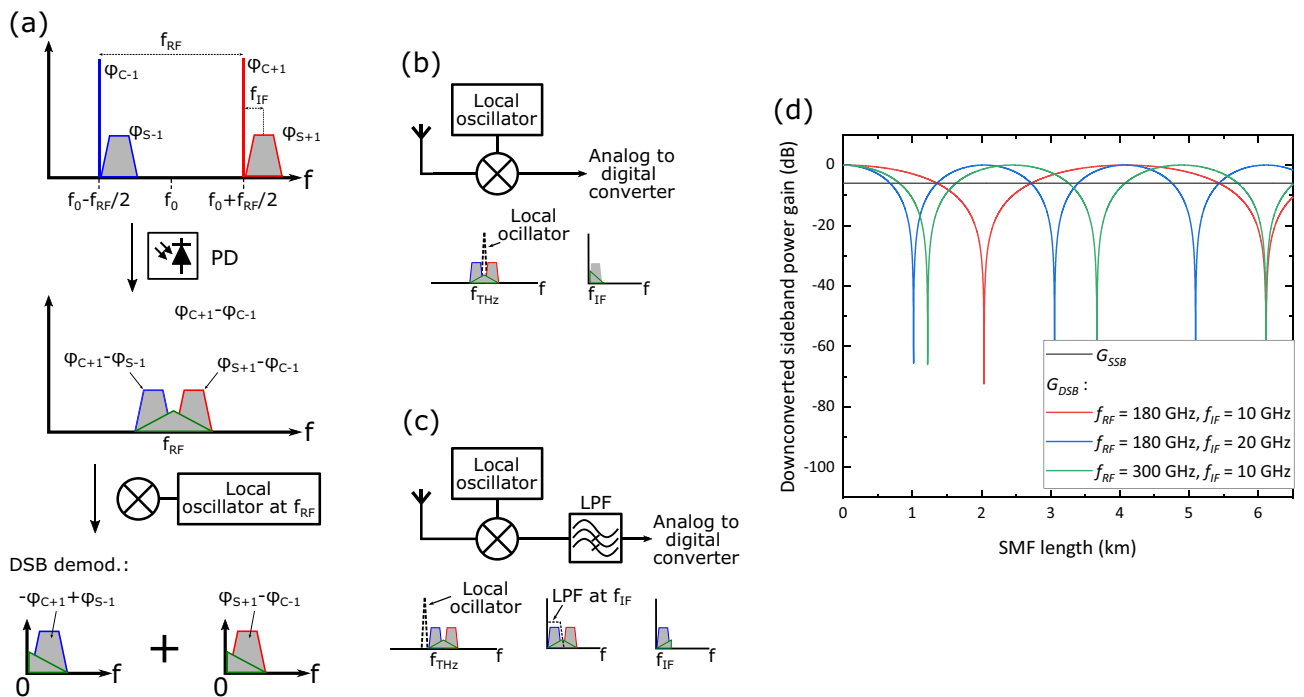


Figure 5. (a) Dispersion-induced phase shifts in each of the signals generated in a single-path photonic system with DSB demodulation, φ_{S+1} , φ_{C+1} , φ_{S-1} , and φ_{C-1} are the phase shifts due to chromatic dispersion of the carriers and sidebands of the two SSB-C optical signals (all phases are relative to that of the pulse center, which has a frequency of f_0); (b) DSB demodulation receiver; (c) SSB demodulation receiver; and (d) downconverted sideband power gain versus length of the optical fiber link for the SSB and DSB receivers and various values of f_{RF} and f_{IF} (calculations made with $\beta_2 = -21.7 \text{ ps}^2/\text{km}$).

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