

ADDENDUM

Phase Noise Issue with the CX72301-11 and SKY72301-21 Frequency Synthesizers

Skyworks CX72301-11 and SKY72301-21 are direct digital modulation, fractional-N frequency synthesizers. While both devices have the same, small footprint and provide the same functionality, the SKY72301-21 is fully RoHS-compliant with a higher reflow temperature. Both devices have a main and an auxiliary frequency synthesizer, and both provide independently configurable dividers of the crystal oscillator frequency for the main and auxiliary phase detectors.

Both of these devices have recently been observed to have a phase noise issue when operated with a reference divide ratio setting of $R = 1$ for both the main and auxiliary synthesizers. The result is a degradation in phase noise of approximately 20 dB.

Until a newer synthesizer is developed to replace the CX72301-11 and SKY72301-21, Skyworks suggests using either of the following two options to correct this problem:

1. Operate the device with a reference divide ratio setting of $R = 2$, or higher.
2. Replace either device with Skyworks SKY72300-21. This is a direct drop-in replacement except for its higher operating frequency and current consumption of 1 to 2 mA greater than the CX72301-11 or SKY72301-21.

Refer to the following Skyworks Data Sheets for further information:

- SKY72301 Spur-Free, 1.0 GHz Dual Fractional-N Frequency Synthesizer (document number 101090).
- SKY72300 Spur-Free, 2.1 GHz Dual Fractional-N Frequency Synthesizer (document number 101217).

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