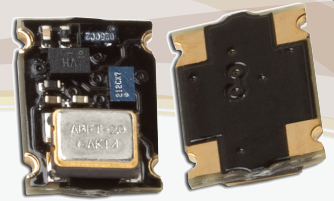


ABFT Series- Frequency Translator and Jitter Attenuator



ABFT is a miniature SMT reflow-able, Frequency Translator designed to attenuate close-to-the-carrier jitter; accompanying the 10.00MHz input reference. This device is ideally suited for space constrained solutions, requiring phase & frequency cohesion to the System Master Clock at 10MHz. This device eliminates the need to implement a traditional PLL or a multiplication scheme to achieve a faster signal; typically employed to clock RF or Digital circuitry such as processors, controllers, decoders, etc.

Key Features:

- 5x7x2mm SMT, RoHS Compliant reflow-able package
- Frequency translation to 20MHz or 40MHz options
- Designed for ultra low - 0.5pS rms Jitter over 12KHz to 20MHz B/W, **regardless of the input reference jitter.**
- Excellent close-to-the carrier Phase Noise (Typical -150dBc/Hz at 10KHz offset)
- Ultra Fast Rise and Fall times, 1.2nS max
- -40°C to 85°C operating temperature range
- 3.3V supply with LVCMOS Output
- Absolute Internal Pull range greater \pm 100ppm allowing for long term correction including Aging over 10 years

What the ABFT can do for your design.....

The ABFT Series *simplifies* the 2*Fin or 4*Fin up-conversion without using a traditional PLL approach. Further, it attenuates the input reference jitter & does not multiply the phase noise at the up-converted output.

The ABFT series offers less than 0.5pS rms jitter over 12KHz to 20MHz B/W; independent of the jitter at the reference input.

The ABFT also provides Best-in-Class ultra fast rise and fall times of 1.2nS max, and supply current consumption of 10mA (in locked state with 15pF load). Competitive solutions are 2x slower and 100% more power hungry.

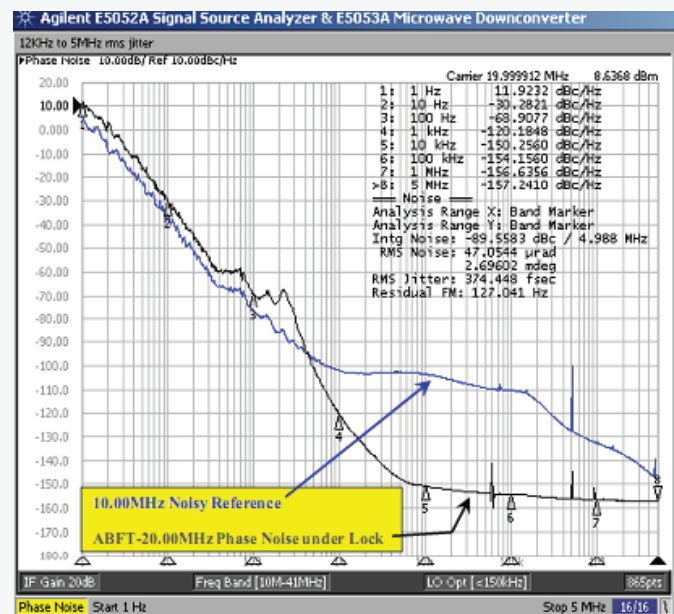
The ABFT has been tested in *Clock Recovery* applications demonstrating the ability to lock onto an incoming carrier of a BPSK modulated DSSS signal. This opens up further applications for this module.

Typical Phase Noise @ Offset from the Carrier

Offset	Typical	Maximum
10Hz Offset	-87dBc/Hz	
100Hz Offset	-113dBc/Hz	
1KHz Offset	-135dBc/Hz	-130dBc/Hz
10KHz Offset	-151dBc/Hz	-145dBc/Hz
100KHz Offset	-155dBc/Hz	-150dBc/Hz
1MHz Offset	-156dBc/Hz	-150dBc/Hz
5MHz Offset	-157dBc/Hz	-155dBc/Hz

Applications:

- Frequency translation, clock smoothing and jitter attenuation of the input 10MHz reference
- Datacom - DSLAM, DSLAR, Access Nodes
- Cable modem head end
- Base Station - GSM, CDMA
- Telecom - SONET/SDH/ATM
- Clock/Data Recovery



If ABFT is driven from a Noisy 10.00MHz reference, the intrinsic phase noise of the ABFT Translator takes over at about 1kHz offset, and will typically be about -150dBc/Hz @ 10kHz offset from the carrier. This results in better than 0.50ps rms jitter over 12kHz to 20MHz BW, regardless of the input reference noise.

Links and Resources:

<http://www.abracon.com/PrecisionTiming/ABFT.pdf>

In-Stock @: *Digikey, Mouser, Avnet & Abracon.*



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