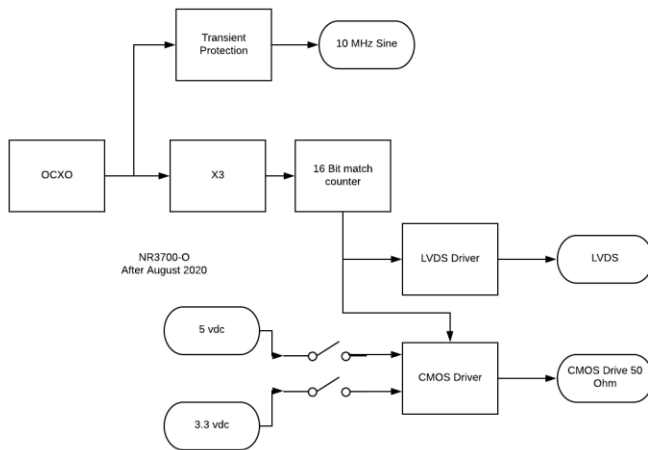


Company Datasheet #	NR3700-O
Revision #:	F
Date:	08072020

NR3700-O

10MHz Frequency Reference, OCXO, w/Band Gap Reference, with Internal 16 Bit Match Counter

KEY FEATURES



The heart of the unit is a low phase noise SC cut crystal. The OCXO is a SC (stress compensated) crystal placed in an oven that is operated at ~10C above the maximum specified temperature. The SC cut has more than a five times improvement in thermal stability and a much lower mechanical sensitivity than an AT cut crystal. There is built-in-test that drives an LED and relay contacts for system integration. The unit also has a frequency divider option that incorporates a 16 bit match counter that divides a 30 MHz signal. Outputs from the synthesizer are available as CMOS or LVDS. The NR3700-O is nominally powered from 12 VDC but can operate from -60 to +60 VDC in three power ranges (range specified at ordering). There is also an AC power adapter available. Compact package of 4" x 1.2" x 2.75" (3.5" with mounting flanges).

Product Highlights



Oven Stabilized Crystal

The OCXO provides temperature stability of 10 ppb. First year aging stability of 50ppb.

Typical Phase Noise

Offset (Hz)	dBc / Hz
10	-104
100	-135
1K	-145
10K	-149

Lower phase noise options available.

Low Cost

Compact size lowers cost.

Frequency Divider Option

16 Bit match counter applied to 30 MHz signal. LVDS and CMOS outputs.

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Technical specifications

Output	10 MHz, 0.4 ±0.1 Vrms, into 50 Ohms BNC- frequencies to 50 MHz
Ship frequency accuracy	±10 ppb (24 hours)
First year frequency stability	±50 ppb
Temp stability	±10 ppb
Synthesizer	16 Bit match counter from 30 MHz
Power requirements	Standard configuration is 12 VDC (9 to 15 VDC) Options- ±24VDC (20 to 30 VDC), ±48 VDC (40 to 60 VDC) AC Adapter available 100 to 240VAC, 50/60Hz Power 5 W peak during warm-up, 3W normal operating (special crystals may require different power). Power isolation exceeds 200 VAC
Connectors	4-pin power con - power in, status relay connector- Digikey 277-2418-ND (mate provided with unit) For AC adapter use: the adapter comes with a threaded connector SMA for CMOS output capable of driving 50 Ohms. 3 Pin terminal connector for LVDS-
Status relay	±20 VDC, 50 ma max. (normally closed)

Environmental and Mechanical

Operating temperature	0 to 50C non-condensing (extended temperature range available)
Storage temperature	-40 to 70C
Width	3.5" (with flange)
Depth	4" (exclusive of connectors)
Height	1.2"
Weight	~8 oz

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