

High Stability Oscillators

Masterclock offers three high-stability oscillator options for the GMR Series. When locked to GPS, the OCXO 10 MHz sine wave frequency will have the same long-term stability as an atomic clock. When not tied to GPS, a precision frequency 10 MHz reference output is available as a source for laboratory use or for an RF reference, including cellular applications. The HSO option is required for all 10 MHz signal outputs.

<i>Freq. = 10 MHz</i>		HSO-1 Standard	HSO-2	HSO-3 Available only in GMR5000
Oscillator Type		TCXO	OCXO	Rubidium
Freq. Stability - Aging/Day		$\leq \pm 0.0027$ ppm (or 2.7E-9/day)	$\leq \pm 1E-9$ /day	$\pm 4E-11$ /day
Freq. Stability - Aging/Year		$\leq \pm 1.0$ ppm (or 1E-6 /year)	$\leq \pm 1E-7$ /year	$\pm 1.5E-9$ /year
Power Consumption		≤ 0.021 W	≤ 3.5 W warm up, ≤ 1.5 W steady state	≤ 14 W warm up, ≤ 8 W steady state
ROHS Compliant		Yes	Yes	Yes
Short Term Stability (Allan Variance), t =1sec.		-	-	$\leq 5E-11$
Time Drift per Year (max)		± 3 sec./year	± 0.25 sec./year	$\pm .001$ sec. / year
Phase Noise (dBc/Hz) @ 10 MHz	1 Hz	-	-	≤ -65 dBc/Hz
	10 Hz	-	≤ -110 dBc/Hz	≤ -85 dBc/Hz
	100 Hz	≤ -135 dBc/Hz	≤ -130 dBc/Hz	≤ -112 dBc/Hz
	1k Hz	≤ -135 dBc/Hz	≤ -145 dBc/Hz	≤ -130 dBc/Hz
	10k Hz	≤ -148 dBc/Hz	≤ -155 dBc/Hz	≤ -140 dBc/Hz

MASTERCLOCK, INC.

5-YEAR LIMITED PARTS & LABOR WARRANTY

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