

SPECIFICATIONS

Frequency

Range:	0.100 000 0 MHz to 309.999 999 9 MHz
Resolution:	1 Hz
Accuracy	same as frequency standard
Control:	manual by 10-position dial; remote by TTL-level parallel entry BCD or GPIB (optional)

Switching Time (to within 0.1 radian at new frequency)

100 MHz - 10 MHz digit:	20 μ seconds
1 MHz digit:	5 μ seconds
100 KHz - 1 Hz digit:	<1 μ s transient, 2 μ s delay, phase continuous

Output

Level:	+3 to +13 dBm (1V max, 50 Ω)
Flatness:	± 0.5 dB
Impedance:	50 Ω
Control:	manual by front panel control; remote by analog voltage

Spurious Outputs

	(at full power output, +13 dBm)	
	Type 1	Type 2
Discrete:	-65 dBc	-60 dBc
Harmonics:	-30 dBc	-30 dBc
Phase Noise:	-68 dBc	-63 dBc
	(0.5 Hz to 15 KHz) including effects of internal standard	
$\mathcal{L}(1\text{Hz})$:	100 Hz/ -105 dBc, 1 KHz/ -115 dBc, 10 KHz/ -123 dBc, 100 KHz/ -127 dBc	
Noise Floor:	-135 dBc/Hz	-135 dBc/Hz
Optional Phase Rotation:	0°, 90°, 180°, 270° in 90° steps 0 - 360° in .225° steps	

Frequency Standard

Internal:	OCXO	or	TCXO
	$3 \times 10^{-9}/\text{day}$		$1 \times 10^{-9}/\text{day}$
	$\pm 1 \times 10^{-9}/0 - 50^\circ\text{C}$		$\pm 1 \times 10^{-9}/0 - 50^\circ\text{C}$
	$1 \times 10^{-6}/\text{year}$		$2 \times 10^{-6}/\text{year}$
External:	10 MHz, 0.4-2.0 Vrms into 50 Ω ; 5 MHz, 0.5-2.0 Vrms into 50 Ω		
Aux. Output:	10.000 MHz, 0.4 Vrms into 50 Ω (Note: internal or external standard required for operation)		

General

Operating Ambient:	0 - 55°C, 95% R.H.
Power:	105 - 125V, 50 - 400 Hz, 40W (100, 220, 240V optional)
Dimensions:	19 x 3.5 x 17.5 inches (relay rack or bench cabinet)
Weight:	20 lbs



PTS 310 FREQUENCY SYNTHESIZER

- 0.1 MHz to 310 MHz
- new standard in performance/price, with choice of spurious suppression
- DDS standard with phase-continuous switching
- flexible phase rotation options
- +3 to +13 dBm output
- 1 Hz resolution
- fully programmable, BCD or GPIB with remote-only versions available.
- space-saving 3.5" cabinet

NOTE:

PTS 310 shown for illustration in "M and V" cabinets.
Consult pages 28, 29 for full cabinet style listing.
Consult page 27 for cabinet mechanical specifications.

