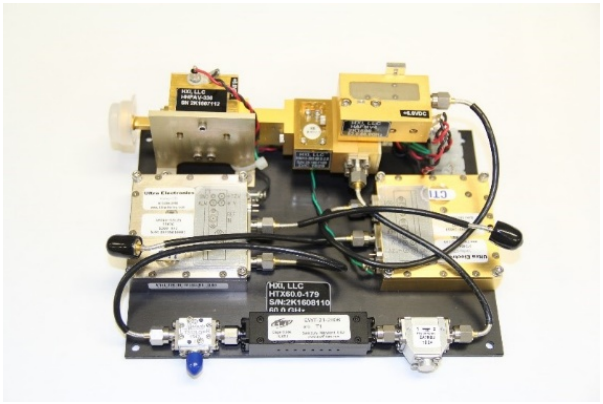
60 GHz Phase-Locked Transmitter

Model HTX60.0-179

The HTX60.0-179 Phase-Locked Transmitter operates at a center frequency of 60 GHz, which is the location of the oxygen absorption band where low elevation transmission losses are approximately 16 dB per kilometer. The Receiver can be used along with HXI's HRX60.0-180 Phase-Locked Receiver for propagation studies, material characterization, as an analog communications link or even as an FMCW or pulsed radar front end.



HXI can offer variations of this transmitter, with options such as a synthesizer in place of a fixed frequency local oscillator, a higher power, higher gain amplifier, the addition of an antenna, etc. We can also provide similar transmitters and receivers from X-Band through 110 GHz.

TRANSMITTER SPECIFICATIONS

RF Output Frequency Range	59.45 – 60.50 GHz
Input Reference Frequency	10 MHz (2 locations on transmitter)
IF Input Frequency Range	0.95 – 2.0 GHz*
Gain	19 dB nominal
Output P1dB	+14 dBm
Sideband Suppression	50 dBc minimum, 65 dBc typical
LO Suppression	35 dB minimum, 40 dB typical
Spurious In-Band	-60 dBc typical
DC Power Requirements	+6 VDC @ 625 mA typical (Amplifier & Frequency Multiplier)
	+12 VDC @ 600 mA typical (Phase-Locked Oscillator)
RF Output	WR-15, UG-385/U
IF Input	SMA Female
Configuration	Plate Mounted

*Double conversion implemented due to the low IF input frequency.