

HMC-T2000

SYNTHESIZED SIGNAL GENERATOR, 700 MHz to 8 GHz

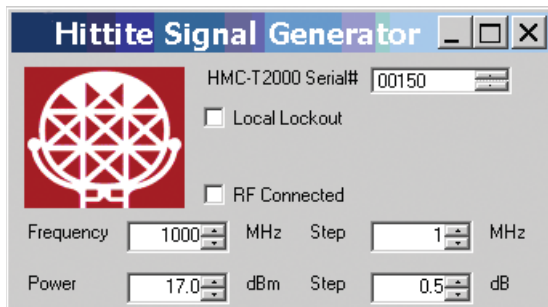
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The HMC-T2000 is an easy to implement test equipment solution designed to fulfill your signal generation needs. Built on a foundation of high quality and market leading Hittite MMICs, the HMC-T2000 provides the highest output power, lowest harmonic levels and broadest frequency range amongst signal generators of its size and cost.

This compact and lightweight signal generator also features a USB interface and innovative control software ensuring carefree integration within various test environments while improving overall productivity and equipment utilization.

Optional Software Control Via USB



Applications

- ◆ ATE
- ◆ Test & Measurement
- ◆ R&D Laboratories

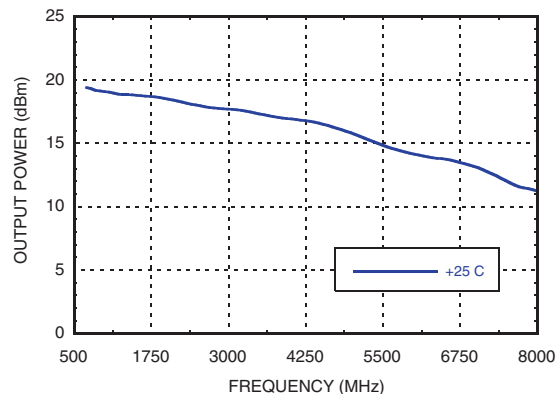
Performance

- ◆ High Output Power: +17 dBm
- ◆ Wide Frequency Range: 700 MHz to 8 GHz
- ◆ Excellent Harmonic Rejection: -40 dBc @ 1 GHz
- ◆ Spurious Rejection: < -42 dBc
- ◆ Phase Continuity Capability; Integer Mode Architecture

Advantages

- ◆ Versatile: Higher Drive Simplifies Test Set-Ups
- ◆ Efficient: Fast Frequency Switching: 200 μ S
- ◆ Accurate: Incorporates Hittite MMICs
- ◆ Flexible: Manual or Software Control

Typical Unleveled Power vs. Frequency



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Frequency

Range: 700 MHz to 8 GHz
 Accuracy: As Per Internal Ref. +/- 1.5 ppm
 Resolution: 1 MHz
 Power Slope: 0 to 0.8 dB/GHz
 Internal Reference : 10 MHz
 Aging Rate: <1 ppm/yr
 Temperature Stability: <0.5 ppm
 External Reference Input:
 10 MHz square, 200 to 1200 mVp-p
 Internal Reference Output: 10 MHz (LVTTTL)

Output Power

Frequency (GHz)	Power Output (dBm)*
0.7 - 2.6	+17
2.6 - 5.0	+15
5.0 - 6.0	+13
6.0 - 8.0	+10

* Maximum Leveled

Minimum Settable: -18 dBm @ 8 GHz
 Resolution: 0.5 dBm
 Output Source Match: < 2.0:1
 Power Accuracy: +/- 1 dB from -18 to +17 dBm

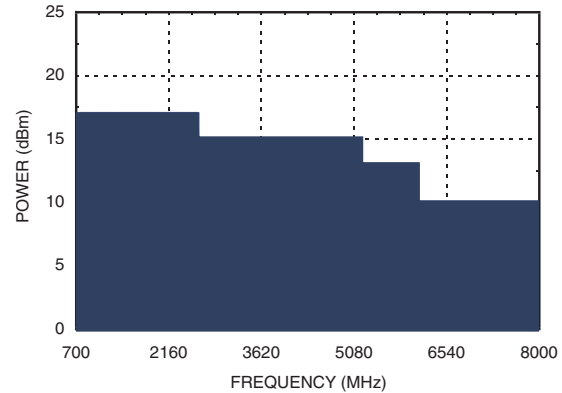
Spectral Purity

Frequency (GHz)	Harmonics			Spurious (dBc)
	2nd (@ 0 dBm)	3rd (@ 0 dBm)		
1	-40	-52		-48
4	-33	-55		-45
7	-38	-50		-42

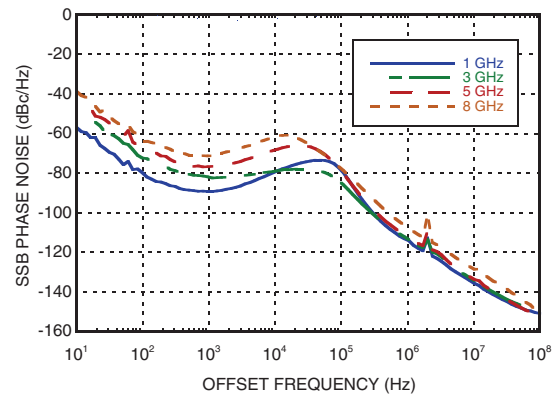
Frequency (GHz)	SSB Phase Noise					
	Offset From Carrier					
	100 Hz	1 kHz	10 kHz	100 kHz	1 MHz	10 MHz
1 GHz	-80	-89	-79	-78	-113	-135
4 GHz	-70	-79	-74	-83	-111	-133
7 GHz	-62	-71	-61	-77	-103	-127

Output Phase Noise: < -150 dBm/Hz

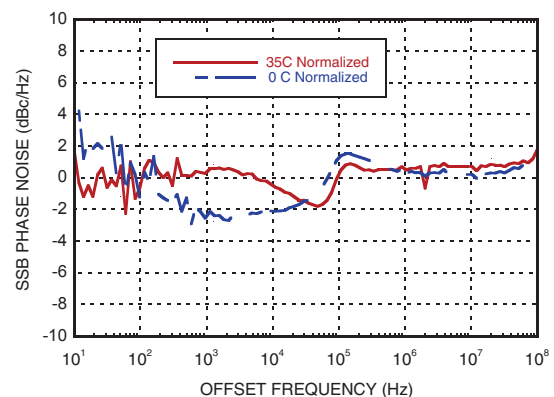
Maximum Leveled Output Power vs. Frequency



SSB Phase Noise Over Frequency



SSB Phase Noise Normalized to 25° C



HMC-T2000

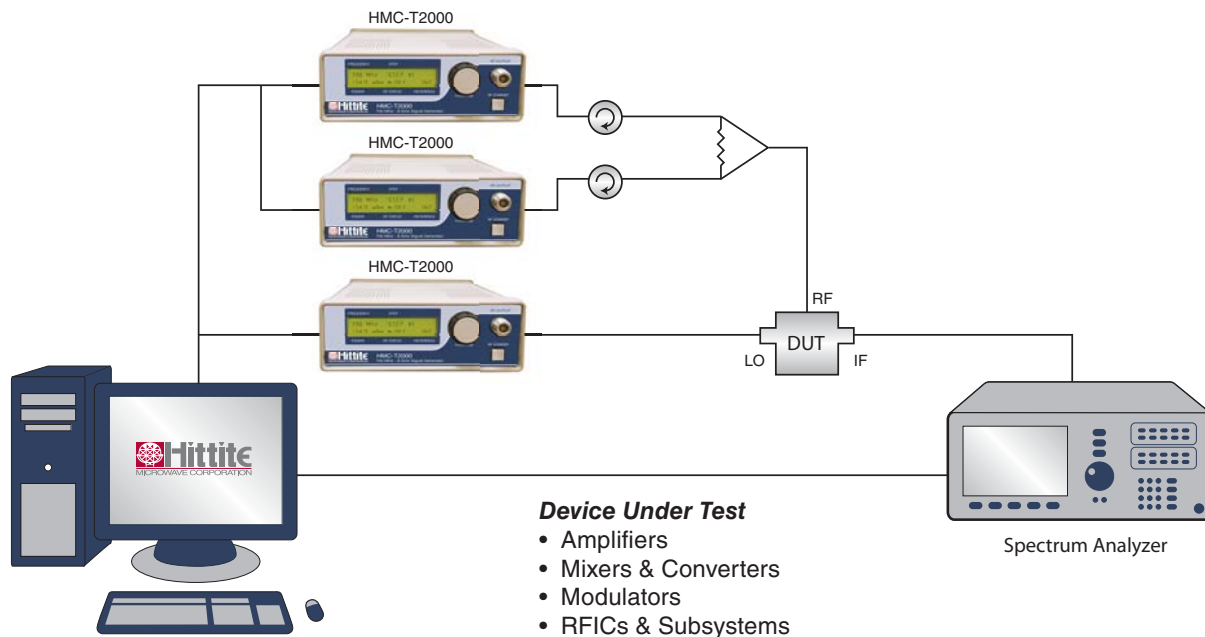
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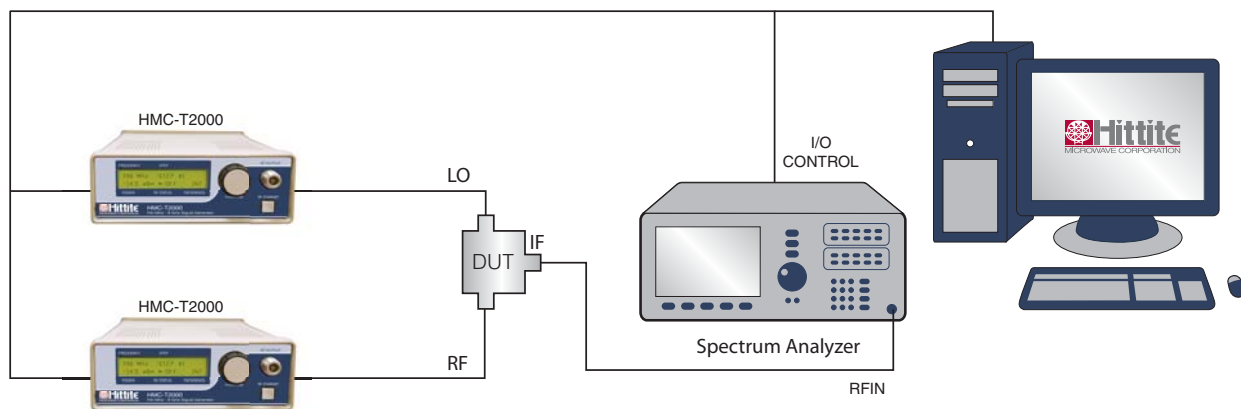
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Test & Measurement Applications for the HMC-T2000

Two Tone Third Order Intermodulation Intercept Test Set-up



Efficient Mixer Conversion Loss, Isolation & MxN Spurious Test Set-up



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Local Interface

Front Panel Rotary Knob & Display

Remote Interface

Hardware: USB (XP Drivers Supplied)
Software: Labview / LabWindows Driver (XP)
Frequency Switching Speed: < 200µ sec @100 MHz Steps

Connectivity & Control

It's compact size, lightweight, fast switching speed and USB control interface ensures a smooth integration within all test environments particularly those associated with automated test. An installation disk that accompanies each unit includes all the drivers required to remotely control the device as well as a user friendly lab-windows based GUI interface compatible with a Windows XP operating system. User control is facilitated via pull down menus that allow programming of single or swept modes in frequency and/or power. Integration of multiple units within a production test environment is easy, affordable and repeatable due to the incorporation of integer mode architecture and its ability to maintain phase coherence between frequency steps.

Customization

Built on a foundation of high quality and market leading Hittite MMICs and a scalable platform architecture, Hittite can offer new features and performance to suit your measurement needs. Our expert hardware and software design teams are ready to discuss your requirements to help you achieve your testing goals.

HMC-T2000 I/O Connections



General Specifications

Power: 100 to 240 VAC, 50 to 60 Hz, 264 VA Max.

Calibration: 1 Year

Environment (for indoor use only): 0 to 35 °C

Cooling: Convection

Input/Output: RF Out: N-type Connector
10MHz Ref : BNC Connector
USB 1.1 / 2.0

Mechanical Vibration & Shock:

MIL-STD810 Table 415.5 C-VII;

MIL-STD 202 MTD 214 1.5G

General Mechanical Characteristics

H: 2.5" [63.5mm], W: 7.25" [184mm],

D: 10.0" [254mm]

Weight 3.5 lbs [1.6 kg]

Warranty: 1 Year

Ordering Information

Part Number	Description
HMC-T2000	Synthesized Signal Generator 700 MHz to 8 GHz * Includes 100-240V AC Power Supply & North America Power Cord
Optional Power Cord	
Part Number	Region
HMC-PC01	Continental Europe, Korea
HMC-PC02	UK, Hong Kong, Malaysia, Singapore
HMC-PC03	China
HMC-PC04	Australia, New Zealand
HMC-PC05	North America
HMC-PC06	India