

Handheld Satcom Test Source



The Handheld Test Source is an easy to use all-in-one test instrument that eliminates the need for several independent test sources. It is an ideal product for the following applications:

- Signal source for measurement of different parameters of satellite up-converters
 - Intermodulation
 - 1 dB Compression Point
 - Conversion Gain
- Usable as ordinary low phase noise dual carrier signal generator
- Combined source for block-up converters (L-Band, 10 MHz and 24 V DC)

Key Features

- Single and two tone output
- 50 MHz to 180 MHz and 950 MHz to 2150 MHz output frequency
- Step size 0.5 MHz
- -45 dBm to -5 dBm output power / 0.5 dB step size
- Both synthesizers independently adjustable in frequency and power
- Low system intermodulation
- 10 MHz reference output with adjustable power
- Remote control via USB using supplied PC software (GUI)
- Power supply options: internal battery, USB or external SMPS

Product Design

The Test Source consists of a single main module, which contains the RF-section, the Reference Section and the Power Supply. The internal lithium ion battery is directly connected to the main module.

RF- and Reference Section

The main parts of the RF-Section are the two low spurious PLL-Synthesizers. The Synthesizers use a high stable internal reference of 10 MHz to generate a frequency from 50 MHz to 180 MHz and from 950 MHz to 2150 MHz with a step size of 0.5 MHz. Each signal is filtered by a frequency depended low pass filter before it is amplified and attenuated by a high dynamic attenuator to reach the desired output level in the range of -45 dBm to -5 dBm (step size: 0.5 dB).

To create a two tone signal at RF out, the two single tone signals are combined by a wideband power combiner. The output signal can be muted as well as each synthesizer. In addition to a two tone signal, a 10 MHz reference, adjustable in power (-10 dBm to 10 dBm, 0.5 dB steps) and a 24 V DC signal can be switched to the RF out-Port. The presence of the DC-signal is indicated by a red LED located next to the RF out connector.

Open questions, demo units

If you need more information about the Handheld Satcom Test from WORK Microwave or if you would like to have demo unit, please contact us via e-mail: sales@work-microwave.de or call us on: +49 8024 6408 0. We are glad to assist you.

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Frequency Range	50 MHz to 180 MHz and 950 MHz to 2150 MHz			
Frequency Resolution	0.5 MHz			
Output level	-45 dBm to -5 dBm			
Output level resolution	0.5 dB			
Level tolerance	± 1 dB			
Output impedance	50 Ohm			
Output mute	< -60 dBc			
Phase Noise	50 MHz	180 MHz	950 MHz	2150 MHz
100 Hz offset	< -110 dBc/Hz	< -100 dBc/Hz	< -85 dBc/Hz	< -78 dBc/Hz
1 kHz offset	< -115 dBc/Hz	< -105 dBc/Hz	< -90 dBc/Hz	< -83 dBc/Hz
10 kHz offset	< -120 dBc/Hz	< -110 dBc/Hz	< -95 dBc/Hz	< -88 dBc/Hz
100 kHz offset	< -140 dBc/Hz	< -130 dBc/Hz	< -115 dBc/Hz	< -108 dBc/Hz
1 MHz offset	< -150 dBc/Hz	< -150 dBc/Hz	< -135 dBc/Hz	< -128 dBc/Hz
Spurious (single tone)	50 MHz to 180 MHz		950 MHz to 2150 MHz	
< 1 MHz offset	< -75 dBc		< -45 dBc	
elsewhere	< -75 dBc		< -70 dBc	
Harmonics (single tone)	< -30 dBc			
System Intermodulation	50 MHz	180 MHz	950 MHz	2150 MHz
Pout < -5 dBm	< -60 dBc	< -60 dBc	< -60 dBc	< -60 dBc
Pout < -18 dBm	< -85 dBc	< -85 dBc	< -85 dBc	< -80 dBc
Pout < -25 dBm	< -90 dBc	< -90 dBc	< -85 dBc	< -80 dBc
Reference Output	10 MHz, -10 dBm to +10 dBm, 0.5 dB steps			
Reference Frequency stability	± 1 x 10 ⁻⁷ , 0°C to 50°C ± 2 x 10 ⁻⁹ per day			
Temperature range				
charging battery	0°C to +40°C			
operating	0°C to +50°C			
storage	-20°C to 50°C			
Interface	USB 2.0			
Power supply	ext. 24 V DC SMPS, USB, internal lithium ion battery			
Power consumption				
charging battery	max. 12 W			
else	max. 6 W			
Connectors				
RF out:	50 Ohm SMA female			
REF out:	50 Ohm BNC-female			
USB 2.0	USB Standard type B			
Weight	approx. 1.5 kg			
Dimensions (L x W x H)	250 x 125 x 74 mm			

Technical data subjected to change.

Order Information:

Model No. HTS-VL