

Time and Frequency Frequency Distribution Unit Model: 8451A



Application - Defense (Military) • SatCom • Wireless

- Precise Reference Frequency Distribution
- Communications Networks
- Satellite Ground Stations
- Test and Measurement Systems

Specifications:

- High Output to Output and Input to Input Isolation
- Extremely Low Contributed Phase Noise and Spurious
- Optional Ethernet Interface for Status and Control
- Optional Internal Oscillator (Ovenized Crystal or Rubidium)
- Single or Dual Redundant Frequency Inputs and Power Supplies, Automatic or Manual Switchover for Input Frequencies



Description:

The Model 8451A is designed for precise reference frequency signal distribution applications, through a range of 1 MHz - 20 MHz. Highly desirable features for this application include redundancy, very low phase noise, high output to output and input to input isolation, with low harmonic distortion and spurious. Single or redundant inputs, with automatic or manual switchover, 12 separately buffered outputs, as well as single or redundant power supplies are provided. Available as an option is an internal oscillator, either ovenized crystal or rubidium, for standalone reference frequency distribution or to provide a redundant input source for systems when only one frequency input is present. Fault sensing and front panel indications are provided for each input and output channels as well as power supplies. All fault / status functions are summed together providing one common fault output. Complete monitoring and control is provided with an optional Ethernet interface. Coupled with the Ethernet interface is a variable gain feature that allows remote, overall signal gain setting of the unit.

Specifications:

Frequency Response:	1 MHz to 20 MHz, ± 1 dB	1MHz to 30 MHz, +2dB
Phase noise floor:	-170 dBc, typical	
Spurious:	> -100 dBc	
Harmonic Distortion:	> -40 dBc, at 1 VRMS out, over the frequency range of 1 MHz to 20 MHz	
Isolation, Output to Output:	> 100 dB @ 10 MHz	
Isolation, Input to Input:	> 100 dB @ 10 MHz	
Input Impedance:	50 Ω	
Output Impedance:	50 Ω	
Gain:	Fixed, unity, for a maximum output level of 1 VRMS (+13 dBm)	
Inputs:	Two, A and B	
Outputs:	Twelve	
Connectors:	BNC female, standard with TNC female available as an option	

Specifications subject to change without notice.

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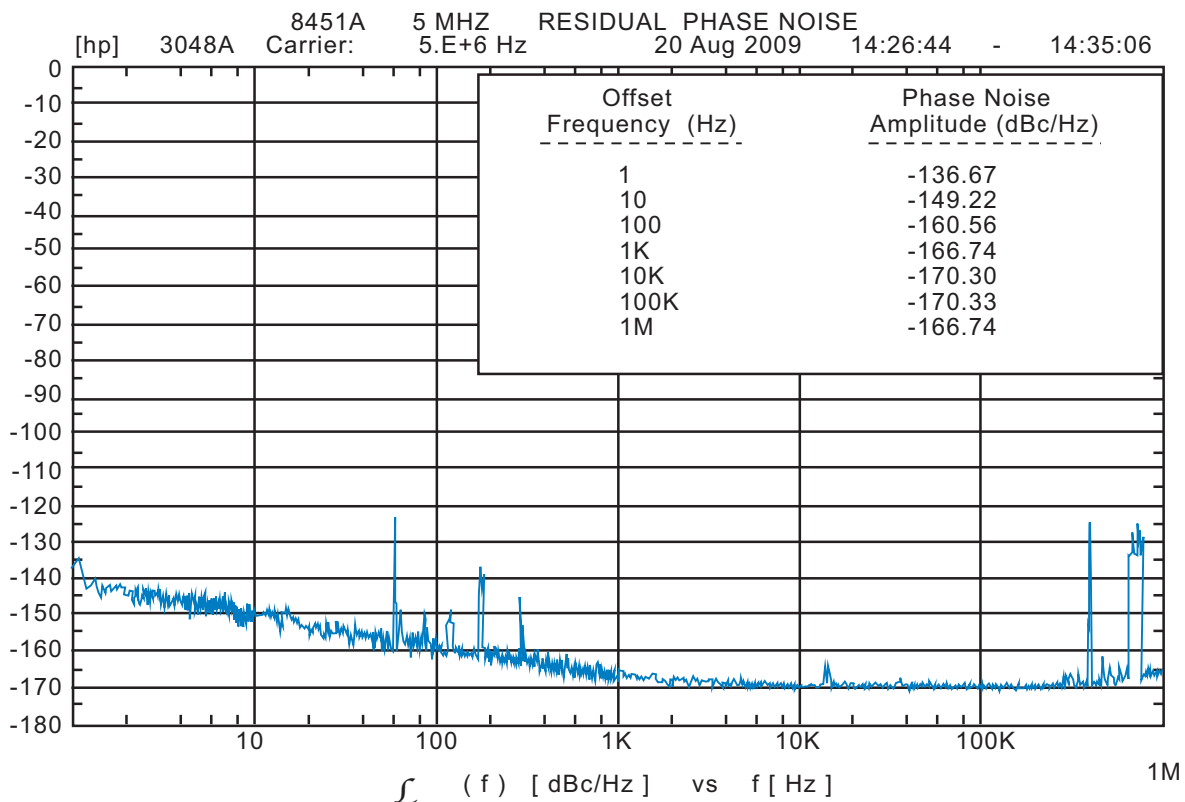
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Specifications (Cont'd):

Indicators, Fault / Status, Front Panel:	Bi-color LEDs, green for reference signals and power supplies good, red for faults. Green for A or B Input on-line.
Controls, Front Panel:	Input A, B, or Auto mode select and Fault Reset
Fault Summation Output:	Open collector, sinks 20 mA maximum, +12 V Maximum. Active logic "low" for any unit fault.
Dimensions:	1.72 inches high (1 RU), 19 inches high, and 12 inches deep (excluding front panels handles and rear panel connectors)
Weight:	~6 lbs, without external power supplies
Finish:	Charcoal (Pantone color PMS 433) front panel with white nomenclature, clear anodize all other surfaces
Operational Temperature:	0° C to +50° C
Humidity:	Up to 95%, non condensing
Power Supply:	+24 VDC, redundant, supplied by external desk-top types, 60 watts maximum output, 100 - 240 VAC power input, with IEC 320 type AC power connector.
Power Supply Operational Temperature:	0° C to +40° C.
Power Supply Weight:	1 pound

Typical Phase Noise



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