



DPA-10-20-HA: 0 – 20 MHz Pulse/Frequency/Time Code Distribution Amplifier



Provisional Front Panel Picture

Key Features

- 2 inputs: 12 outputs
- Input coupling selectable AC or DC coupled
- Free Windows Software
- Ultra-Low Allan Deviation
- Frequency: 0 Hz – 20 MHz (usable to 50 MHz)
- Pulse Frequency: 1PPS to 20 MPPS
- IRIG Time Codes either AM modulated or DC shift
- Ethernet Interface with Embedded Web Page
- Free Windows Control Software

General Description

The DPA-10-20-HA is a universal distribution amplifier capable of distributing frequency, squarewave, pulses or time code signals all in one 19" rack mount 1U device. It has two inputs that can be configured for manual or automatic switchover (A to B, B to A etc).

Full monitoring and control is achieved via an Ethernet interface. An embedded web page can be used to monitor and control the unit from anywhere in the world. Alternatively, free console software is supplied.

Options

Various options are available. If the option you require is not shown, just email us your requirements and we will advise whether it can be designed.

- Option 02: G703 compliant outputs. Outputs levels are -1.2V to +1.2V into a 75 Ω load.
- Option 03: Internal DDS, 0-80 MHz in 1 μ Hz steps. Adjusted by RS232. This option is usually fitted with option 02 to give 2.048 MHz G703 outputs from a 10 MHz input.

Miscellaneous Information

The DPA-10-20-HA is a highly reliable unit with an MTBF of over 60 years. The DPA-10-20-HA is housed in a fully screened 19" rack mount case and operates from a 100 - 240 VAC supply (usable 90 – 260 VAC) or external 12 V DC (option). The DPA-10-20-HA is CE marked for sale within the EEC.

DPA-10-20-HA SPECIFICATIONS

Specification Parameter	Specification	Comments
Frequency Input (Sinewave)		
Frequency Range	0 to 20 MHz	Usable to > 50 MHz
Input Impedance (sinewave)	50 Ω or 600 Ω	Selectable using Ethernet Interface
Maximum Input Level (50 Ω)	+18 dBm	Damage Level +20 dBm
Frequency Output		
Frequency Flatness (0 – 20 MHz)	< ± 0.5 dB	Typically, < 0.4 dB
Gain	0 dB	Other gains optionally available
Harmonics	-45 dBc	Typically, -48 dBc
Output Impedance (Standard unit)	50 Ω	
Phase Noise (Offsets 1 / 10 / 100 Hz)	-130 / -140 / -150 dBc/Hz	Typical
Allan Deviation	< 3×10^{-14} @ 1 second	< 3×10^{-16} @ 1000 sec
Channel to Channel Isolation	> 70 dB	Typical
Pulse / DC IRIG Time Code Input		
Frequency	1PPS to 20 MPPS	
Level	0-6V p-p	
Duty Cycle	0 to 100%	
Input Impedance	50 Ω or 600 Ω	
Pulse / DC IRIG Time Code Outputs		
Frequency	1PPS to 20 MPPS	
Duty Cycle	0 to 100%	
Rise / Fall Times	< 1 ns typical	With 50 ohm load
Output to Output Match	< 2.5 ns (joined mode 12 outputs)	Typically, < 2 ns. Optional < 1 ns
Propagation delay	< 10 ns	Input to any output
Input Impedance	50 Ω or 600 Ω	
AM IRIG Time Code Input / Outputs		
Frequency	1 PPS to 10 MPPS	
Level	0-5 V p-p	
Modulation Frequency	Up to 1 MHz	
Code	Format: Any IRIG format, IEEE 1344, NASA 36, 2137, XR3	
Input Impedance	50 Ω or 600 Ω	
General		
Power: AC / DC	100 - 240 VAC	30 Watts max / 1.0Amps with opt 03
Size and weight	483 x 300 x 44 mm and 4.6 kg	Width x Depth x Height
Ambient Operating Temperature	-10°C to +60 °C	
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Specifications subject to change without notice (010322)