



DPA-10-20-E: 0 – 10 MHz Squarewave Distribution Amplifier



Key Features

- 0 – 10 MHz TTL Input
- 5,10,15 or 20 x TTL outputs
- Outputs drive 50 ohm loads
- Good channel isolation
- Ideal for 1 pps distribution. Matched timing outputs.
- Available in other frequencies from 1 to 100 MHz
- Optional Alarm Relay, enabled on alarm condition
- Many other options available, inc. G703 outputs.

General Description

The DPA-10-20-E can be used to synchronize up to twenty instruments to a TTL input. The input can be from 0 to 10 MHz. A typical input is the 1 pps output from a GPS receiver or another timing generator.

Outputs

There can be 5, 10, 15 or 20 outputs in a 1U case or 40 outputs in a 2U case. Each output is isolated from the input and each other. Therefore, the reference oscillator connected to the DPA-10-20-E is protected against load variations, short circuits etc. that may be applied to the outputs. The output frequency is exactly the same as the input.

For a 0 – 2 MHz input, all outputs are aligned to each other to typically within 1 ns for 5 or 10 outputs and 4 ns for 15 or 20 outputs.

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 01: Increased output level. 0 to > 4.6V into 50 ohms.
- 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 along with option 02 to give 2.048 MHz G703 outputs from a 10 MHz squarewave input.

Applications

The DPA-10-20-E: 10 MHz Pulse Distribution Amplifier is ideal for use in calibration or standard laboratories, radio repair workshops or production facilities.

Miscellaneous Information

The DPA-10-20-E is a highly reliable unit with an MTBF of over 60 years. The DPA-10-20-E 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. The DPA-10-20-E is CE marked for sale within the EEC.

DPA-10-20-E SPECIFICATIONS

Specification Parameter	Specification	Comments
Input		
Frequency Range	0 to 10 MHz	Higher frequencies optionally available
Input Impedance (sinewave)	1 k ohm approx	
Input Level	TTL, 0 -3 V minimum	0-5.5V maximum
Connector	BNC	
Outputs		
Output Waveform	TTL	
Number of Outputs	5, 10, 15 or 20 outputs	40 in a 2U case
Output Frequency	Exactly the same as the input frequency	Divided output optionally available
Output level (TTL)	Typically, 0 -3.2V (50 Ω)	0 - 5V into open circuit
Output Level (option 02)	-1.2V to +1.2V into 75 Ω.	G703
DDS Generator (option 03)	0-80 MHz output	Requires 10 MHz squarewave input
Duty Cycle (with squarewave input)	Output duty same as input duty	
Jitter (1 second, Allan Deviation)	< 0.8 ps	Typical
Risetime	< 10 ns typical	Typically 4 to 7 ns
Delay Match between outputs (assumes input rise-time < 10 ns)	< 2 ns for 5 or 10 output versions < 10 ns for 15 or 20 output versions	Typically < 1 ns for 5 or 10 outputs Typically < 4 ns for 15 or 20 outputs
Propagation delay (input to output)	< 50 ns	Typically < 30 ns for 0-5V input
Connector	BNC	
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 +50 °C	
Precision Test System Contact Details		
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Full specifications available from www.ptsyst.com. Specifications and features subject to change without notice (111016)