

PTS PRECISION TEST SYSTEMS

PTS55 10 MHz Distribution Amplifier



Key Features

- 100 kHz Input
- AGC Controlled
- 5 Sinewave Outputs
- 1 Squarewave Output
- Slave Output
- Low Phase Noise
- High Isolation
- AC or DC power
- CE Marked

General Description

The PTS55 can be used to synchronize up to six instruments to a 100 kHz reference input. The PTS55 incorporates AGC (automatic gain control) so that a 100 kHz input can be varied from -5 dBm to +20 dBm without the outputs changing by more than 1 dB. Inputs as low as -10 dBm still produce a useable output. The pure sinewave output (harmonics are 70 dB down) enables the PTS55 to work in the most demanding applications.

Outputs

There are five, 10 MHz, sinewave outputs. Each 10 MHz output is isolated from the input and each other. Therefore the reference oscillator connected to the PTS55 input is protected against load variations, short circuits etc. that may be applied to the outputs.

A sixth squarewave output can be switched in frequency from 10 MHz, 5 MHz, 2 MHz, 1 MHz, 100 kHz and 1 Hz. This output is ideal for instruments that do not use a 10 MHz timebase. A rear slave output can be connected to a second PTS55 (or more) to give up to twelve outputs (or more). See "Applications" below.

Applications

The PTS55 10 MHz Distribution Amplifier is ideal for use in calibration or standard laboratories, radio repair workshops or production facilities. By using the rear slave output, many PTS55's can be connected together to give multiple outputs

Miscellaneous Information

The PTS55 is a highly reliable unit with a MTBF of over 20 years. The PTS55 is housed in a fully screened steel case and operates from a 115 VAC or 230 VAC supply or external 12 V DC. The PTS55 is CE marked for sale within the EEC.

Options

The PTS55 series can be modified upon special request to work at different frequencies than 10 MHz. For example the PTS50-15 accepts a 15 MHz input and has 15 MHz outputs. Refer to the relevant brochures for more information. Other options include 19" rack mount case and alarm relay outputs (relay activated on loss of input signal or AC/DC power).

PTS55 SPECIFICATIONS

Specification Parameter	Specification	Comments
Input		
Frequency	100 kHz	
Bandwidth (-3 dB)	> ± 50 kHz	
Impedance	50 Ω	
Input VSWR	< 1.3 @ 100 kHz	
Input Level Range (100 kHz input)	+20 dBm to -5 dBm	Output Changes by < 1 dB
Outputs 1 to 5		
Output Waveform	Sinewave	50 Ω BNC Connector
Output Frequency	Same as the input frequency	
Output VSWR (50 Ω)	< 1.5:1 @ 10 MHz	
Output level (100 kHz input)	From 0 dBm to +10 dBm	Each output internal adjustable
Harmonic Distortion at 10 MHz	-70 dBc	Output set to +10 dBm
Jitter	< 2 ps rms	
Input to Output Isolation	> 100 dB	Typical
Output 6		
Output Waveform	Squarewave	Front Panel BNC Connector
Level	0 - 5V (open circuit) 0 - 2.7 V (50 Ω)	TTL Compatible
Frequency	10,5,2,1 MHz, 100 kHz and 1 Hz	1 Hz = 1 pulse per second
Risetime	< 25 ns	At 1 MHz
Jitter (1 second, Allan Deviation)	< 2 ps rms	
Output 7 (Slave Output)		
Output Waveform	Sinewave	Rear Panel BNC Connector
Phase Noise (Typical)		
At 10 Hz Offset	-125 dBc/Hz	Measurement uncertainty ± 4 dB
General		
Power (AC)	115 VAC or 230 VAC $\pm 10\%$	15 Watts max
Power (DC)	11-13 VDC @ 0.7 Amps	
Size and weight	215 x 265 x 35 mm and 2.8 kg	Width x Depth x Height
Ambient Operating Temperature	-10°C to +50 °C	
Options		
Option 01	19" Rack Mount case	
Option 02	Traceable Calibration Certificate	Traceable to UKAS or NIST
Option 03	Alarm Relay Outputs	Activated if input signal/power is lost

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Full specifications available from www.ptsyst.com. Specifications and features subject to change without notice (101221)