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PW2120 - 20MHz Function Generator



Specifications

Frequency Characteristics

 Waveforms Sine Square Triangle, $\pm$ Pulse $\pm$ Ramp

Range 0.2Hz to 20MHz in 8 ranges

Resolution 5 digits

Frequency stability 0.1%

Tuning Range - Coarse 10:1, Fine 1/16% of Coarse Setting speed

Variable Duty Cycle 15:85:15 Continuously Variable.

Operating Modes - Normal, Sweep, VCG, AM, FM, Burst

Output Characteristics

 Impedance 50 ohm $\pm 10\%$

Level 20v p-p Open Circuit, 10v p-p into 50 ohm

Amplitude; variable 20dB range typical

 DC Offset Preset ± 0.1 v Variable ± 10 v open circuit, ± 5 v into 50 ohms

 Auto + negative peak of waveform 0v ± 0.1 v

 Auto - positive peak of waveform 0v ± 0.1 v

SINE WAVE

Distortion 1% typical at 1kHz

 Flatness $\pm 5\%$.45dB 10Hz to 10MHz, $\pm 10\%$ (1.0dB) 10 MHz to 20MHz

SQUARE WAVE

 Symmetry 0.2Hz to 100kHz $< 2\%$

Rise Time 20ns

TRIANGLE WAVE

 Linearity $> 98\%$ to 100kHz

TTL Output

Level 0.8v 2.4v

 Rise Time < 20 nS

Duty Cycle 50% typ.

CMOS Output

Level 0-4v to 0-14v Continuously variable

 Rise Time < 120 ns

Operation unspecified at frequencies > 2MHz

VCG (Voltage Controlled Generator Input)

Input Voltage 0-10v $\pm 1v$, 0-10v causes a 100:1 frequency change
Impedance 10k $\pm 5\%$

Sweep Operation

Mode Linear or Log
Width 100:1 continuously variable
Rate 20ms to 30s continuously variable
Sweep output 0-2v
Start/stop frequencies adjustable

Amplitude Modulation Characteristics

Source Internal or External
Modulation Depth 0-100%
Internal Modulation 1kHz
External Modulation DC to 500kHz
External Sensitivity < 10v for 100% modulation

Frequency Modulation Characteristics

Source Internal or External
Deviation 0-5%
Internal Modulation 1kHz
External Modulation DC to 500 kHz
External Sensitivity < 10v for 5% deviation

Burst Characteristics

Source Internal/External
Burst Width Continuously Variable from 5% to 90% of burst repetition rate
Repetition Rate 0.5Hz internal, DC to 500kHz external
External Level: TTL levels
Burst Frequency: Same as Main Generator frequency
Burst is always an integral number of cycles, starting and finishing at zero crossing

Frequency Counter

Accuracy $\pm 10\text{ppm} \pm 1$ count at 23 ± 5 C
Display 5 digit LED.

External Input

Frequency range 5Hz to 40 MHz,
Resolution 0.1Hz, 1Hz, 10Hz 100Hz 1kHz, automatically switched depending on input frequency
Sensitivity < 25mV rms
Impedance 1M ohm/ 100pF

Square Wave divide by 10 or 100

Auxiliary square wave outputs at 1/10th and 1/100th of the main frequency. -TTL levels

Power Source

110/230v ac 50/60Hz

Communication Port

RS-232

Part Number

105-2120

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