

FG 700-MO Series DDS 函數波信號產生器



台灣百科產品 FG 700-MO 系列是品質的直接數位合(DDS)函數信號產生器, 低噪音與低失真。結合直接數位合成科技, FG 700-MO 系列產生高精確與穩定的頻率適合您測試的精準需求。內建的觸發 / 閘極函數讓您可由外部或內部控制波形的產生, PSK 和 FSK 的功能可讓您在實驗室或通訊實驗時產生數位調變的波形。而 FG 700-MO 系列新增了調幅/調頻(AM/FM)模組、頻率計數器(Counter)等功能, 讓產品功能更加的完整。

特點

- 多功能直接數位合成函數波信號產生器
- 低失真、低雜訊(訊號小至1mV峰值輸出)
- 數位設定線性和對數掃描功能(最小掃頻間隔0.1Hz)
- 飛梭觸發和閘控功能
- LCD同步顯示輸出頻率/振幅/直流偏移量/工作週期
- 輸出短路保護及輸入電壓保護 $\leq 20V_{peak}$
- FSK、PSK調變方式
- 外部及內部的AM / FM調變 (FG 710F-MO/720F-MO)
- 數位式設定工作週期0.1%~99.9% (FG 710F-MO/720F-MO)
- 20KHz鋸齒波輸出功能 (FG 710F-MO/720F-MO)
- 內建100MHz頻率計數器和量測外部頻率的工作週期 (%) (FG 710F-MO/720F-MO)

Data Sheet

Model	FG 708S-MO	FG 710F-MO/720F-MO
Output Waveform Frequency Range	Sine, Square, Sync Output, Pulse : 100mHz ~ 8MHz Triangle : 100mHz ~ 1MHz DC : ±10V at open-circuit, ±5V at 50Ω load	Sine, Square, Sync Output, Pulse : 100mHz ~ 10M/20MHz Triangle : 100mHz ~ 1MHz Ramp Up , Ramp Down : 100mHz ~ 20KHz DC : ±10V at open-circuit, ±5V at 50Ω load
Frequency Resolution	100mHz or 6 Digits Display	
Output Impedance	50Ω ± 5%	
Amplitude	1mV to 20Vp-p (open-circuit),0.5mV to 10Vp-p(into 50Ω load)	
Resolution	10mV@0.1V~9.99V,1mV@10mV~99mV,0.1mV@1mV~9.9mV,0.01mV@0.90mV~0.99mV (Depend on Attenuation)	
Accuracy	Typical 1% , test at 1KHz 9Vp-p Sine @ 50Ω load	
Output Attenuation	0 db, -20 db, -40 db, -60 db	
FUNC_OUT Self Protection	FUNC_OUT Short Circuit Protection Reverse Voltage Protection up to 20 Vpeak	
DC_Offset and DC Output	±10V at open-circuit, ±5V at 50Ω load	
Resolution	10mV@±9.99V,1mV@±99mV,0.1mV@±9.9mV,0.01mV@±0.99mV (Depend on Attenuation)	
Accuracy	1% ± 5 counts (Amplitude Knob at Maximum Position)	
Sine Wave Harmonic Distortion	DC to 100KHz < -55 dBc typical 100KHz to 1MHz < -45 dBc typical 1MHz to 8MHz < -35 dBc typical	DC to 100KHz < -55 dBc typical 100KHz to 1MHz < -45 dBc typical 1MHz to 10M/20MHz < -35 dBc typical
Spurious(non harmonic)	DC to 1MHz < -55 dBc typical	
Total Harmonic Distortion	DC to 100KHz < 0.3%	
Square Wave	Rise / Fall time ≤ 12nS for 10Vpp @ 50Ω load Overshoot < 5% of Vp for 10Vpp @ 50Ω load	
Pulse Generator	Frequency Range : 100mHz to 8MHz Amplitude : 0 to 10V / 0 to -10V / ±10V Duty Cycle : 100mHz to 5MHz : 20% ~ 80% : 5MHz to 8MHz : 40% ~ 60%	Frequency Range : 200mHz to 20KHz 20KHz to 400KHz Amplitude : 0 to 10V / 0 to -10V / ±10V Duty Cycle : 200mHz to 20KHz : 0.1% ~ 99.9% : 20KHz to 400KHz : 2% ~ 98%
Triangle Wave Linearity	99% up to 100KHz	
Sweep (Linear / Logarithmic)	Start Frequency, Stop Frequency, and Sweep Step Sweep Type: Up/Down, Up-Down	
	Output Level : Low Level ≤0.6V@50Ω High Level ≥1V @50Ω	
Sync Output	Frequency Range : 100mHz ~ 8MHz Output Impedance : 50Ω.	Frequency Range : 100mHz ~ 10M/20MHz Output Impedance : 50Ω.

Data Sheet

Model	FG 708S-MO	FG 710F-MO/720F-MO
Modulation Characteristics		
FM	-	Modulation : Sine, Square, Triangle Frequency : 100mHz to 10KHz Peak Deviation : 4~5 % of Max Frequency Modulation Source Internal : 400 / 1000Hz Sine Waveform External : Any Waveform @ 5.5 Vpeak Max
AM	-	Carrier : Sine, Triangle Modulation Source : Internal / External Internal : 400 / 1000Hz Sine Waveform External : Any Waveform @ 5.5 Vpeak Max Modulation Depth : 0% to 100% (±5%)
FSK	Function : Sine or Square or Triangle Frequency Range : 100mHz to 8MHz Internal Rate : 400 / 1000Hz Source : Internal / External	Function : Sine or Square or Triangle Frequency Range : 100mHz to 10M/20MHz Internal Rate : 400 / 1000Hz Source : Internal / External
PSK	Function : Sine or Square or Triangle Frequency Range : 100mHz to 8MHz Internal Rate : 400 / 1000Hz Phase Setting : 0.0000 to 360.0 Degree Source : Internal / External	Function : Sine or Square or Triangle Frequency Range : 100mHz to 10M/20MHz Internal Rate : 400 / 1000Hz Phase Setting : 0.0000 to 360.0 Degree Source : Internal / External
Trigger/Gate		
Trigger	Trigger Source : Manual Trigger (Rotary Push Trigger) / External Trigger Main Frequency Setting Range : 100mHz to 100KHz	
Gate	Gate Source : Manual Gate (Rotary Push Trigger) / External Gate Main Frequency Setting Range : 100mHz to 8MHz	Gate Source : Manual Gate (Rotary Push Trigger) / External Gate Main Frequency Setting Range : 100mHz to 10M/20MHz
Frequency Counter		
Measuring Range Accuracy	-	Frequency Range : 4Hz to 100MHz Accuracy : Time Base Error ± 5 counts
Resolution	-	7 Digits or (99.9999)
Low Pass Filter (LPF)	-	Manual
Time Base Stability	-	50MHz ± 25 ppm (23.5 ± 5°C) Optional TCXO Time Base Available
Input Level Attenuation	-	0dB , -20dB
Sensitivity	-	Standard: 4Hz~50MHz /-20dbm @50Ω Typical 50MHz~80MHz /-10dbm @50Ω Typical 80MHz~100MHz /-5dbm @50Ω Typical
General Characteristics		
Power Source	AC 115 V / 230V ±10%, 50 / 60Hz	
Operation Environment	0°C ~ 40°C, relative humidity below to 80% , Storage Temperature : - 20°C ~ 70°C	
Dimension	235mm(W)× 95mm(H)×280mm(D)	
Weight	3 kg	
Accessories	Operating manual, AC power cord.	