TFN TG96

Multi-standard RF signal generator signal source

Excellent solutions for rapid testing and integration

Overview

Multi-Standard Signal Generator Provides Diversified Product Choices under Different Functional Requirements and Different Application Scenarios. Each Type of Product Has Outstanding Features in Its Function, Which Represents the Focus of Its Testing Field. The Signal Generator Has Various Important Analog Modulation Functions (AMFM/Φ M Pulse Modulation) and Various General Digital Modulation Functions (Ask/PSK/FSK) and a Variety of Customizable Special Modulation Methods (SSB/DSB/CW Modulation, Etc.) in Addition, Frequency Amplitude Scanning, Amplitude Frequency Scanning, Linear Frequency Modulation, functions Such as Low Frequency Transmission and Frequency Conversion Are Integrated into the Instrument, Making the Signal Generator a Flexible and Universal Instrument.

Overview of main features of the product

- The Frequency Range Is 9KHz to 6.0GHz, Covering a Wide Range of Application Scenarios;
- Large dynamic range power output, excellent level accuracy and level repeatability;
- Supports AM, FM, and M, with a maximum modulation rate of 1MHz;
- Support pulse modulation, combined with linear frequency modulation function, can simulate radar signal output;
- Support multiple standard digital debugging signal output;
- Supports the internal low-frequency output function, which can generate various function waveform;
- It can be used as an upconversion device, allowing external input intermediate frequency signals for frequency conversion processing;
- Supports LAN/USB communication interfaces, which can be used for remote control and data transmission;
- Good API documents provide users with system programming or application development;
- It has excellent performance and portable features.

Technical parameters

Model		TG96
Frequency		
Frequency range		9kHz~6.0GHz
Frequency resolution		0.23Hz
Internal benchmark		
Reference frequency		10MHz
Temperature stability		± 0.5ppm (option: ± 5ppb)
Aging rate		± 1ppm/year (option: ± 0.1ppm/year)
Internal Reference output	Typical value	10MHz，+2dBm
Amplitude/frequency scan		
Scan method		Step scan, list scan
Scan mode		Single, continuous
Scan range		Instrument range/instrument frequency range
Step Change		Linear variation
Scan points	Step scan	2~65535
	List scan	2~16383
Residence time		20ms ~ 50s
Trigger mode		Automatic and external triggering
Spectral purity		
Harmonic	Typical value	≤-40dBc
Non-harmonic	Typical value	≤-60dBc
Single chip with phase noise	f= 1GHz	-98dBc/Hz@10kHz
Amplitude		
Output Power Range	9kHz~50kHz	-120dBm~0dBm
	50kHz ~ 6.0GHz	-120dBm~+10dBm
Set resolution		0.1dB
Level uncertainty		
Level error		≤±1dB
VSWR		≤ 1.8

Level setting		
ALC function		Yes
ALC dynamic range		50dB (typical)
Level setting time		≤5ms(ALC open)
Maximum reverse power		1W
Internal modulation source (LF)		
Waveform		Sine wave, Fang Bo, triangular wave, sawtooth wave
Frequency range	Sine wave	0.1Hz ~ 500kHz
	Fang Bo	0.1Hz ~ 20kHz
	Triangular wave, sawtooth wave	0.1Hz ~ 100kHz
Frequency resolution		0.1Hz
Output voltage	Set range	200mVp-p ~ 2.0Vp-p
	Resolutio	1mV
Linear frequency modulation		
Working mode		Normal scan, positive/negative slope scan
Scan range	Maximum range	20MHz
Scan points		2~65535
Scan rate		20ns ~ 20ms
Analog modulation		
Modulation source selection		Internal/external
AM	Modulation depth	0%~100%
	Modulation rate	20Hz~1MHz
FM	Maximum frequency offset	2MHz
	Modulation rate	20Hz~1MHz
ΦM	Modulation phase	0°~360°
	Modulation rate	20Hz~1MHz

Pulse modulation		
Up/down time	0%/90%	100ns (typical)
Pulse period	Set range	300ns ~ 160s
	Resolution	100ns
Pulse width	Set range	200ns~85s
	Resolution	100ns
On/off ratio	Typical value	70dB
Trigger mode		Automatic, external trigger, key trigger
RF upconversion device		
Input intermediate frequency range		200MHz±10MHz
Input signal amplitude range		-50dBm ~ 0dBm
Output signal frequency		301MHz~6.0GHz
Output signal amplitude		-120dBm ~ +10dBm
Digital Modulation		
Modulation source		Internal/external
Modulation bandwidth	External modulation	≤ 1MHz
	Internal modulation	≤ 1MHz
External data input	Data format	Modulation sequence
Modulation Format		ASK/2FSK/4FSK/8FSK/2PSK/4PSK/8PSK
Molding filter		——
Interface		
RF output		N type, 50Ω
LF output		BNC, 50 Ω
Functional interface	Interface name	External Intermediate Frequency Input, External Pulse Modulation Input, External Trigger Input, External Modulation Input, 10M Reference Input and Output
	Interface Type	BNC, 50 Ω
USB communication interface		USB 2.0 (device/host)
LAN communication interface		10/100 Base-T
Basic data		
Operating temperature range	Typical range	-10C to + 45#
Storage Temperature range		-40# to + 70#
Power supply	AC	110V~240V 50/60Hz
Size	Length x width * height	430mm×380mm×100mm
Weight		≤3kg

Order information

Configuration	Description	Order Number
Host	RF signal source	TG96
Standard accessories	Quick Guide (printed)	
	CD (User Manual, Programming Manual)	
	Power cord (standard AC220V power cord)	
Option	RF upconversion device	SG2000-RFUC
	Analog external audio modulation	SG2000- AMOD
	High stability Time Base option	SG2000-OCXO
	Power meter control kit	SG2000-PMC
	Compact omnidirectional antenna (0.3~6GHz)	OA750
	Handheld directional antenna (0.6~8GHz)	DA800