

ATF05C

DDS Function Generator

5MHz



INTRODUCTION

ATF05C Function generator uses Direct Digital Synthesis (DDS) technology. Its outstanding performance and system features make it a perfect solution for your testing requirement. The simplified and optimized design of the front panel and dual-language (English/Chinese) TFT display interface make your testing much easier for operation and observation. Additionally, the extendable optional functions can also improve your system characteristics.

ATF05C

40mHz~5MHz

FEATURES

- Direct Digital Synthesis(DDS) technology, 2 independent output channels, LCD display
- 32 kinds of standard or build-in fixed waveforms
- Minimum stable output waveform: 1mV(50)
- Multiple modulation functions: FM, FSK, ASK, PSK
- Frequency sweep, amplitude sweep and burst functions
- Over-voltage, over-current, output short-circuit and reverse voltage protections
- Optional configurations: Frequency Counter, Power Amplifier

SPECIFICATIONS

Output A Characteristics

WAVEFORM	Waveform type	32 kinds, such as Sine, Square, Triangle, Pulse etc	
	Waveform length	1024 points	
	Sample rate	100 MSa/s	
	Vertical resolution	8 bits	
	Harmonic rejection (sine)	$\geq 40\text{dBc}$ (< 1MHz), $\geq 35\text{dBc}$ (1MHz~20MHz)	
	Total distortion(sine)	$\leq 1\%$ (20Hz ~ 200kHz)	
	Rise/fall time of square	$\leq 35\text{ns}$	
	Overshoot	$\leq 10\%$	
	Square duty cycle	1% ~ 99%	
	Frequency range	40mHz ~ max. frequency(sine) , 40mHz ~1MHz(other waveforms)	
FREQUENCY	Frequency Resolution	40mHz	
	Frequency Accuracy	$\pm (50\text{ppm}+ 40\text{mHz})$	
AMPLITUDE	Amplitude range	2mVpp ~ 20Vpp 2mVpp ~ 15Vpp 2mVpp ~ 8Vpp	40mHz~10MHz (high impedance) 10MHz~15MHz (high impedance) 15MHz~20MHz (high impedance)
	Amplitude Resolution	20mVpp (amplitude>about 2 Vpp), 2mVpp (amplitude<about 2Vpp)	
	Amplitude Accuracy	$\pm (1\%+2\text{mVrms})$ (high impedance,1kHz,sine)	
	Amplitude Flatness	$\pm 5\%$ (<10MHz), $\pm 10\%$ (>10MHz)	
	Amplitude stability	$\pm 0.5\%$ / 3 hours	
	Output impedance	50 Ω	
OFFSET	Offset Range	$\pm 10\text{V}$ (high impedance, attenuation 0dB)	
	Offset accuracy	$\pm (1\% + 20\text{mVdc})$	
SWEEP	Sweep Type	Linear sweep or frequency or amplitude	
	Sweep range	free to set the start and stop points	
	Sweep step	larger than any figure of the resolution	
	Sweep rate	10ms~60s/step	
	Sweep mode	Up, Down, Up-Down, Single	
FM	Carrier singal	Channel A signal	
	Modulating signal	internal signal of Channel B or external signal	
	FM depth	0% ~ 20%	

SHIFT KEYING	FSK	free to set the carrier and hop frequency
	ASK	free to set the carrier and hop amplitude
	PSK	Hop Phase: 0 ~ 360°, Max. resolution: 1°
	Alternate rate	10ms ~ 60s

Output B Characteristics

WAVEFORM	Waveform type	32 kinds, such as sine, square, triangle, pulse etc
	Waveform length	1024 points
	Sample rate	12.5 MSa / s
	Amplitude resolution	8 bits
	Square duty cycle	1% ~ 99%
FREQUENCY	Frequency range	10mHz ~ 1MHz(sine) 10mHz ~100kHz (other waveforms)
	Frequency Resolution	10mHz
	Frequency Accuracy	± (10ppm + 10mHz)
AMPLITUDE	Amplitude range	50mVpp ~ 20Vpp (high impedance)
	Amplitude Resolution	20mVpp
	Output impedance	50Ω

TTL Output Characteristics

TTL	Waveform	rise/fall time ≤ 20ns (square)
	Frequency	40mHz ~ 1MHz
	Amplitude	TTL,CMOS compatible, low level <0.3V,high level >4V

GENERAL CHARACTERISTICS

Power Supply	AC110V/220V±10%, 50Hz/60Hz, 50VA Max.
Dimensions	415mm x 295mm x 195mm
Weight	3.5kg

ACCESSORIES INCLUDED

Standard

• ATF05C Series DDS Function Generator	1 unit
• Power cord	1 pc
• Q9 testing cable	1 Pc
• Q9 BNC-clip test lead	1 pc
• Operation manual	1 pc
• RS232 software CD (optional)	1 pc
• RS232 cable (optional)	1 pc

Optional Parts

- RS232 interface
- Power amplifier
- Frequency counter

Reflecting Giarun-Atten's commitment to high quality standards in product, design, development, production, installation, and service, our manufacturing and distribution facility has received the ISO 9001 certification. We pursue a policy of continuous development and product improvement. Thus the specifications and picture in this Spec sheet may be changed to make product improvements at any time and without notice and is not responsible for typographical errors.

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