

FREQUENCY GENERATOR / FREQUENCY:INTERVAL COUNTER - FG10/FGC10

- DUAL FUNCTION OF WAVEFORM GENERATOR AND FREQUENCY/TIME COUNTER WITH FOCUS ON ESSENTIAL PERFORMANCE #1
- DDS WITH XTAL TIMEBASE AND CALIBRATED DAC TO MAINTAIN FREQUENCY , TIME , AMPLITUDE AND OFFSET ACCURACY
- ALL DIGITAL ENTRY - NO ANALOG VOLUME
- USB INTERFACE WITH PC - ISOLATED RS232C FOR FULL SETTING & MEASURE #2
- MAJOR PERFORMANCE #3:

FREQUENCY GENERATOR OUT SYNC	FREQUENCY SET		SWING	OFFSET	SYNC OUTPUT	RECTANGLE DUTY	FUNCTION
	SINE	0.1 Hz - 10MHz 0.1Hz STEP	+/- 5V	+/- 5V	VL < 0.2V	VARIABLE 0.1% STEP <= 12KHz	BURST
	RECTANGLE	0.1 Hz - 10MHz 0.1Hz STEP	5mV STEP RL:50Ω	5mV STEP RL:50Ω	VH > 2.0V RL:50Ω	VARIABLE 1% STEP <= 120KHz	FSK
TRIANGLE	0.1 Hz - 120KHz 0.1Hz STEP			VH > 4.3V RL:1KΩ	FIXED 50% > 120KHz	PSK	
FREQUENCY COUNTER CH1 CH2 CH3	INPUT VOLTAGE/VTH	INPUT SWING	FREQUENCY RANGE		#1 FGC10 : DUAL FUNCTION FG10 : FG ONLY #2 MEASURE ONLY FOR FGC10 #3 PARAMETERS RELATIVE TO COUNTER ONLY FOR FGC10 #4 R:Rising F:Falling		
	CH1 CH2	CH3	CH1 CH2	CH3			
		-15dBm 1GHz -5dBm 50MHz RIN:50Ω	1 Hz - 50MHz	50MHz - 1GHz			
INTERVAL COUNTER CH1 CH2	TIME RANGE	TRIGGERING #4					
		CH1	CH2	CH1 → CH2			
	100nS - 5S 20nS RESOLUTION	R → F F → R	R → F F → R	R → R R → F F → R F → F			
VIN : > 100mVpp < 10Vpp VTH : +/- 5V 10mV STEP RIN : 10KΩ							

- ACCURACY
(TA:25±5°C AC:100±10V)

FG FREQUENCY
CTR FREQUENCY/TIME
FG AMPLITUDE SINE/RECTANGLE
TRIANGLE
OFFSET

25PPM
25PPM + 1COUNT
±1.0% <= 1MHz ±2.0% <= 10MHz
±1.0%
±1.0%

- AC POWER

90 - 260V

- DIMENSION

W210MM X H113MM X D280MM

FUNCTION GENERATOR BENCH MARKING

REFERENCE TO PRODUCT DATA SHEET

SIMILAR PRODUCT	MODEL		FREQUENCY RANGE	WAVEFORM
	EW	FG10	0.1Hz - 10MHz	SINE TRIANGLE RECTANGLE DC
	Texio	FG-281	0.01Hz - 15MHz	SINE TRIANGLE RECTANGLE PULSE RAMP DC
	Agilent	33210A	0.001Hz - 10MHz	SINE TRIANGLE RECTANGLE PULSE RAMP DC NOISE

SINE			
MODEL	RANGE	HARMONICS	LEVEL FLATNESS
FG10	0.1Hz - 10MHz	< -40 dBc (1MHz - 10MHz)	< 0.3dB
FG-281	0.01Hz - 15MHz	< -35 dBc (1MHz - 15MHz)	< 0.3dB
33210A	0.001Hz - 10MHz	< -30 dBc (1MHz - 10MHz)	< 0.3dB

TRIANGLE	
RANGE	LINEARITY
0.1Hz - 120KHz	< 0.2% OF FS
0.01Hz - 100KHz	?
0.001Hz - 100KHz	< 0.1% OF FS

RECTANGLE - FIXED DUTY 50%			
MODEL	RANGE	DUTY ERROR	Tr / Tf
FG10	>120KHz - 10MHz	1% + 5nS	< 20nS
FG-281	0.01Hz - 15MHz	1% + 5nS	< 25nS
33210A	0.001Hz - 10MHz	1% + 4nS	< 20nS

RECTANGLE - VARIABLE DUTY				
MODEL	RANGE	DUTY RANGE		STEP
FG10	0.1Hz - 120KHz	2% - 98% (<= 120KHz)	0.2% - 98.8% (<= 12KHz)	1% (<= 120KHz) 0.1% (<= 12KHz)
FG-281	0.01Hz - 15MHz	20% - 80% (<= 5MHz)	40% - 60% (> 5MHz)	0.1%
33210A	0.001Hz - 10MHz	20% - 80% (<= 5MHz)	40% - 60% (> 5MHz)	?

FREQUENCY			
MODEL	STEP	UNIT	ACCURACY
FG10	0.1Hz	Hz KHz MHz S mS uS	25PPM
FG-281	0.01Hz	?	50PPM
33210A	0.001Hz	?	20PPM

OUTPUT SWING - 50Ω				OUTPUT OFFSET - 50Ω			SYNC - 50Ω	
RANGE	STEP	UNIT	ACCURACY	FS	STEP	ACCURACY	VL	VH
±0.01V - ±5V	5mV	P-P LH LEVEL	1%	±5V	5mV	1%	< 0.3V	> 2.0V
±0.05V - ±5V	0.1mV	?	3% #1	±5V	1mV	1% + 5mV	< 0.3V	> 1.0V
±0.01V - ±5V	5mV	P-P LH LEVEL RMS dBm	2% + 1mV	±5V	5mV	2% + #2 + 2mV	?	?

MUDULATION				
MODEL	AM/FM	FSK/PSK	BURST	SWEEP
FG10	N/A	YES	YES	YES
FG-281	N/A	N/A	YES	YES
33210A	YES	N/A	YES	YES

FUNCTIONALITY						
MODEL	PULSE SLOPE	PHASE SET	EXT TRIGGER	INTERFACE	SAVE/RECALL	OPTIONS
FG10	FIXED	N/A	T/I #3	USB	YES	- - -
FG-281	FIXED	YES	BNC INPUT	GPIB , 232C	YES	MOTOR CONTROL
33210A	VARIABLE	N/A	BNC INPUT	GPIB,USB,LAN	YES	ARBITRARY WAVE

MODEL	AC POWER	DIMENSION	PRICE
FG10	90 - 260V	W210mm H113mm D280mm	85KYEN
FG-281	90 - 110V	W200mm H99mm D353mm	145KYEN
33210A	100 - 240V	W261mm H104mm D272mm	275KYEN

#1 : SINE:1% TRIANGLE:2% RECTANGLE:3%
 #2 : 0.5% OF SWING SET
 #3 : THROUGH INTERFACE







