



Manufacturer : Matrix

The function generator MFG series are reliable devices that generate frequencies up to 3 MHz (**MFG-8216A-1**) and up

to 5 MHz (**MFG-8255A-1**). Typical application are: testing response of audio circuits, vibration testing, checking control systems with servomechanisms, ultrasonic systems, etc.

The generators generate the following functions: logarithmic and linear for time base (**MFG-8255A-1**) and have built-in frequency meter. Trigger function facilitates finding speakers resonance points, filtering mains and other circuits interferences. Built-in frequency meter can measure and display frequency of external signals up to 100 MHz.

#### Features:

- 6-digit LED display
- low distortion waveforms (sine, triangle and square) and ramp waveform
- output signal in 7 ranges, 0,5 Hz to 5 MHz for **MFG-8255A-1**, 0,3 Hz to 3 MHz for MFG-8216A-1
- adjustable trigger point and base time width, both inlinear and logarithmic mode (**MFG-8255A-1**)
- Duty-Cycle control with reverse function
- frequency external voltage control (VCF)
- AM or FM internal or external modulation (**MFG-8255A-1**)
- second output for TTL or CMOS pulses
- 50 W main signal output with DC offset and 20 dB amplification function

Model:	<b>MFG-8216A-1</b>	<b>MFG-8255A-1</b>
AM/FM		x
Time base		x
Frequency meter int/ext	x	x
Output GCV (0,2-2V)	x	x

TTL/CMOS	x		x
VCF	x		x
Duty-cycle control	x		x
Characteristics:			
Frequency range	0,3 Hz ~ 3 MHz		0,5 Hz ~ 5 MHz
Amplitude		$\geq 10V_{pp}$ (on 50 $\Omega$ )	
Attenuation		-20 dB $\pm$ 1 dB x 2	
Impedance		50 $\Omega$ $\pm$ 10%	
Offset		<-5V ~ >5V (on 50 $\Omega$ )	
Adjustable duty-cycle		80% : 20% : 80% at 1 MHz	
Sine waveform:			
Distortions		$\leq 1\%$ , 0,3 Hz ~ 200 kHz	
Flatness	<0,3 dB, 0,3Hz~300kHz <0,5dB, 300kHz~3MHz		$\leq 0,3$ dB, <500kHz $\leq 1$ dB, <5MHz
Triangle waveform:			
Linearity	$\geq 98\%$ , 0,3Hz~100kHz $\geq 95\%$ , 100kHz~3MHz		$\geq 98\%$ , 0,5Hz~100kHz $\geq 95\%$ , 100kHz~5MHz
Square wave:			
Symmetry	$\pm 2\%$ , 0,3Hz~100kHz		$\pm 2\%$ , 1Hz~100kHz
Rise/fall time	$\leq 100$ ns		$\leq 50$ ns
Frequency meter:			
Range	0,3 Hz~3MHz	(5 Hz ~ 100 MHz ext.)	0,5 Hz~5 MHz
Input impedance		1 M $\Omega$ / 150 pF	
CMOS output:			
Level		4 V <sub>pp</sub> $\pm$ 1 V <sub>pp</sub> ~ 14.5 V <sub>pp</sub> $\pm$ 0,5 V <sub>pp</sub> adjustable	
TTL output:			
Level		$\geq 3V_{pp}$ (20 TTL load)	
VCF output:			
Input volt.		0 V ~ 10 V $\pm$ 1V (100:1), impedance 10 k $\Omega$	
Time base trigger:			
Time		0,5 s ~ 30 s adjustable	
Supply	: 115 / 230VAC $\pm$ 15%, 50 / 60 Hz		
Dimensions	: 251x 91x 291mm		
Weight	: approx 2,2 kg		

**Standard equipment:**

- mains power cable
- 2 test cables with BNC connector