Display	Graph mode for visual verification of signal settings	
Capability	Standard waveforms	Sine, Square, Ramp, Triangle, Pulse, Noise, DC
	Built-in arbitrary waveforms	Exponential Rise and Fall, Negative ramp, Sin(x)/x, Cardiac

WAVEFORM CHARACTERISTIC

Sine	Frequency	1 μHz to 50 MHz
	Amplitude Flatness[1][2] (Relative to 1KHz)	0.1dB(<100KHz)
		0.15dB(<5MHz)
		0.3dB(<20MHz)
		0.5dB(<50MHz)
	Harmonic distortion[2][3] (unit: dBc)	DC to 20 KHz -70(< 1Vpp) -70(≥ 1Vpp)
		20 KHz to 100 KHz -65(< 1Vpp) -60(≥ 1Vpp)
		100 kHz to 1 MHz -50 (< 1Vpp) -45 (≥ 1Vpp)
		1 MHz to 20 MHz -40 (< 1Vpp) -35 (≥ 1Vpp)
		20 MHz to 50 MHz -35 (< 1Vpp) -30 (≥ 1Vpp)
	Total Harmonic distortion[2][3]	DC to 20 KHz, Output ≥ 0.5Vpp THD+N ≤ 0.06%
	Spurious[2][4] (non-harmonic)	DC to 1 MHz -70 dBc
		1 MHz to 50 MHz -70 dBc + 6 dB/octave
	Phase Noise (10K Offset)	-115/dBC/Hz, typical when f ≥ 1MHz, V ≥ 0.1Vpp
Square	Frequency	1 μHz to 25 MHz
	Rise/Fall time	< 10 ns
	Overshoot	< 2%
	Variable Duty Cycle	20% to 80% (to 10 MHz) 40% to 60% (to 25 MHz)
	Asymmetry	1% of period + 5 ns (@ 50% duty)
	Jitter (RMS)	200 ps when f ≥ 1MHz, V ≥ 0.1Vpp
Ramp, Triangle	Frequency	1 μHz to 200 KHz
	Linearity	< 0.1% of peak output
	Symmetry	0.0% ~ 100.0%
Pulse	Frequency	500 μHz to 10 MHz
	Pulse width	20 ns minimum
		10 ns res. (period ≤ 10s)
	Variable Edge Time	< 10 ns to 100 ns
	Overshoot	< 2%
	Jitter (RMS)	200 ps when f ≥ 50KHz, V ≥ 0.1Vpp
Noise	Bandwidth	20 MHz typical
Arbitrary	Frequency	1 μHz to 10 MHz
	Length	2 to 256 K
	Resolution	14 bits (including sign)
	Sample Rate Min	125 MSa/s
	Rise/Fall Time	30ns typical
	Linearity	< 0.1% of peak output
	Settling Time	< 250ns to 0.5% of final value
	Jitter(RMS)	6ns + 30ppm
	Non-volatile Memory	4 waveforms * 256K Points

COMMON CHARACTERISTIC

Frequency	Resolution	1μHz
Amplitude	Range	10mVpp to 10Vpp in 50Ω
		20mVpp to 20Vpp in Hi-Z
	Accuracy[1][2] (at 1KHz)	±1% 0f setting ± 1mVpp
	Units	Vpp, Vrms, dBm
DC Offset	Resolution	4 digits
	Range (Peak AC +DC)	±5V in 50Ω ±10V in Hi-Z
	Accuracy[1][2]	±2% of offset setting ±0.5% of amplitude setting
Main Output	Resolution	4 digits
	Impedance	50 Ω typical
	Isolation	42 Vpk maximum to earth
	Protection	short-circuit protected; overload automatically disables main output
Internal Frequency reference Accuracy[2]		±10ppm in 90 days
		±20ppm in 1 year
External Frequency reference	Standard /Option	Standard
External Frequency Input	Lock Range	10 MHz ± 500 Hz
	Level	100mVpp ~5Vpp
	Impedance	1KΩ typical, AC coupled
	Lock Time	< 2 Sec
External	Lock Range	10 MHz
Frequency Output	Level	632mVpp (0dBm), typical
	Impedance	50Ω typical, AC coupled
Phase Offset	Range	-360° to +360°
	Resolution	0.001°
	Accuracy	8ns

Modulation

Modulation Type		AM, FM, PM, FSK, PWM, Sweep and Burst
AM	Carrier	Sine, Square, Ramp, Arb
	Source	Internal / external
	Internal Modulation	Sine, Square, Ramp, Triangle, Noise, Arb
	Frequency (Internal)	2mHz to 20KHz
	Depth	0.0% ~ 120.0%
FM	Carrier	Sine, Square, Ramp, Arb
	Source	Internal / external
	Internal Modulation	Sine, Square, Ramp, Triangle, Noise, Arb
	Frequency (Internal)	2mHz to 20KHz
	Deviation	DC ~ 25MHz
PM	Carrier	Sine, Square, Ramp, Arb
	Source	Internal / external
	Internal Modulation	Sine, Square, Ramp, Triangle, Noise, Arb
	Frequency (Internal)	2mHz to 20KHz
	Deviation	0.0° to 360°
PWM	Carrier	Pulse
	Source	Internal / external
	Internal Modulation	Sine, Square, Ramp, Triangle, Noise, Arb
	Frequency (Internal)	2mHz to 20KHz
	Deviation	0% ~ 100% of pulse width
FSK	Carrier	Sine, Square, Ramp, Arb
	Source	Internal / external
	Internal Modulation	50% duty cycle Square
	Frequency (Internal)	2mHz to 100KHz
External Modulation Input[6]	Voltage Range	±5V full scale
	Input Resistance	8.7KΩ typical
	Bandwidth	DC to 20KHz
SWEEP	Waveforms	Sine, Square, Ramp, Arb
	Type	Linear or logarithmic
	Direction	up or down
	Sweep Time	1 ms ~ 500 Sec
	Trigger	Internal , External or Manual
	Marker	falling edge of sync signal (programmable frequency)
BURST[7]	Waveforms	Sine, Square, Ramp, Triangle, Noise, Arb
	Type	Counted (1 to 50000 cycles), Infinite, Gated
	Start/Stop Phase	-360° to +360°
	Internal Period	1uS ~ 500Sec
	Gated Source	External trigger
	Trigger Source	Internal , External or Manual
Trigger Input	Level	TTL compatible
	Slope	Rising or Falling (Selectable)
	Pulse width	> 100 ns
	Impedance	> 10KΩ, DC coupled
	Latency	< 500 ns
Trigger Output	Level	TTL compatible into ≥ 1 KΩ
	Pulse width	> 400 ns
	Output Impedance	50 Ω typical
	Maximum rate	1MHz
	Fan-out	≤ 4 Picotest G5100As

Pattern Mode CHARACTERISTIC

Clock	Maximum rate	50MHz
Output	Level	TTL compatible into ≥ 2 KΩ
	Output Impedance	110 Ω typical
Pattern	Length	2 to 256 K

General

Power Supply	CAT II 110 – 240V AC ±10%
Power Cord Freq.	50Hz to 60Hz
Power Consumption	50VA max
Operating Environment	0°C to 55°C
Storage Temperature	-30°C to 70°C
Interface	(Standard) USB, LAN, (Optional) GPIB
Language	SCPI-1993, IEEE-488.2
Dimensions	107 (H) x 224 (W) x 380 (D) mm
Weight	4.08 Kg
Safety Designed to	IEC61010-1,EN61010-1,UL61010-1
EMCTested to	EN61326, IEC61000-3, IEC61000-4
Warm-up Time	1 hour
Warranty	1 Year

[1] Add 1/10th of output amplitude and offset spec per °C for operation outside the range of 18°C to 28°C

[2] Autorange enabled

[3] DC offset set to 0V

[4] Spurious output low amplitude is -75 dBm typical

[5] Add 1 ppm/°C average for operation outside the range of 18°C to 28°C

[6] FSK uses trigger input (1 MHz maximum)

[7] Sine and square waveforms above10MHz are allowed only with an "infinite" burst count