Function Generator — continued

TG1010
10MHz Programmable DDS

The TG1010 generates high quality sine, square and pulse waveforms over the full frequency range of 0.1MHz to 10MHz with 7 digit resolution and accuracy better than 10ppm

- Eight standard waveforms, plus multiple "complex" waveforms, true arbitrary waveforms and noise
- Powerful modulation modes including Sweep, AM Gating, Trigger/Burst, FSK and Hop
- Variable symmetry, variable start/stop phase
- 20V pK-pK output 50Ω or 600Ω (switchable
- Storage for five Arbitrary Waveforms (1024 10 bits)
- RS-232 interface as standard
- housed in a half-rack 3U size metal case Supplied with mains lead and manuals

Waveform	Frequency Range	Output Level
Sinewave 0.1MHz to 10MHz		6mV to 20V pK-pK open circuit
Squarewave	0.1MHz to 10MHz	5mV to 20V pK-pK open circuit
Triangular waveform	0.1MHz to 500kHz	6mV to 20V pK-pK open circuit
Positive and negative ramp	0.1MHz to 50kHz	3mV to 10V pK-pK open circuit
Positive and negative pulse	0.1MHz to 10MHz	2.5mV to 10V pK-pK open circuit
Multi-level squarewave	0.1MHz to 30kHz	6mV to 20V pK-pK open circuit

Output (BNC)
Output Impedance 50Ω or 600Ω swirchable
Amplitude5mV to 20V pK-pK (2.5Mv to 10V pK-pK into 50/600Ω
Accuracy ±3% ±1mV at 1KHz into 50Ω/600Ω
DC Offset ±10V from 50Ω/600Ω signal peak limited to±10V from 50Ω/600Ω
Resolution 3 digits or 1mV

General
Display 20 character x4 row alphanumeric LCD
Data Entry Keyboard selection, numeric keys, rotary control
Power Supply 115Vac ±14% or 230Vac±14% 50/60Hz
Weight 4.1kg
Operating temperature +5°C to 40°C, 20-80%RH
Safety Complies with **EN6010-1**
EMC Complies with **EN50081-1** and **EN50082-1**

T479

Mftrs. List No.	Order Code	Price Each 1+	5+	10+
TG1010	**493-284**			

TG550 5MHz Function Generator with Sweep
External Counter and Dual Display

The TG550 can generate a variety of precision waveforms over a wide range of frequencies from mHz to MHz. Dual digital display shows frequency and level of frequency stability

- 0.005Hz to 5MHz frequency range
- Simultaneous display of frequency and amplitude
- Frequency locking for crystal controlled stability
- Precision internal linear or logarithmic sweep
- External frequency counter with a 7 digit resolution
- High waveform quality at all frequencies and levels
- 20V pK-pK from 50Ω or 600Ω, plus TTL/CMOS output
- 1000:1 frequency change by vernier or sweep voltage
- Internal or external amplitude modulation up to 100%

Waveforms	Sine, Square, Triangle
Frequency Range	0.005Hz to 5MHz
Vernier range	1000:
Sine Distortion	<0.5% on 500, 5K and 50K ranges; <1% on 5, 50 and 500K ranges All harmonics >25dB below fundamental on 5M range
Triangle linearity	Better than 99% to 200KHz
Square wave	Rise/Fall <45ns, 1:1 ±1% to 100KHz
Symmetry control	Variable 1:9 to 9:1
Sweep Rate	20ms to 20s, linear or logarithmic
AM	0 to 100%, 400Hz internal, DC to 100KHz external
DC offset	±10V unterminated
Auxilliary output	0 to 5V signal, frequency/symmetry/phase as main output
Meter Accuracy	Frequency ±1 digit 0.2Hz to 5MHz, 1% of range below 0.2Hz Amplitude typically ±5%. Offset typically ±2%
Frequency Locking	<0.01% of displayed value, 0.5Hz to 5MHz
External Frequency	5Hz to 20MHz, sensitivity 50mV, Accuracy 10ppm ±1 digit
Resolution	6 digits in 0.5 seconds, 7 digits in 5 seconds
General	
Input Voltage	
Operating Temperature	230V or 115V nominal 50/60Hz by internal adjustment
Weight	+5°C to +40°C, 20% to 80%RH
Safety	Complies with **EN601010-1**
EMC	Complies with **EN50081-1, EN50082-1**

T480

Mftrs. List No.	Order Code	Price Each 1+	5+	10+
TG550	**493-272**			

20MHz Function Generator
TG120

The TG120 is a low-cost dial-set function generator which uses a new highly integrated design to achieve an upper frequency of 20MHz.

H = 82 W = 220 D = 230

- Low cost 20MHz function generator
- 0.2Hz to 20MHz frequency range
- 10mV to 20V peak-to-peak from 50W
- Separate TTL/CMOS output
- DC offset control with zero detent
- Variable symmetry control
- External sweep input

FREQUENCY
Frequency Range: 0.2Hz to 20MHz in 8 overlapping decade ranges with fine adjustment by a vernier
Vernier Range: >10:1 on each range
Vernier Accuracy: Typically ±5% of full range

SWEEP MODE (EXTERNAL)
Sweep Range: Typically 20:1
Input Sensitivity: Typically 0 to 2V for 10:1 sweep

WAVEFORM PERFORMANCE
Sine Distortion: Typically 2% on 200, 2k and 20k ranges
Amplitude Flatness: ±0.2dB to 200kHz; ±2dB to 20MHz
Triangle Linearity: Typically 99% on kHz ranges
Squarewave Rise/Fall: <22ns
Symmetry Range: Typically variable from 1:6 to 6:1 up to 500kHz

OUTPUT
50W output, three ranges with 26dB vernier control withineach range
0dB Range: 1V to 20V peak-to-peak (0.5V to 10V into 50Ω)
-20dB Range: 100mV to 2V peak-to-peak (50mV to 1V into 50Ω)
-40dB Range: 10mV to 0.2V peak-to-peak (5mV to 0.1V into 50Ω)
DC Offset Range: ±10V from 50Ω. DC offset plus signal peak limited to ±10
TTL/CMOS Output: Capable of driving 4 standard TTL loads

GENERAL
Power: 230V or 115V ±14%, 30VA max. Installation Category II
Safety and EMC: Complies with EN61010-1, EN55011 and EN50082-1

T504

		Order Code	Price Each 1+	5+	10+
TG120	C17	**316-8487**			
Standard Calibration	S C17			Each	

Function Generator 0.1Hz to 500kHz – Jupiter 500 BLACKSTAR

- Frequency 0.01Hz to 500MHz
- ±30V output
- External AM/sweep facilities
- Sine, square, triangle TTL outputs
- ±15V dc offset
- Short circuit protection.

CALIBRATION SERVICES

H = 98, W = 219, D = 240

Frequency range		0.1Hz to 500kHz (0.02Hz to >700kHz in 7 switched decade ranges with fine frequency control)
Frequency accuracy		3% of range (typically 1%)
Output impedance		600Ω (±2%)
Output amplitude		0 to 30V pk to pk min (low output-20dB)
Output dc offset		-15 volts to +15V fully variable
Output waveform purity	Sine	Distortion <1.5% (typically 0.5%) up to 100kHz typically 2% up to 500kHz
	Triangle	Linearity typically 1% up to 100kHz
	Square	Mark/spare ratio 50% ±1% .Rise and fall times 200ns Slew rate 170V/µs typ
	TTL	Mark/spare ratio 50% ±2% .Rise and fall times 25ns (120pF/225Ωload, max load 30 standard TTL inputs)

☎ **Please call our sales office**

1594 Electronic, Electrical and Mechanical Prices are in Singapore Dollars and exclusive of GST