Function generator, 2 MHz

TOE 7401

TOE 7401

Special features

- Frequency range 0.2 Hz to 2 MHz
- External sweep-frequency control up to 100:1
- 3 signal waveforms
- 20 V output voltage
- 3 outputs: HI, LO, TTL

The TOE 7401 function generator is a universal, general-purpose signal source at affordable cost. Its design concept makes it equally suitable for use in education, servicing, test departments and laboratories.
All inputs and outputs are on the front panel and are no-load and short-circuit proof. The generator produces AC voltages with sine, triangle and square signal shapes over a frequency range from 0.2 Hz to 2 MHz. A TTL-compatible output is provided. The function generator can be controlled by an external sweep-frequency control signal fed into the VCO input.
External voltage protection can be provided as an option to protect the output amplifier against dangerous feedback.

Technical specifications

Functions and operating modes

Functions	Sine, triangle, square
Operating modes	Free-running, external sweep-frequency control

Frequency characteristics

Frequency range	0.2 Hz to 2 MHz in 6 decadic subranges
Frequency offset	± 5 %
Frequency error	2 % of full-scale value, 5 % of full-scale value in the range x 1 MHz
Drift	1 x 10^{-3}/K up to 200 kHz 5 x 10^{-3}/K up to 2 MHz 5 x 10^{-3} in 8 hours, in each case following 30 min warm-up time

Function output

Output amplitude	V_{pp} = 7 mV to 20 V
Output impedance	50 Ohm. The output is short-circuit and no-load proof
Feedback voltage protection	Up to ≤ 120 V (option)
DC offset	0 to ± 10 V
Output attenuator	40 dB continuously adjustable plus 30 dB fixed; via LO output (-30 dB)
Frequency response (sine, triangle)	0.8 dB up to 2 MHz

Function specification

At max. output voltage and 50 Ohm load

Sine	
Distortion factor	< 0.5 % up to 50 kHz < 5 % up to 2 MHz
Triangle	
Linearity error	< 1 % up to 100 kHz
Symmetry error	< 1 % up to 100 kHz
Square	
Transition time	< 50 ns
Overshoots	< 5 %

Other signal inputs and outputs

Synchronizing signal output	TTL-compatible Source impedance: 50 Ohm, 5 fan out
VCO modulation input	Approx. 5 V for a frequency variation ratio of 100:1

General data

Line voltage	115 V or 230 V ± 10 %, 47 Hz to 63 Hz
Power consumption	20 VA
Operating temperature	0 °C to 45 °C
Dimensions (W x H x D)	216 x 88.5 x 272 mm
Weight	Approx. 2.8 kg
Housing	Aluminium

Options

TOE 7400/101	Feedback voltage protection
TOE 9008	Carrying handle
TOE 9507	19" adapter, 2 HU
TOE 9509	Parallel installation set 272, 2 HU

Ordering data

Function generator	TOE 7401