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WA301 - Description and Specifications

WA301 - 30V pk-pk Waveform Amplifier

- Extends the output range of function generators
- 30 Volts peak to peak output swing
- ▶ DC to 1MHz bandwidth
- ▶ High impedance input, 0dB to +20dB gain
- ▶ 50 Ohm and 600 Ohm outputs
- ▶ 20dB swtitchable output attenuator
- ► Fully protected output



The WA301 is a DC to 1MHz amplifier with a maximum output (e.m.f.) of 30 volts peak to peak from a 50Ω source impedance. A 600Ω output is also provided.

The unit can provide up to 15 volts peak to peak into a 50Ω load and can drive up to 300mA peak into a low impedance or short circuit.

Fully variable gain between x1 and x10 is provided by a rotary vernier with calibrated end stops. A -20dB output attenuator is also incorporated.

An "output clip" LED is provided to warn if the output amplitude exceeds ±15V.

SPECIFICATIONS

Bandwidth: -3dB at 1MHz Flatness: -1dB at 400kHz

Rise/fall time: <0.5µs

Distortion: <0.1% at 1kHz

Gain: Vernier adjustment between x1 and x10

Input impedance: $10k\Omega$

OUTPUT

Output impedance: 50Ω and 600Ω (separate sockets)

Output 0dB: 30V pk-pk max. from $50\Omega(15V$ into 50 Ohms), 30V pk-pk max. from 600Ω (15V into 600 Ohms) Output -20dB: 3V pk-pk max. from 50Ω (1.5V into 50 Ohms), 3V pk-pk max. from 600Ω (1.5V into 600 Ohms)

DC offset: <5mV

GENERAL

Power: 230V or 115V AC nominal 50/60Hz, adjustable internally; operating range ±14% of nominal; 20VA max.;

Installation category II

Size: 210(W) x 75(H) x 230(D)mm, inc. feet.

Weight: 1.1kg

Operating Range: + 5°C to 40°C, 20-80% RH.

Storage Range: - 40°C to 70°C

Safety: Complies with EN61010-1. EMC: Complies with EN63126.



APPLICATIONS

Most function generators have a maximum opencircuit output voltage of 20V peak to peak. The WA301 enables this to be boosted to 30V peak to peak.

Commonly the WA301 will be used as a slave to a function generator with the gain set to x10. Thus an output of 3V pk-pk at the function generator would give rise to an output of 30V pk-pk from the WA301.

Alternatively the variable gain facility might be used to provide an adjustable output level from a fixed level source.