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

GENERAL DESCRIPTION

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.

APPLICATIONS

Most function generators have a maximum open-circuit 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.

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:	10kΩ

OUTPUT

Output impedance:	50Ω and 600Ω (separate sockets)
Output 0dB:	30V pk-pk max. from 50Ω(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.