



LF GENERATOR & AMPLIFIER

FEATURING

- 20 kHz to 12 MHz up to 600 W
- Low distortion Output @ 300W, $h_3 \leq -20$ dBc up to 750 kHz. Better than -18 dBc for other harmonics up to 12 MHz
- Digital Meter, measures forward, reflected and load power simultaneously
- Front Panel Control of Amplifier and Generator functions
- Data acquisition: Status Monitoring & Power Measurement at Analog Port
- RS232 Communication: Full Control Of Amplifier & Generator Functions
- AGC or Power Leveling: Gain Control to better than ± 0.5 dB
- Pulse and Sweep of Internal RF oscillator

Model AG 1016 Amplifier/Generator is a robust source of RF power for ultrasonic, laser modulation, RFI/EMI, plasma generation, general laboratory and industrial applications. Featuring solid state design in all RF amplifier stages and a built-in DDS signal source, it provides everything for a complete and reliable, finely controlled RF power delivery system.

The AG 1016 produces up to 600W of RF Power over a frequency range from 20 kHz to higher than 12 MHz. It operates without band switching or other adjustments.

Front Panel offers a LCD display of Forward, Reflected and Load Power readings, RF Status, MGC/AGC setups and operating frequency in Generator Mode.

When used as amplifier, the AG 1016 is compatible with most signal and function generators, computer synthesizer cards and it accurately reproduces all waveforms within its output and bandwidth limits.

The internal power supply is designed to permit operation over a wide range of temperature and global AC line conditions.

AG 1016 is protected by its internal monitoring system for greater than 600 Watts Forward Power, 80 Watts of Reflected Power. This is intended to protect the amplifier output stage from accidental overdrive at the input and an extreme mismatch at the Output.



For more information visit TCPOWERCONVERSION.com
or email us at: info@tcpowerconversion.com

For quote, contact us at sales@tcpowerconversion.com or call (585) 482 - 5551

AG 1016 SPECIFICATIONS

Class Of Operation

Class "A/B"

Frequency Of Operation

20 kHz to 12 MHz

RF Power Output

50 Ohm load:

Up to 500W for 20 kHz to 30 kHz
Up to 600W for 30 kHz to 10 MHz

Any load:

Up to 300W continuous operation.

Mismatch Power Output

Continuous Load Power at 20C:

2:1 VSWR (25 Ohm) 210W minimum
3:1 VSWR (15 Ohm) 145W minimum
Limited by heat protection circuit!

Burst and Pulse mode Load Power:

3:1 VSWR, 300W minimum
Limited by Reverse Power Limiter!

Gain

58 dB @ 600W / 0.5 MHz
±1.5 dB 20 kHz to 6 MHz

RF Input Drive for AGC

Recommended -5 dBm to 0 dBm for
±0.5 dB gain flatness

Input Drive Source

Signal or function generator, analog
input capable of up to 1 Vp-p @ 50
Ohm

Input range: -30 to 0 dBm typical,
+5 dBm maximum

Internal RF Source

DDS oscillator: 20 kHz to 6 MHz,
1 kHz resolution

Input and Output Impedance

50 Ohm

2:1 max INPUT VSWR

3:1 max OUTPUT VSWR

Output VSWR Protection

80 W max reflected power limit for
Load Impedance > 50 Ohm. Current
level protection for Load Impedance <
50 Ohm.

Harmonic Level @ 300W

H3 (3rd) - better than -20dBc from 10
kHz to 750 kHz.

Any other, better than -20 dBc

Harmonic Level @ 500W

H3 (3rd) - better than -20dBc from 10
kHz to 500 kHz.

H3 (3rd) - better than -15dBc from
500 kHz to 2500 kHz.

Any other, better than -18 dBc

Spurious Output

- 50 dBc equivalent noise level
generated by internal circuits

RF Output Settings & Control

- Front Panel EDITOR and function
switches for manual control,
- RS232 port for GUI or other
computer communication. Rear
Panel.

- SubD 25 Analog and Digital I/O .
Port power scale 1V=100W. Rear
Panel

BURST operation

Pulse range: 1 to 500 usec
Period: 1 to 50 milliseconds
User settings via GUI and RS232

BURST - external

DC to > 200 kHz. User defined
BURST scheme via SubD-25.
See analog port description for more
details.

SWEEP operation

0.02 to 12 MHz. Min time 10 ms, max
10s. Settings and activation from GUI
only.

Output Blanking

For pulsed applications, T&C
amplifiers and generators offer
blanking of the output signal for
minimum noise RF spectrum

Rear Panel RF Connectors

BNC Female, Back Panel

AC Power Connection

IEC Standard Power Entry followed
by RFI filter.

Filter range 0.1 to 30 MHz minimum

AC Input Current (RMS)

120 V ac, +/-10%, 50 - 60 Hz, 14.4A
230 - 240 V ac, +/-10% 50 - 60 Hz,
9A

Cooling

Forced air, temperature controlled,
heatsink temperature monitored via
RS232 GUI interface.

Acoustic level:

45dBa @ Max Fan Speed @ temp.

Case

Designed to meet EMI and RFI
shielding requirements AL chassis,
yellow conductive finish.
Front Panel: T&C off-white.
Cover: T&C black.

Dimensions

135mm x 254 mm x 385 mm
(H 5.25" x W 10" x L 15")

Weight: 12 kg, 26 lbs.

Mounting

Table top, stand alone unit.
Optional: Rack Mount Kit.

Environmental conditions

Temp.: 10° to 35° C ambient

Humidity: 80%

Equipment intended for ISM applica-
tions in laboratory and light industrial
environment.

AG 1016 Performance Chart at 50 Ohm Load

