CBA 3G-300
800 MHz TO 3.1 GHz 300 WATT CLASS A BROADBAND AMPLIFIER

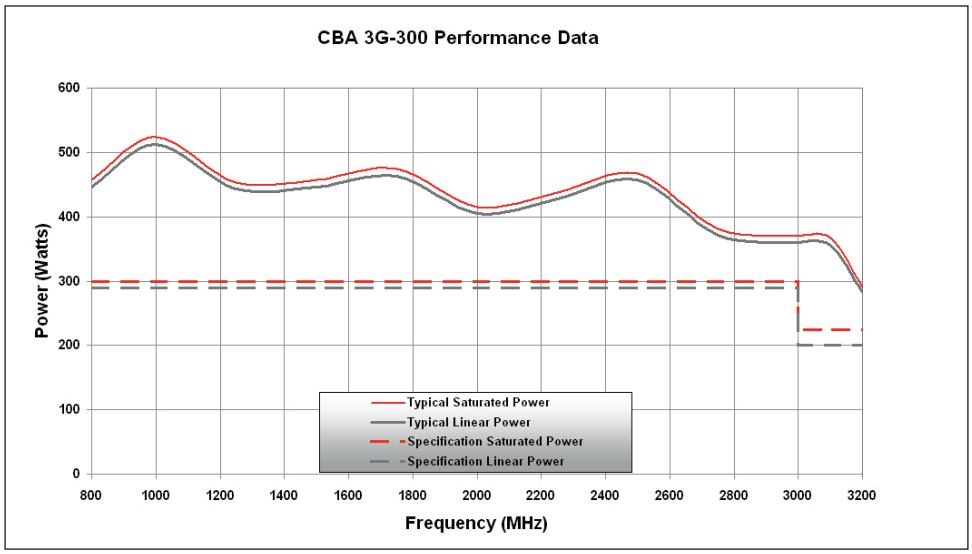
- **Class A linear and low distortion design**
- **High reliability gallium arsenide technology**
- **Mismatch tolerant and unconditionally stable**
- **Wide instantaneous bandwidth**
- **Remote control option**
- **Three year parts and labour warranty**

Designed specifically for radiated EMC testing, this mismatch tolerant class A amplifier delivers power continuously into the poor and variable match typically associated with testing above 1 GHz. Although antenna are usually well matched at these high frequencies, the presence of the EUT in the path of the antenna causes high levels of reflected power which only fully class A amplifiers can handle.

Although antenna gain is relatively constant, increasing cable losses at the higher frequencies demand increasing power with increasing frequency. Teseq amplifiers are therefore designed to maintain their high linear output power right up to and beyond the defined frequency range. This amplifier will produce usable power up to 3.2 GHz, the power level is not defined but is typically around 200 Watts.

The GaAs class A design ensures a high reliability, low distortion linear performance across the frequency range. This design also ensures that the amplifier will continue to operate at full power even when presented with an open or short circuit at its output.

The unit is powered from a switched mode power supply for high efficiency, high power factor and wide voltage range operation. The unit is air-cooled with integral fans, and is protected against faulty cooling by excess temperature sensing. A safety interlock connector is provided, which the user can short circuit to ground, to put the amplifier into standby mode. Front panel indicators are provided to indicate over-temperature and rf interlock condition.



TESEQ

Advanced Test Solutions for EMC

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Key RF Parameters

Frequency range (instantaneous)	800 to 3100 MHz
Rated output power	300 W minimum (350 W typical) 800 MHz to 3 GHz 225 W minimum (250 W typical) 3.0 GHz to 3.1 GHz
Output power at 1 dB gain compression	290 W minimum (325 W typical) 800 MHz to 3 GHz 200 W minimum (225 W typical) 3.0 GHz to 3.1 GHz
Harmonics at 290 W output (800 MHz to 3 GHz)	Better than -20 dBc
Gain (nominal)	56 dB
Gain variation with frequency	±4 dB
Maximum input power (no damage)	+10 dBm

Impedance / VSWR

Output VSWR tolerance [1]	Infinite:1
Stability	Unconditional
Output impedance	50 Ohms
Input VSWR	2:1

Additional RF Data

Third order intercept point [2]	65 dBm
RF connector style	Type N female

Electrical and Interfaces

USB interface	Optional
Safety interlock	BNC female, s / c to mute
Supply voltage (three phase)	184 to 264 Vac (phase to phase for Delta (Δ) or phase to neutral for star (Y)
Supply frequency range	45 to 63 Hz
Supply power	<3 kVA

Physical / Environmental

Case dimensions	19 inch, 34U rack, 800 mm deep
Weight	150 kg
Operating temperature range	0 to 40°C

Notes:

1. Output VSWR tolerance is specified for excitation within the permitted levels and frequency range.
2. The third order intercept point is a nominal value, as its calculation depends upon the power level at which distortion measurements are made.

Teseq AG
Nordstrasse 11F 4542 Luterbach Switzerland
T +41 32 681 40 40 F +41 32 681 40 48
sales@teseq.com **www.teseq.com**

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