



CBA 1G-070 10 MHz TO 1 GHz 70 WATT CLASS A BROADBAND AMPLIFIER



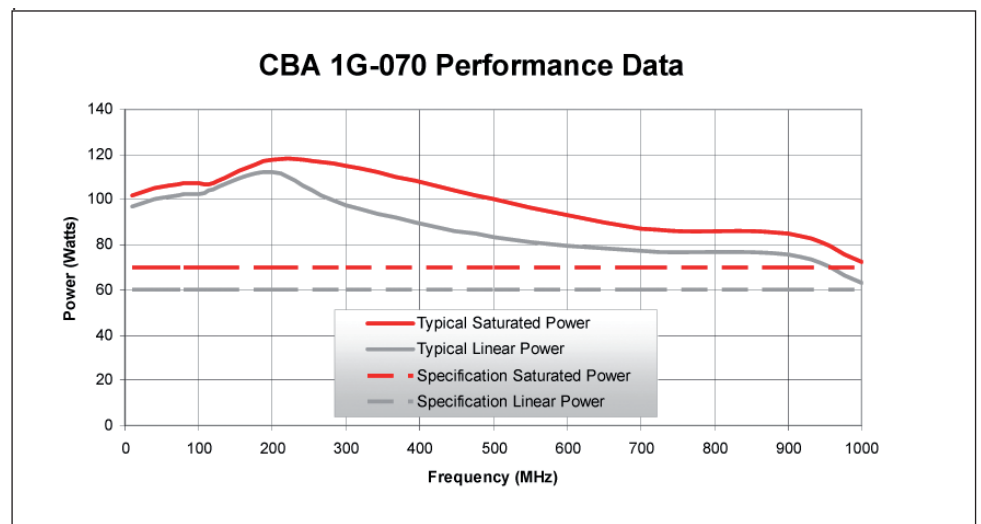
Designed specifically for radiated EMC testing, this mismatch tolerant Class A amplifier delivers power continuously into the very poor match typically associated with broadband EMC antennas when used at low frequency.

Since antennas typically exhibit their lowest gain at the lowest frequency, more power is required here than at the higher frequencies. Unlike other amplifiers designed for general purpose applications, this EMC specific amplifier maximises the linear power at the lowest frequency, making it ideal for use in this very specialised application.

- **Class A linear and low distortion design**
- **Ideal for use with GTEM cells**
- **Mismatch tolerant and unconditionally stable**
- **Wide instantaneous bandwidth**

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 use of gallium arsenide technology represents a breakthrough in amplifier design for this frequency range and output power. Previous designs based on silicon technology suffer from relatively poor compression characteristics, low efficiency and sometimes poor reliability.

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 operation.





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Technical specifications

Frequency range (instantaneous)	10 to 1000 MHz
Rated output power	70 W minimum (100 W typical 10 MHz to 500 MHz)
Output power at 1 dB gain compression	60 W minimum (80 W typical 10 MHz to 500 MHz)
Gain	49 dB
Third order intercept point (see note 1)	58 dBm
Gain variation with frequency	±3 dB
Harmonics at 60 W output power	Better than -20 dBc
Output impedance	50 Ohms
Stability	Unconditional
Output VSWR tolerance (see note 2)	Infinite any phase
Input VSWR	2:1
RF connector style	Type N female
Safety interlock	BNC female, s/c to mute
USB interface	Optional
Supply voltage (single phase)	85 to 264 Vac
Supply frequency range	45 to 63 Hz
Supply power	<500 VA
Mains connector	IEC20
Conducted and radiated emissions	EN61326 Class A
Conducted and radiated immunity	EN61326: 1997 Table 1
Mains harmonic currents	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Safety	EN61010-1
Case dimensions	19 inch, 4U case, 440 mm deep
Mass	15 kg
Operating temperature range	0 to 40°C
Options (select at time of ordering)	
341-728	Bench model with front panel mounted input/output connectors
341-828	Rack mountable with front panel mounted input/output connectors
341-928	Rack mountable with rear panel mounted input/output connectors

Notes:

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