



CBA 1G-018

100 kHz TO 1 GHz 18 WATT

CLASS A BROADBAND AMPLIFIER

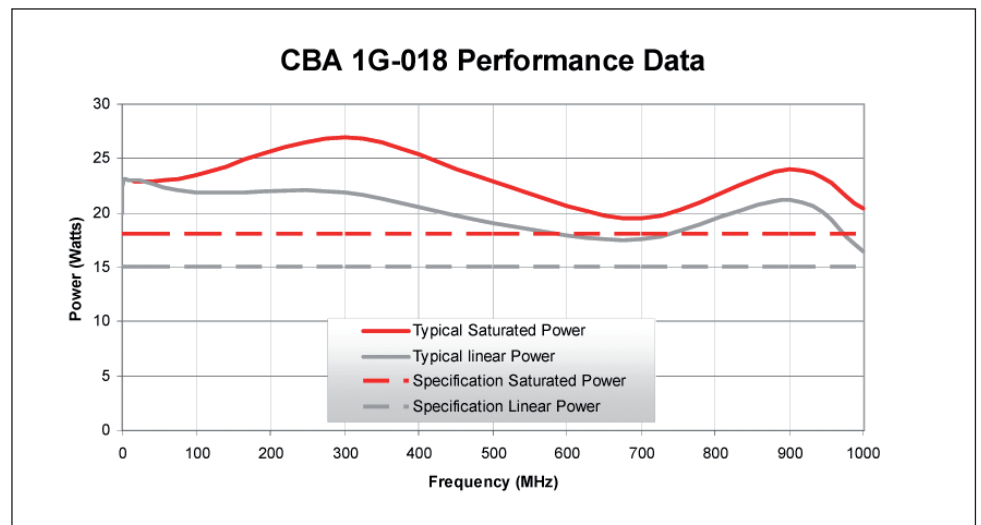


- **Class A linear and low distortion design**
- **Ideal for use with CDNs and small GTEM cells**
- **Mismatch tolerant and unconditionally stable**
- **Wide instantaneous bandwidth**
- **Three year parts and labour warranty**

Designed specifically for EMC testing, this mismatch tolerant Class A amplifier is able to produce a test field of 10 V/m in GTEM cells up to 1 metre in height and can also produce more than a 10 V test level when used in conjunction with a CDN. This amplifier is ideal for a small test facility as it conveniently covers both the conducted and radiated bands of the IEC61000-4 standard.

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 re-presents 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.



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Technical specifications

Frequency range (instantaneous)	100 kHz to 1000 MHz
Rated output power	18 W minimum (20 W typical)
Output power at 1 dB gain compression	15 W minimum (18 to 23 W typical)
Gain	44 dB
Third order intercept point (see note 1)	54 dBm
Gain variation with frequency	±3 dB
Harmonics at 15 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
Safety interlock	BNC female, s/c to mute
RF connector style	Type N female
USB interface	Optional
Supply voltage (single phase)	85 to 264 Vac
Supply frequency range	45 to 63 Hz
Supply power	<150 VA
Mains connector	IEC320
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, 3U case, 440 mm deep
Mass	9 kg
Operating temperature range	0 to 40°C
Options (select at time of ordering)	
341-726	Bench model with front panel mounted input/output connectors
341-827	Rack mountable with front panel mounted input/output connectors
341-927	Rack mountable with rear panel mounted input/output connectors

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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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.



Advanced Test Solutions for EMC