



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



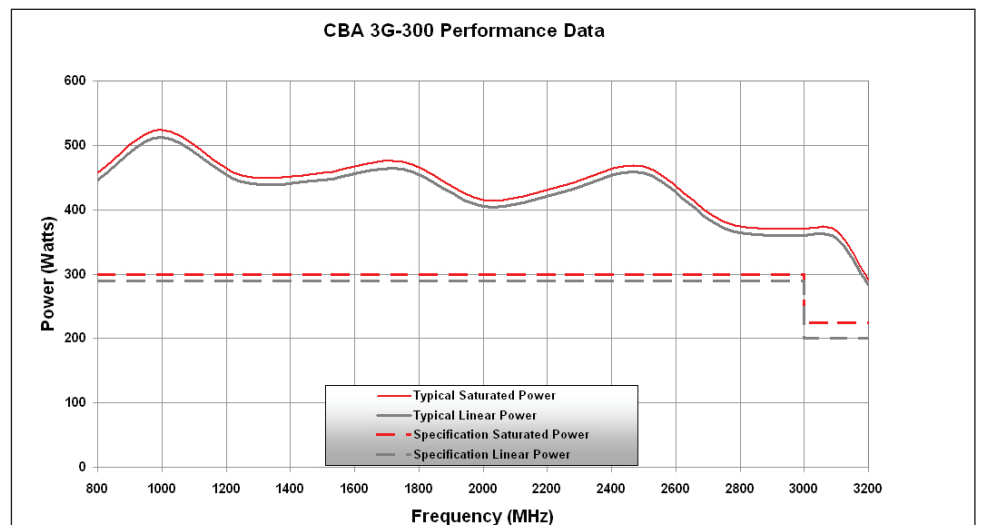
- **Class A linear and low distortion design**
- **High reliability gallium arsenide technology**
- **Mismatch tolerant and unconditionally stable**
- **Wide instantaneous bandwidth**
- **Remote control option**
- **Three year parts and labour warranty**

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.



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Technical specifications

Frequency range (instantaneous)	800 to 3000 MHz	>3000 to 3100 MHz	
Rated output power	300 W	225 W	minimum
	350 W	250 W	typical
Output power at 1 dB gain compression	290 W	200 W	minimum
	325 W	225 W	typical
Gain (nominal)	56 dB		
Third order intercept point (see note 1)	65 dBm		
Gain variation with frequency	±4 dB		
Harmonics at 290 W output (800 MHz to 3 GHz)	Better than -20 dBc		
Output impedance	50 Ohms		
Stability	Unconditional		
Output VSWR tolerance (see note 2)	Infinite:1		
Input VSWR	2:1		
RF connector style			
Input	Type N female		
Output	Type N female		
Safety interlock	BNC female, s/c to mute		
USB interface	Optional		
Supply voltage	184 to 264 Vac (phase to phase for Delta (Δ) or phase to neutral for star (Y)) (see options for three phase configuration)		
Supply frequency range	45 to 63 Hz		
Supply power	<3 kVA		
Mains connector	Appropriate IEC 60309 plug (see options)		
Conducted and radiated emissions	EN 61326 class A		
Conducted and radiated immunity	EN 61326: 1997 table 1		
Mains harmonic currents	EN 61000-3-2		
Voltage fluctuations and flicker	EN 61000-3-3		
Safety	EN 61010-1		
Case dimensions	19 inch, 34U rack, 800 mm deep		
Mass	150 kg		
Operating temperature range	0 to 40°C		
Options (select at time of ordering)			
341-823	Three phase plus P.E. delta connection no neutral (4 pin plug)		
341-923	Three phase, neutral plus P.E. star connection (5 pin plug)		
341-999	USB Interface (Remote control of standby/operate. Interlock and fault mode monitoring)		

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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.

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Advanced Test Solutions for EMC