

CBA 3G-100 800 MHz TO 3.1 GHz 100 WATT **CLASS A BROADBAND AMPLIFIER**



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 antennas 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 full Class A amplifiers can tolerate.

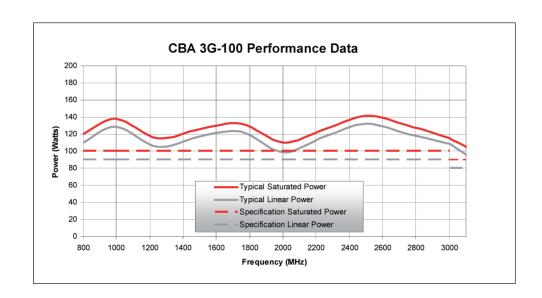
Whilst antenna gain is relatively constant, increasing cable losses at the higher frequencies demand increasing power with increasing frequency. Teseq amplifiers are therefore designed to maintain their high linear output power right up to and beyond the defined frequency range.

design

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.

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







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Technical specifications

Frequency range (instantaneous) Rated output power at 1 dB gain compression Rote output (800 MHz to 3 GHz) Rote output (800 MHz to 3 GHz) Rote output power output (see note 1) Rote output power Rote output impedance Rote output impedance Rote output impedance Rote output vimpedance Rote output vimpedanc				
110 W typical 90 W minimum 03.0 GHz to 3.1 GHz 100 W typical 100 W t	Frequency range (instantaneous)		800 to 3100 MHz	
Output power at 1 dB gain compression 90 W minimum (3.0 GHz to 3.1 GHz) Output power at 1 dB gain compression 90 W minimum (800 MHz to 3 GHz) 100 W typical (800 MHz to 3 GHz) (800 MHz to 3 GHz) 80 W minimum (3.0 GHz to 3.1 GHz) (800 MHz to 3 GHz) 80 W minimum (3.0 GHz to 3.1 GHz) (3.0 GHz to 3.1 GHz) 6ain 51 dB Third order intercept point (see note 1) 60 dBm 6ain variation with frequency ±3 dB Harmonics at 90 W output (800 MHz to 3 GHz) 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) 90 to 264 Vac Supply frequency range 47 to 63 Hz Supply power <1 kVA	Rated output power	r	100 W minimum (800 MHz to 3 GHz)	
Output power at 1 dB gain compression 100 W typical (800 MHz to 3 GHz) (800 MHz to 3 G			110 W typical (800 MHz to 3 GHz)	
Output power at 1 dB gain compression Solution Company Comp			90 W minimum (3.0 GHz to 3.1 GHz)	
100 W typical 800 MHz to 3 GHz 80 W minimum 30.0 GHz to 3.1 GHz 80 W minimum 30.0 GHz to 3.1 GHz 80 W minimum 30.0 GHz to 3.1 GHz 80 W typical 30.0 GHz to 3.1 GHz 30.0 GHz to 3.1 GHz to 3.1 GHz to 3.1 GHz 30.0 GHz to 3.1 GHz			100 W typical (3.0 GHz to 3.1 GHz)	
Gain 51 dB Third order intercept point (see note 1) 60 dBm Gain variation with frequency ±3 dB Harmonics at 90 W output (800 MHz to 3 GHz) Output impedance 50 Ohms Stability Unconditional Output VSWR tolerance (see note 2) Infinite any Phase Input VSWR RF connector style 7 ype N female Safety interlock BNC female, s/c to mute USB interface Optional Supply voltage (single phase) 90 to 264 Vac Supply power 47 to 63 Hz Supply power 47 to 63 Hz Supply power 1 kVA 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	Output power at 1 dB gain compression		90 W minimum (800 MHz to 3 GHz)	
Gain 51 dB Third order intercept point (see note 1) 60 dBm Gain variation with frequency ±3 dB Harmonics at 90 W output (800 MHz to 3 GHz) 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) 90 to 264 Vac Supply frequency range 47 to 63 Hz Supply power <1 kVA			100 W typical (800 MHz to 3 GHz)	
Gain 51 dB Third order intercept point (see note 1) 60 dBm Gain variation with frequency ±3 dB Harmonics at 90 W output (800 MHz to 3 GHz) 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) 90 to 264 Vac Supply frequency range 47 to 63 Hz Supply power <1 kVA Mains connector IEC320 Conducted and radiated emissions EN61326 Class A Conducted and radiated immunity EN61326: 1997 Table 1 Mains harmonic currents EN6100-3-2 Voltage fluctuations and flicker EN6100-1 Case dimensions 19 inch, 6U case, 550 mm deep Mass 35 kg Operating temperature range 0 to 40°C Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors			80 W minimum (3.0 GHz to 3.1 GHz)	
Third order intercept point (see note 1) Gain variation with frequency Harmonics at 90 W output (800 MHz to 3 GHz) Better than -20 dBc Output impedance Stability Unconditional Output VSWR tolerance (see note 2) Infinite any Phase Input VSWR Pronnector style Safety interlock USB interface Supply voltage (single phase) Supply frequency range Ar to 63 Hz Supply power Al kVA Mains connector Conducted and radiated emissions Conducted and radiated immunity Mains harmonic currents Voltage fluctuations and flicker Safety Case dimensions Mass Operating temperature range Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors			90 W typical (3.0 GHz to 3.1 GHz)	
Gain variation with frequency ±3 dB Harmonics at 90 W output (800 MHz to 3 GHz) Output impedance 50 Ohms Stability Unconditional Output VSWR tolerance (see note 2) Infinite any Phase Input VSWR RF connector style 7ype N female Safety interlock BNC female, s/c to mute USB interface Optional Supply voltage (single phase) 90 to 264 Vac Supply frequency range 47 to 63 Hz Supply power <1 kVA 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 Safety EN61010-1 Case dimensions 19 inch, 6U case, 550 mm deep Mass 35 kg Operating temperature range Oto 40°C Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	Gain		51 dB	
Harmonics at 90 W output (800 MHz to 3 GHz) Output impedance Stability Unconditional Output VSWR tolerance (see note 2) Infinite any Phase Input VSWR Input VSWR 2:1 RF connector style Safety interlock BNC female, s/c to mute USB interface Optional Supply voltage (single phase) Supply frequency range 47 to 63 Hz Supply power 41 kVA Mains connector IEC320 Conducted and radiated emissions Conducted and radiated immunity EN61326: 1997 Table 1 Mains harmonic currents EN61000-3-2 Voltage fluctuations and flicker Safety EN61010-1 Case dimensions Mass Operating temperature range Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	Third order intercept point (see note 1)		60 dBm	
Output impedance Stability Unconditional Output VSWR tolerance (see note 2) Infinite any Phase Input VSWR 2:1 RF connector style Safety interlock USB interface Supply voltage (single phase) Supply voltage (single phase) Supply frequency range 47 to 63 Hz Supply power 41 kVA 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 Safety EN61010-1 Case dimensions 19 inch, 6U case, 550 mm deep Mass Operating temperature range Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors			±3 dB	
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) 90 to 264 Vac Supply frequency range 47 to 63 Hz Supply power <1 kVA 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, 6U case, 550 mm deep Mass 35 kg Operating temperature range 0 to 40°C Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	Harmonics at 90 W output (800 MHz to 3 GHz)		Better than -20 dBc	
Output VSWR tolerance (see note 2) Input VSWR RF connector style Safety interlock USB interface Supply voltage (single phase) Supply frequency range 47 to 63 HZ Supply power All kVA Mains connector Conducted and radiated emissions Conducted and radiated immunity Mains harmonic currents EN61326 Class A Conducted and radiated immunity EN61326: 1997 Table 1 Mains harmonic currents EN61000-3-2 Voltage fluctuations and flicker EN61010-1 Case dimensions 19 inch, 6U case, 550 mm deep Mass Operating temperature range Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	Output impedance		50 Ohms	
Input VSWR RF connector style Safety interlock USB interface Supply voltage (single phase) Supply frequency range Supply power Ains connector Conducted and radiated emissions Conducted and radiated immunity Mains harmonic currents EN61326: 1997 Table 1 Mains harmonic currents EN61000-3-2 Voltage fluctuations and flicker Safety EN61010-1 Case dimensions 19 inch, 6U case, 550 mm deep Mass Operating temperature range Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	Stability		Unconditional	
RF connector style Safety interlock USB interface Optional Supply voltage (single phase) Supply frequency range 47 to 63 Hz Supply power 41 kVA Mains connector IEC320 Conducted and radiated emissions Conducted and radiated immunity EN61326 Class A Conducted and radiated immunity EN61326: 1997 Table 1 Mains harmonic currents EN61000-3-2 Voltage fluctuations and flicker Safety EN61010-1 Case dimensions 19 inch, 6U case, 550 mm deep Mass Operating temperature range Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	Output VSWR tolerance (see note 2)		Infinite any Phase	
Safety interlock USB interface Supply voltage (single phase) Supply frequency range 47 to 63 Hz Supply power All kVA Mains connector Conducted and radiated emissions Conducted and radiated immunity Mains harmonic currents EN61326: 1997 Table 1 Mains harmonic currents EN61000-3-2 Voltage fluctuations and flicker Safety EN61010-1 Case dimensions 19 inch, 6U case, 550 mm deep Mass Operating temperature range Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	Input VSWR		2:1	
USB interface Optional Supply voltage (single phase) 90 to 264 Vac Supply frequency range 47 to 63 Hz Supply power <1 kVA 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, 6U case, 550 mm deep Mass 35 kg Operating temperature range 0 to 40°C Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	RF connector style		Type N female	
Supply voltage (single phase) Supply frequency range Supply power A7 to 63 Hz Supply power A7 to 63 Hz Supply power A8 to 63 Hz 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 A9 inch, 6U case, 550 mm deep Mass Operating temperature range Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	Safety interlock		BNC female, s/c to mute	
Supply frequency range 47 to 63 Hz Supply power < 1 kVA 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, 6U case, 550 mm deep Mass 35 kg Operating temperature range 0 to 40°C Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	USB interface		Optional	
Supply power < 1 kVA 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, 6U case, 550 mm deep Mass 35 kg Operating temperature range 0 to 40°C Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	Supply voltage (single phase)		90 to 264 Vac	
Mains connector Conducted and radiated emissions Conducted and radiated immunity EN61326: 1997 Table 1 Mains harmonic currents EN61000-3-2 Voltage fluctuations and flicker Safety EN61010-1 Case dimensions 19 inch, 6U case, 550 mm deep Mass Operating temperature range Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	Supply frequency range		47 to 63 Hz	
Conducted and radiated emissions 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, 6U case, 550 mm deep Mass Operating temperature range Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	Supply power		<1 kVA	
Conducted and radiated immunity Mains harmonic currents Voltage fluctuations and flicker Safety EN61000-3-2 EN61000-3-3 Safety EN61010-1 Case dimensions 19 inch, 6U case, 550 mm deep Mass Operating temperature range Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	Mains connector		IEC320	
Mains harmonic currents Voltage fluctuations and flicker Safety EN61000-3-3 Safety EN61010-1 Case dimensions 19 inch, 6U case, 550 mm deep Mass 35 kg Operating temperature range Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	Conducted and radiated emissions		EN61326 Class A	
Voltage fluctuations and flicker Safety EN61000-3-3 EN61010-1 Case dimensions 19 inch, 6U case, 550 mm deep Mass 35 kg Operating temperature range Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	Conducted and radiated immunity		EN61326: 1997 Table 1	
Safety EN61010-1 Case dimensions 19 inch, 6U case, 550 mm deep Mass 35 kg Operating temperature range 0 to 40°C Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors			EN61000-3-2	
Case dimensions 19 inch, 6U case, 550 mm deep Mass 35 kg Operating temperature range 0 to 40°C Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors			EN61000-3-3	
Mass 35 kg Operating temperature range 0 to 40°C Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors			EN61010-1	
Operating temperature range 0 to 40°C Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors			19 inch, 6U case, 550 mm deep	
Options (select at time of ordering) 341-719 Rack mountable with rear panel mounted input/output connectors	Mass		9	
341-719 Rack mountable with rear panel mounted input/output connectors			0 to 40°C	
	Options (select at ti	me of ordering)		
341-819 Rack mountable with front panel mounted input/output connectors	*	Rack mountable with rear pan		
	341-819	Rack mountable with front 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.

