



CBA 3G-025 **800 MHz TO 3.1 GHz 25 WATT** **CLASS A BROADBAND AMPLIFIER**



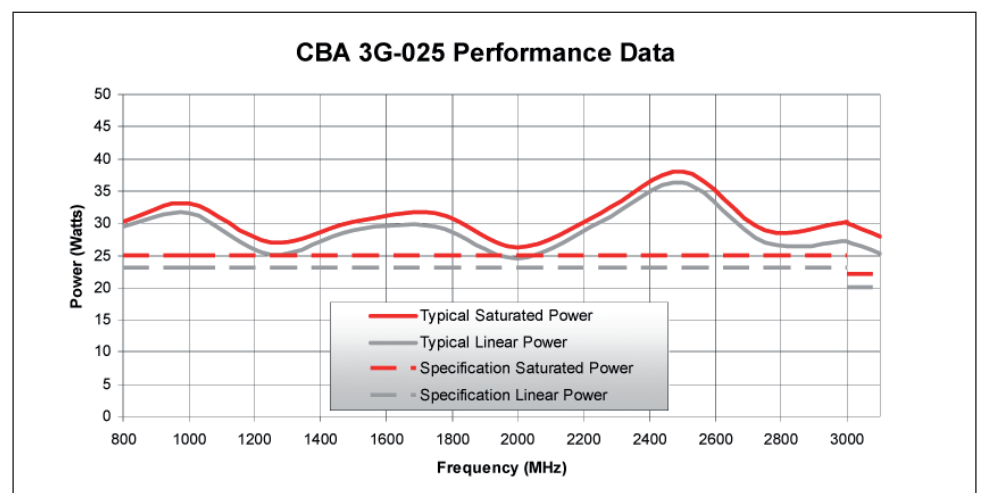
- **Class A linear and low distortion design**
- **High reliability gallium arsenide technology**
- **Mismatch tolerant and unconditionally stable**
- **Wide instantaneous bandwidth**
- **Three year parts and labour warranty**

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 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.

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.



T E S E Q

Advanced Test Solutions for EMC

CBA 3G-025

800 MHz TO 3.1 GHz 25 WATT CLASS A BROADBAND AMPLIFIER

Key RF Parameters

| | | |
|--|-----------------------------|--------------------|
| Frequency range (instantaneous) | 800 to 3100 MHz | |
| Rated output power | 25 W minimum (30 W typical) | 800 MHz to 3 GHz |
| | 22 W minimum (25 W typical) | 3.0 GHz to 3.1 GHz |
| Output power at 1 dB gain compression | 23 W minimum (25 W typical) | 800 MHz to 3 GHz |
| | 20 W minimum (22 W typical) | 3.0 GHz to 3.1 GHz |
| Harmonics at 23 W output (800 MHz to 3 GHz) | -20 dBc | |
| Gain | 46 dB | |
| Gain variation with frequency | ±2.5 dB | |
| Maximum input power (no damage) | +10 dBm | |

Impedance / VSWR

| | |
|------------------------------------|--------------------|
| Output VSWR tolerance ¹ | Infinite any phase |
| Stability | Unconditional |
| Output impedance | 50 Ohms |
| Input VSWR | 2:1 |

Additional RF Data

| | |
|--|---------------|
| Third order intercept point ² | 54 dBm |
| RF connector style | Type N female |

Electrical and Interfaces

| | |
|-------------------------------|-------------------------|
| USB interface | Optional |
| Safety interlock | BNC female, s/c to mute |
| Supply voltage (single phase) | 85 to 264 Vac |
| Supply frequency range | 45 to 63 Hz |
| Supply power | <200 VA |

Physical / Environmental

| | |
|-----------------------------|-------------------------------|
| Case dimensions | 19 inch, 3U case, 440 mm deep |
| Weight | 14 kg |
| Operating temperature range | 0 to 40°C |



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Notes:

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

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