



AS0104-100/55 1 GHz TO 4 GHz 100/55 WATT DUAL BAND POWER AMPLIFIER



- Upgradeable to higher power
- High reliability GaAs transistor technology
- Mismatch tolerant and unconditionally stable
- Wide instantaneous bandwidth
- Unique five year parts, labour and shipping warranty
- Integral directional coupler
- RS232, USB and ethernet or RS232 and GPIB

This innovative amplifier combines a compact design with market leading performance. Its ability to operate into any load without fold back makes this an ideal amplifier for all EMC RF immunity testing. The amplifier is supported via Milmega's unique five year parts, labour and shipping warranty and Teseq's local service network.

The amplifier is designed with upgradability in mind. If more power is required this amplifier can be integrated with further additional units to achieve power levels up to 400 watts.

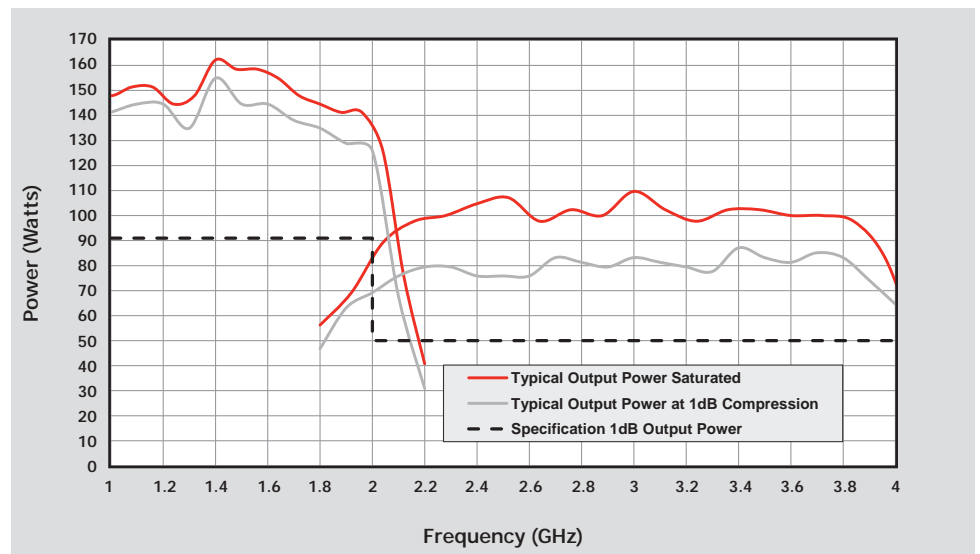
A selection of remote interfaces are available and the user can select, at time of ordering, either the internal RS232, USB and ethernet or the external RS232 and GPIB unit housed in a 1U module at no additional cost.

Internal RF switches, operated either manually via the front panel or by one of the selected remote interfaces, switch input, output and the forward and reverse sample ports for seamless operation across the wide 1 to 4 GHz range.

The GaAs balanced pair design at the core of the amplifier ensures a high reliability, 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.

Measured data



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Key RF Parameters

| | | |
|---------------------------------------|-----------------|--------------|
| Frequency range | 1 to 4 GHz | |
| Sub ranges | 1 to 2 GHz | 2 to 4 GHz |
| Rated output power | 102 W minimum | 56 W minimum |
| Power at 1 dB gain compression (P1dB) | 91 W minimum | 50 W minimum |
| Harmonics at 250 watts | -20 dBc typical | |
| Gain | 45 dB | 42 dB |
| Gain variation with frequency | +/-2 dB | |
| Maximum input power (no damage) | +15 dBm | |

Impedance / VSWR

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

Additional RF Data

| | | |
|---------------------------------|-----------------------------|------|
| Third order intercept point IP3 | 10 dB > P1dB | |
| Spurious | 70 dBc max (80 dBc typical) | |
| Noise figure | 6 dB | 8 dB |
| RF connector style | Type N female | |

Electrical and Interfaces

| | |
|---|---|
| Remote control (either option included in price) | Internal RS232, USB and ethernet or RS232 and GPIB in additional external 1U high unit |
| Safety interlock | Via rear panel D-sub connector |
| Supply voltage (single phase) | 180 to 240 VAC +/-10% or 90 to 132 VAC +/-10% |
| Supply frequency | 47 to 63 Hz |
| Supply power | 2 kVA |

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 quality and environmental requirements of the ISO
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Physical / Environmental

| | |
|-----------------------------|-----------------------------------|
| Case dimensions | 19 inch, 3U case, 527 mm deep |
| Mass | 30 kg |
| Operating temperature range | 0 to 40° C (storage -40 to 70° C) |