

1 to 40 GHz Amplifiers with Integrated Power Detector

Ciao Wireless's new low noise amplifiers have instantaneous, ultra-wideband coverage from 1 to 40 GHz, making them suitable for multiple communication band applications. The amplifier line offers multiple gain options: 20, 25, 30 and 35 dB with flat response, typically less than ± 3.0 dB over the band. Amplifier output power is typically +15 dBm minimum with a two-tone, third-order intercept of +23 dBm and non-harmonic spurious levels better than -60 dBc. All units are well matched, with input VSWR typically 1.6:1 over the band (2.3:1 maximum) and output VSWR 1.8:1 (2.3:1 maximum). Typical noise figure is as low as 4 to 5 dB at +23°C.

The design features an integrated output power detector that covers 10 MHz to 40 GHz and has the flexibility to tailor the output voltage to meet the customer's desired voltage vs. output power. The detected output is scalable up to a 10 dB dynamic range with very repeatable performance and settling times typically 50 μ s or less. Units can

be ordered without the output detector, if only the amplifier is desired. The detector can also be ordered separately, without the amplifier, for applications that require a small, competitively priced power detector covering 10 MHz to 40 GHz. The detector can be optimized over a narrower frequency band.

The amplifier with the integrated detector assembly occupies a small footprint, with 2.9 mm connectors and hermetic feedthroughs. Hermetic sealing is available, and the line is qualified for all commercial and high-rel applications. The nominal operating temperature range is -20° to +70°C, although the design can be optimized for alternate operating conditions. These units require

+12 to +15 V bias and have integrated voltage regulation and reverse polarity protection.

Ciao Wireless Inc.
Camarillo, Calif.
sales@ciaowireless.com
www.ciaowireless.com

