POWER LINE CARRIER PRODUCTS

LPA-2

For Power Line Carrier Communications

PLC 50/100W Amplifiers

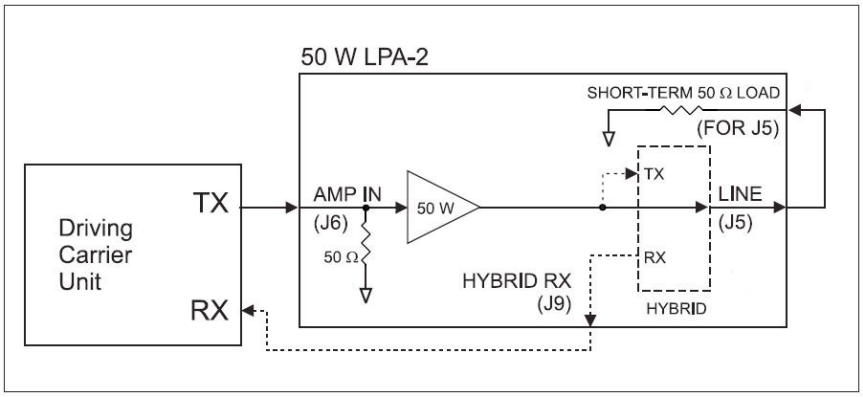
The LPA-2 is the next generation high-power amplifier for Power Line Carrier (PLC) Communications and adds features and efficiency superior to all previous designs using the latest technology. It offers flexibility plus user-friendliness on its input and output, such that it can be used with any power line carrier system. Two 50 W units can be combined for a 100 W output and to provide redundancy.

Although primarily used in applications where the attenuation from end-to-end is higher than the normal 10 W amplifier can handle or where the line noise is high, the LPA-2 can also be used in normal applications to boost system dependability by significantly improving the possibility of the PLC signal not being lost during a high noise event.

Modern design makes the LPA-2 able to protect itself against shorts or open circuits on its coax cable output as well as against being overdriven on its input. Once any problem is removed it will automatically recover without damage to the unit.

FEATURES AND BENEFITS

1	Space saving 2-RU 50W design/4-RU 100 W design (no fans)
2	Improved efficiency for lower heat
3	Automatic overload protection/reliable robust design
4	Self-monitoring plus convenient front LED status, adjustor and test points
5	Optional built-in skewed hybrid
6	Standard 50 Ω short-term 100 W load built-in for testing



Typical connection diagram of one terminal of a PLC system with a 50 W LPA-2 inserted to boost the transmit power & the internal 50 Ω load temporarily connected to its Line Output for setting the TX power level. (Optional Hybrid shown in dotted lines.)

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SPECIFICATIONS

Specification	Value
Frequency Banwidth	30 kHz-353 kHz
Input Impedance	Settable 50 Ω (normal setting) or 5k Ω
Output Impedance	50 Ω
Maximum RF Power Input	10 W (+40 dBm or 22.4 V, 50 Ω reference)
Recommended RF Power Input	5 W (+37 dBm or 15.8 V, 50 Ω reference)
Minimum RF Power Input (to get 50 W output)	2 W (+33 dBm or 10 V, 50 Ω reference)
Maximum Power Output	50 W continuous single frequency into 50 Ω load (+47 dBm or 50 V, 50 Ω reference) *
Harmonic & Spurious Noise Output	50 dB below 50 W fundamental *
Standard Compliance	Meets relevant specifications: IEEE C93.5 & IEEE 1613
Alarm Relay Contact Rating	15 ms max operate time, 1 A max make/carry, 0.25 A max interrupt at 250 Vdc
50 Ω Dummy Load (Testing & Setup)	80 W Continuous, 100 W for 2 min
Ambient Temperature Range	-20 to 60° C

* 50W is replaced by 100W (+50 dBm) when two units are combined to give 100W output with a built-in combiner board inside one of the two units. Inputs of the 2 units are paralleled in this case with one set for 50 Ω and the other for 5K Ω input impedance.

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