The Microsemi 58529A GPS Line Amplifier with L1 Bandpass Filter provides gain to overcome cable losses in installations where a GPS receiver and its antenna must be separated by large distances. With over 20 dB (typical) of gain, the 58529A increases the maximum cable length from 115 to 240 meters between the 58532A GPS Antenna and a timing receiver. Two amplifiers may be used in series to achieve distances up to 360 meters.

An active device, the 58529A accepts power between +4.5 Vdc to +13 Vdc. The unit is designed to pass DC power up to the GPS antenna.

**Improved Immunity to Lightning**

Electromagnetic fields caused by nearby lightning strikes can induce surge voltages in the antenna cable, damaging components in the antenna system. The 58529A has improved immunity to these voltages through built-in diode protection.

**Durable and Easy to Install**

Microsemi’s third generation GPS antenna line amplifier, the 58529A is even more durable and easier to install than its predecessors. New features include a more rugged package design and a streamlined installation scheme.

Shrink tubing is also provided with the 58529A to protect connector joints from moisture. Use of the shrink tubing provides additional moisture protection, but it is not necessary and can be omitted to further simplify installation.
Specifications

Electrical Specification

• Input/Output Impedance: 50 Ω
• Gain: >20 dB (25 dB typical) in the passband
• Filter Attenuation: >15 dB @ L1 ±75 MHz, >30 dB @ L1 ±140 MHz
• Reverse Isolation: >40 dB (typical)
• Noise Figure: <4.3 dB (3.8 dB typical)
• VSWR: Input 1.4:1 (typical), Output 1.7:1 (typical)
• RF Input Level: –25 dBm maximum
• dc Power: +4.5 V to +13 V, <13 ma; dc power is passed to GPS antenna

Physical Specification

• Connectors: 2 Type-N Jacks
• Dimensions (including connectors): 32 mm D 110 mm L
• Weight: 440 g

Environmental Specification

• Operating Temperature: –40°C to +80°C
• Moisture Resistance: IP 66 (according to IEC 529)
• Corrosion: Saltspay test according to MIL-STD-202.Method 101, Condition B.

Safety:

• IEC 1010-1: 1990 + A1 / EN 61-610-1: 1993

EMC:

• CISPR 22 1993 / EN 55022: 1994 Class B
• IEC 801-2 1991 / EN 50082-1: 1992 4 RV CD, 8 kV AD
• IEC 801-3 1984 / EN 50082-1: 1992 3 V/m, 1 kHz 80%
• IEC 801-4 1988 / EN 50082-1: 1992 0.5 kV Signal Lines and DC Power Port
• IEC 1000-3-2 1995 / EN 61000 3-2: 1995 Harmonics
• IEC 1000-3-3 1994 / EN 61000 3-3: 1995 Flicker

This product model complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC and carries the CE marking accordingly.

Ordering Information

(Contact Microsemi for pricing and availability)

p/n 58529A GPS Line Amplifier with L1 Bandpass Filter