

Key Features

- Distributes L band frequency signals to multiple GPS synchronization modules and receivers
- High Isolation
- Excellent Gain Flatness
- DC power sourced from any GPS receiver via any port

Benefits

- Optimum signal quality with low noise
- Rugged, providing long-lasting, trouble free deployment
- High isolation mitigates interference between multiple GPS devices
- Features reliability and redundancy



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L1 GPS Reference Antenna

Reliable Time Through Design

GPS Source is the market leader for high quality GPS components. Our reputation has been earned by designing ruggedized equipment for military applications. All GPS Source splitters are designed and manufactured to military specifications.

The S18GT L1 Active Splitter distributes GPS, Galileo, GLONASS, BeiDou and Compass frequencies to four outputs. This enables a single timing reference antenna and cable configuration to sync multiple systems.

Its high isolation mitigates interaction between multiple GPS receivers including oscillation.

Any single output port connected to a VDC source can power both device and active GPS antenna. The S18GT is designed to automatically switch to another port supplying DC voltage should the initial port fail or the DC source is removed.

The S18GT delivers a simple redundant design, ensuring uninterrupted DC voltage to the splitter and the active antenna, eliminating requirements for a separate power supply or wiring, lowering equipment and installation costs.



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Table 1-1. Electrical Specifications

Operating Temperature -40°C to 85°C

| Parameter | Conditions | Min | Typ | Max | Units |
|--|---|-----|-----|-----|--------|
| Frequency Range | Ant: Any Port; Unused Ports: 50Ω ⁽¹⁾ | 1.1 | | 1.7 | GHz |
| Gain | Ant: Any Port; Unused Ports: 50Ω (Gain can be 0dB or 10dB) | -3 | 0 | 3 | dB |
| Input/Output SWR | All Ports 50Ω | | | 2 | — |
| Noise Figure | Amplified Ant: Any Port; Unused Ports: 50Ω, Gain = 0dB | | | 3 | dB |
| Gain Compression Point (IP1dB) | Gain = 0dB | -32 | | | dBm |
| 3 rd Order Intercept (IIP3) (Gain = 0dB) | f1 = 1600.42MHz f2 = 1625.42MHz 2f1 – f2 = fL1 | -24 | | | dBm |
| RF Input (Damage Threshold) | Maximum RF input without damage | | | 0 | dBm |
| Amp. Balance | [J1 – J2] Ant: Any Port; Unused Ports: 50Ω | | | 1 | dB |
| Phase Balance | Phase (J1 – J2) Ant: Any Port; Unused Ports: 50Ω | | | 1 | Degree |
| Delay | Ant: Any Port; Unused Ports: 50Ω, L1 | | | 5 | ns |
| Isolation (Gain = 0dB) | Adjacent Ports: Ant – 50Ω | 28 | | | dB |
| | Opposite Ports: Ant – 50Ω | 34 | | | |
| DC IN | DC Input on Any RF Output | 3 | | 12 | VDC |
| Device Current | Current Consumption of Active Device (excludes Ant. Cur.) | | 18 | 20 | mA |
| Ant/Thru Current ⁽²⁾ | Max Source DC Current Through Device | | | 250 | mA |

- Notes: 1. Frequency range includes GPS L1, GLONASS L1, and GALILEO E1.
 2. Maximum current allowed from the DC source through the S18GT when output of S18GT is short circuited.

