Symmetricom

DATA SHEET

58536A

GPS L1 Active Splitter

Key Features

- 4 ports
- High isolation
- Waterproof
- Base station applications

Key Benefits

- Can be conveniently cascaded without adding separate amplifiers and bias-tees between splitters
- Delivers precise GPS signals over a wide temperature range and in harsh environmental conditions
- Eliminates feedback and interaction between any GPS systems connected to it

The Symmetricom® Active Splitter allows multiple GPS receivers to share a single antenna. Designed for both manufacturing and position/timing redundancy applications, the GPS L1 Active Splitter provides dependable signals for four GPS receivers.

For large manufacturing facilities, the Symmetricom Active Splitter can provide as many GPS L1 (1575.42 MHz) signals as your manufacturing floor requires. With built-in amplification to overcome splitter losses, the Active Splitters can be conveniently cascaded without adding separate amplifiers and bias-tees between splitters.

High Isolation Eliminates Receiver Interactions

The Symmetricom GPS Active Splitter has the essential port-to-port isolation required to eliminate interaction between multiple GPS receivers. Without such isolation, local oscillator (LO) leakage from one GPS receiver can prevent other receivers from acquiring time and position signals and maintaining lock. In wireless base station applications, poor isolation can disable cell sites. In GPS manufacturing tests, poor isolation causes repeatability problems which can reduce yields and cause false rework.

The Symmetricom Active Splitter has a minimum of 40 dB isolation at common GPS LO frequencies between every combination of output ports. Extensive field testing by GPS and cellular base station manufacturers has demonstrated suitability for use and the long-term dependability of the Symmetricom GPS L1 Active Splitter.

Convenient DC Power Simplifies Your Installation

Power is conveniently obtained from the GPS receiver(s) connected to the amplifier. This eliminates the need for a separate DC power supply and wiring. DC power applied to the splitter is also passed on for use by an active antenna, further simplifying your installation. The 58536A splitter obtains power from a GPS receiver connected to any port. It can be used with mounting hardware kit 093-58536-10.

58536A

Specifications

NUMBER OF OUTPUT PORTS: 4

ELECTRICAL SPECIFICATIONS

Input/output impedance:	50Ω
VSWR (typical):	Input & output 1.6 at L1
Bandwidth (–3 dB):	L1 (1575.42 MHz) ±20 MHz
Gain (antenna input to any output at L1):	0dB ±3dB
Noise figure:	5dB typical, at 25°C
Port-to-port isolation L1 +/-40 MHz:	50dB typical
AC input level	
Maximum input level:	–25dBm
Damage threshold:	+17dBm
DC power (Operating voltage):	+4.5 to +13 V DC
Damage threshold:	18 V DC either polarity
Operating current:	23 to 48 mA depending on voltage
Passthrough current:	450 mA
Group delay:	40 ns typical

PHYSICAL SPECIFICATIONS

RF connectors:	Female N-type
Dimensions (including RF connectors)	
95 mm W x 130 mm L x 35 mm H (3.75 in. x 5.12 in. x 1.38 in.)	
Weight:	0.5 kg
Operating temperature:	–35°C to +75°C

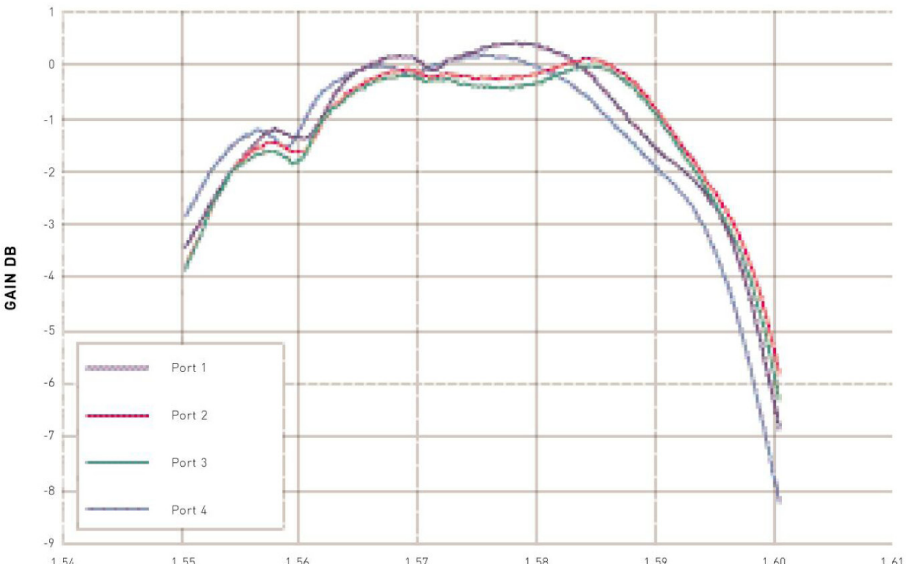

Figure 1. 58536A. The Pass Band Gain Performance of the four ports of a typical splitter at L1 (1575.42MHz) + 10 MHz.

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