

58536B

GNSS L1 4:1 Active Splitter

Summary

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

For large manufacturing facilities, the Microchip Active Splitter can provide as many GNSS 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.



Key Features

- 4 ports
- High isolation
- Waterproof
- Distributes GPS, GLONASS, Galileo, and BeiDou/Compass frequencies
- Base station applications

Key Benefits

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

High Isolation Eliminates Receiver Interactions

The GNSS Active Splitter has the essential port-to-port isolation required to eliminate interaction between multiple GNSS receivers. Without such isolation, Local Oscillator (LO) leakage from one GNSS 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.

Convenient DC Power Simplifies Your Installation

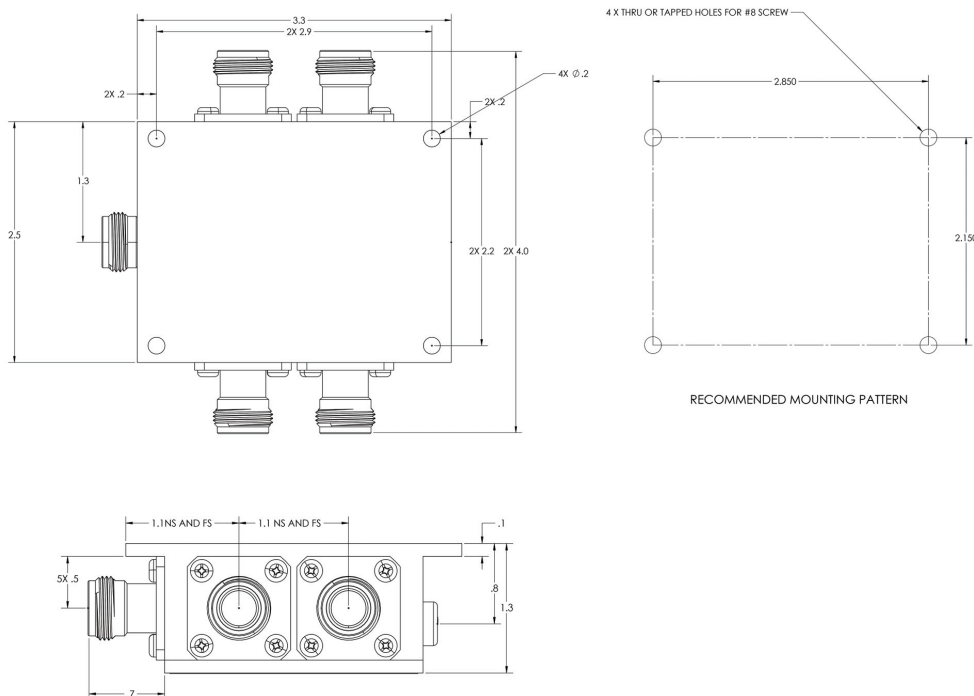
Power is conveniently obtained from the GNSS receiver(s) connected to the amplifier. This eliminates the need for a separate DC power supply and wiring. DC power applied to the splitter is also passed on for use by an active antenna, further simplifying your installation. The 58536B splitter obtains power from a GNSS receiver connected to any port.

Electrical Specifications

- Operating Temperature: -40°C to 85°C"

Parameter	Conditions	Min	Typ	Max	Units
Frequency Range ⁽¹⁾	Ant: Any Port; Unused Ports: 50Ω	1		2	GHz
Gain	Ant: Any Port; Unused Ports: 50Ω (Gain of 0dB)	-3	0	+3	dB
Input/Output SWR	All Ports 50Ω		2:0:1		—
Noise Figure	Ant: Any Port; Unused Ports: 50Ω, Gain = 0dB			2	dB
Gain Compression Point (IP1dB)	Gain = 0dB	-35			dBm
3rd Order Intercept (IIP3) (Gain = 0dB)	f1 = 1600.42MHz f2 = 1625.42MHz 2f1 - f1 = fL1	-24			dBm
RF Input (Damage Threshold)	Max 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 - Amplified	Ant: Any Port; Unused Ports: 50Ω, L1			5	ns
Isolation - Amplified (Gain = 0dB)	Adjacent Ports: Ant – 50Ω	30			dB
	Opposite Ports: Ant – 50Ω	40			dB
DC IN	DC Input on any RF Output	3.3		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, GALILEO E1 2. Maximum current available from the DC source through the 58536B when output of 58536B is short circuited.



Dimensions are in inches (from GPS Source Technical Product Data Sheet S14GT)

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