RACK-MOUNT

Active Splitter

ZT8PD-0922-GPS

50Ω 950 to 2150 MHz 8-Way SMA Female

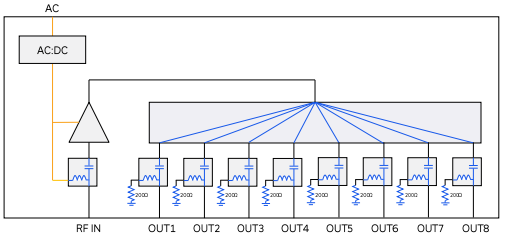
KEY FEATURES

- 8-way power division with no path loss
- L-band frequency coverage
- DC bias at RF input
- DC blocked RF outputs with 200Ω load
- Convenient rack-mountable chassis
- AC mains power supply



Generic photo used for illustration purposes only

FUNCTIONAL BLOCK DIAGRAM



APPLICATIONS

- Benchtop and rack-mounted automated test systems
- GNSS (GPS, Galileo, GLONASS) signal distribution
- Test instrumentation time synchronization
- L-band satcom (satellite communications)

PRODUCT OVERVIEW

Mini-Circuits' ZT8PD-0922-GPS is an 8-way active power splitter covering L-band 950-2150 MHz, ideally suited for satcom and GNSS (GPS, GLONASS & Galileo) signal distribution applications. The splitter is powered from the AC mains input to overcome the signal splitting losses from input to each output.

For GNSS applications, the splitter provides a 5V DC bias on the RF input to power an external active antenna without additional component requirements. All signal paths are DC blocked from the RF input to output ports, with each output additionally having an internal 200Ω load to simulate the antenna's current draw for any receivers connected on the outputs.

The system is housed in a slim 19-inch rack chassis with all RF ports (SMA female) on the front panel.

ELECTRICAL SPECIFICATIONS +25°C

Parameter	Conditions	Min.	Typ.	Max.	Unit
Frequency	-	950	-	2150	MHz
Gain	-	2.0	3.5	5.0	dB
Gain Flatness	-	-	±0.5	-	dB
Isolation	Between output ports	18	28	-	dB
Reverse Isolation[1]	-	-	40	-	dB
Impedance	Z_0	-	50	-	Ω
Return Loss	RF IN	-	20	-	dB
	OUT1-8	-	20	-	
Input P1dB[2]	-	-	0	-	dBm
DC Out[3]	Voltage out from RF IN port	-	5	-	V
	Current out from RF IN port	-	-	100	mA
DC In[4]	Voltage per port into OUT1-8 ports	-	-	5.2	V
	Current per port into OUT1-8 ports	-	-	25	mA
	Internal DC load on OUT1-8 ports	-	200	-	Ω

1. Reverse path loss measured from any OUT1-8 to RF IN
2. Input power level at which the internal amplifier would typically be expected to reach its output power 1 dB compression point
3. Voltage provided by internal source. Do not exceed the current draw limit.
4. Limit per port for a DC signal input into the OUT1-8 ports. Do not exceed the voltage or current limit.

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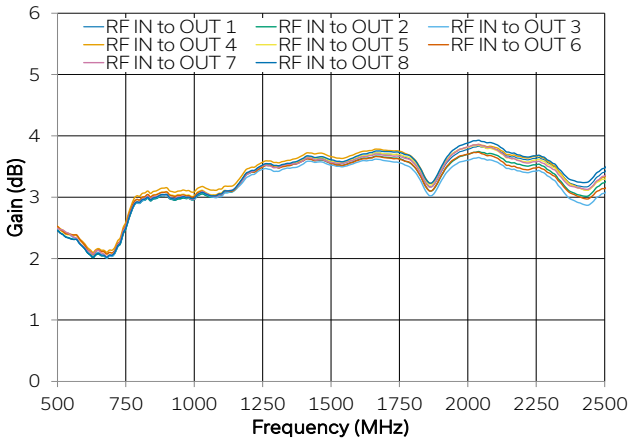
Active Splitter

ZT8PD-0922-GPS

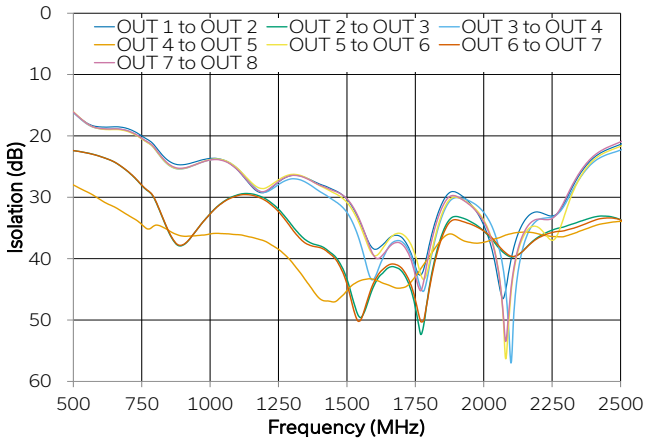
50Ω 950 to 2150 MHz 8-Way SMA Female

TYPICAL PERFORMANCE GRAPHS

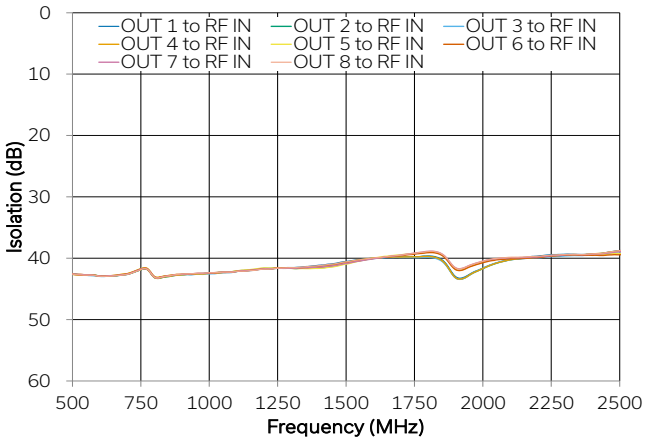
Gain



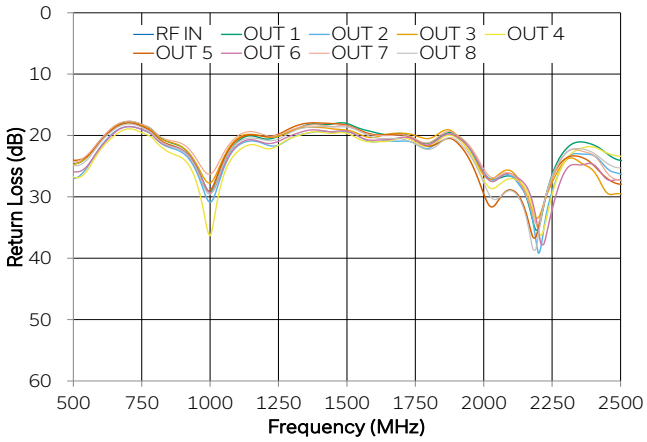
Isolation - Between OUT Ports



Reverse Isolation



Return Loss



ABSOLUTE MAXIMUM RATINGS

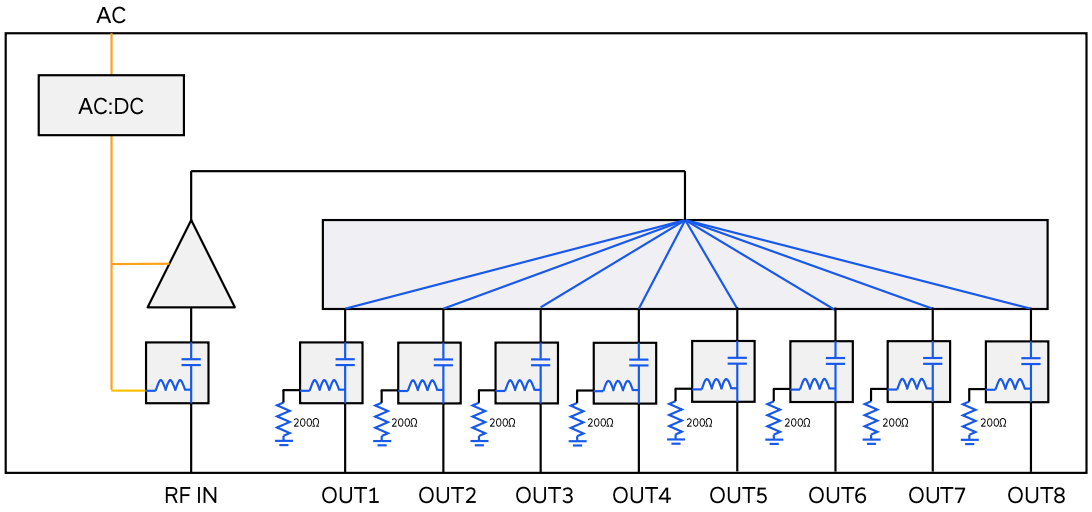
Parameter	Conditions	Limits	Units
Temperature	Operating Storage	0 to +50 -20 to +60	°C
Input Power (No Damage)		+5	dBm

Permanent damage may occur if any of these limits are exceeded. Operating in the range between operating power limits and absolute maximum ratings for extended periods of time may result in reduced life and reliability.

POWER SUPPLY

Power Supply	AC mains input: 100-240 V, 50 / 60 Hz
Fuse	2A, 250V rating
Power Consumption	150W maximum

FUNCTIONAL BLOCK DIAGRAM



CONNECTIONS

Port	Connector
RF IN	SMA female
OUT1-8	SMA female
AC Input	IEC C14 inlet

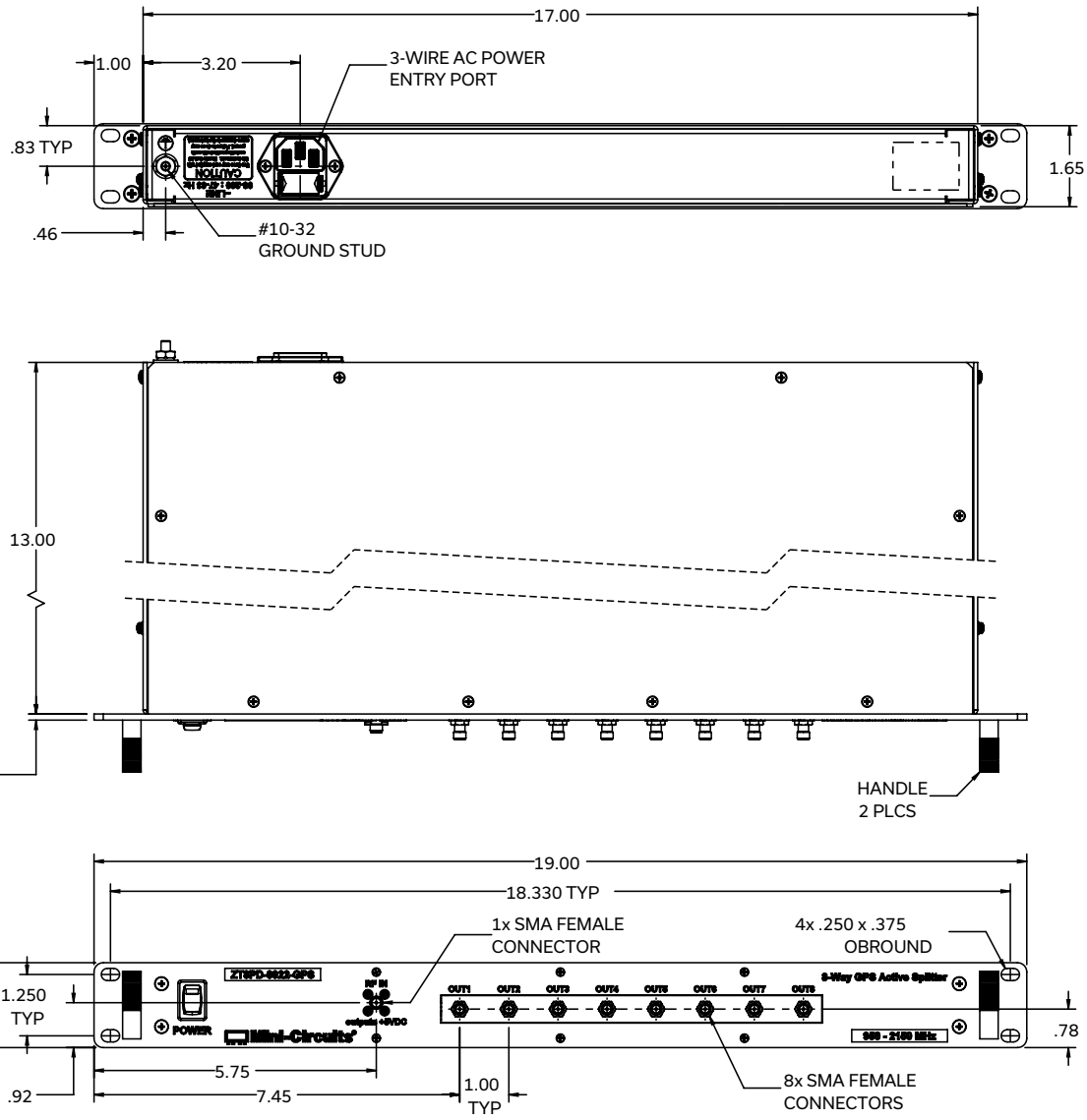
RF IN = Input port
OUT1-8 = Output ports

Active Splitter

ZT8PD-0922-GPS

50Ω 950 to 2150 MHz 8-Way SMA Female

CASE STYLE DRAWING



PRODUCT MARKING*

Product Marking: ZT8PD-0922-GPS
Product Description: 8-Way GPS Active Splitter
Product Frequency: 950-2150 MHz
Unit ID Label: Serial number and other identification marks
*Marking may contain other features or characters for internal lot control

RACK-MOUNT

Active Splitter

ZT8PD-0922-GPS

50Ω 950 to 2150 MHz 8-Way SMA Female

DETAILED MODEL INFORMATION IS AVAILABLE ON OUR WEBSITE CLICK HERE

Case Style	99-01-3737
Environmental Rating	ENV55
Regulatory Compliance	Refer to our website for compliance methodologies and qualifications CE UKCA www.minicircuits.com/quality/environmental_introduction.html

Contact Us: testsolutions@minicircuits.com

Included Accessories	Part Number	Description
	CBL-3W-xx	AC power cord (IEC C13 connector to local plug) Select one option from the list below. Please contact testsolutions@minicircuits.com if your region is not listed.
	HT-4-SMA	SMA connector wrench (4" length)

AC Power Cord Options	Part Number	Description
	CBL-3W-US	USA NEMA 5-15 plug (type B) to IEC C13 connector
	CBL-3W-EU	Europe CEE 7/7 plug (type E/F) to IEC C13 connector
	CBL-3W-UK	UK BS-1363 plug (type G) to IEC C13 connector
	CBL-3W-AU	Australia & China AS/NZS 3112 plug (type I) to IEC C13 connector
	CBL-3W-IL	Israel SI-32 plug (type H) to IEC C13 connector

NOTES

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.

B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html

Mini-Circuits

Environmental Specifications **ENV55**

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-0° to 50° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-20° to 60° C Ambient Environment	Individual Model Data Sheet
Operating and Storage Humidity	5% to 85% RH (non-condensing)	Ambient
Bench Handling Test	Bench Top Tip 45° & Drop	MIL-PRF-28800F
Transit Drop Test	Free Fall Drop, 20 cm (7.9 inches)	MIL-PRF-28800F Class 3

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