

GS18/GS18i

GPS/GNSS Splitter



- Design For Wireless Infrastructure Applications
- Gain :0dB ~ 15dB (Optional)
- Frequency Range: 1150MHz~ 1650MHz
- Response For:
GPS/GLONASS/Beidou/Galileo/IRNSS/QZSS/SBAS/NAVIC
- High Isolations > 28dB

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Description

The GS18/GS18i GPS Splitter is a one-input, eight-output GPS device. This product typically finds application where an input from an active GPS roof antenna is split evenly between four receiving GPS units. In this scenario, the GS18 can be configured to pass DC from an RF output (J1) to the antenna input port in order to power an active GPS antenna on that port. The others outputs would feature a 200 Ohm DC load to simulate an antenna DC current draw for any receiver connected to those ports.

Specifications

Parameter		Conditions		Min	Typ	Max	Units	
Freq. Range		Ant - Any Port		1150		1650	MHz	
In &Out Imped.		In, all output ports			50		Ω	
Gain	0dB	In- Output ports, ,Unused Ports - 50Ω		-1	0	1	dB	
	Amplified(15dB)			14	15	16		
Input SWR		All Ports 50Ω				1.5:1	-	
Output SWR		All Ports 50Ω				1.5:1	-	
Nois Figure- Amplified		0dB~15dB, Standard 10dB		4	1.5	1	dB	
Gain Flatness(Amplified)		0dB~15dB				1.5	dB	
Amp. Balance		J1-J2 , Ant- Any Port, Unused Ports				0.5	dB	
Phase Balance		Phase(J1-J2), Ant- Any Port, Unused Ports				1.0	deg	
Group Delay Flatness						1	ns	
Isolation	0dB~15dB	Adjacent Ports: In - 50Ω		28			dB	
		Opposite Ports: In - 50Ω		38				
DC IN		Wall mount transformer		9	12	16	VDC	
DC input from J1~J8		GS18, GS18i Standard configuration		3.3	5	16	VDC	
		GS18i, with 200Ω load		3.3	5	9		
Device Current						30	mA	
Current		Pass DC, DC input on J1, GS18				250	mA	
		Pass DC, DC input on J1~J8, GS18i				250	mA	
Max RF Output Power						-28	dBm	
Max RF Input(Amplified)		Max RF input without damage				0	dBm	
Operating Temperature				-40		85	°C	

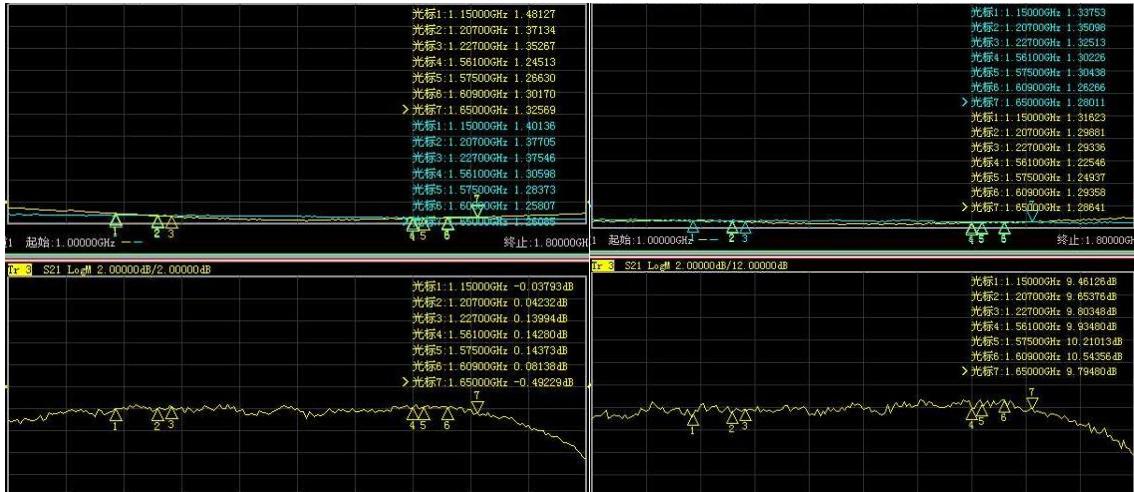
RF Parameter Table 1

Frequency (MHz)	Gain (dB)																Isolation(dB)			
	0dB								15dB								Gain: 0~15dB			
	IN-1	IN-2	IN-3	IN-4	IN-5	IN-6	IN-7	IN-8	IN-1	IN-2	IN-3	IN-4	IN-5	IN-6	IN-7	IN-8	1-2	1-3	1-5	3-5
1150	0.0	0.1	0.0	0.1	0.3	0.2	0.7	0.3	14.8	14.9	14.6	15.1	15.3	15.3	14.9	15.4	44	28	37	38
1176	0.0	0.1	0.1	0.1	0.2	0.2	0.6	0.3	14.8	14.9	14.7	15.1	15.3	15.3	14.9	15.4	45	28	37	38
1207	0.1	0.0	0.1	0.2	0.0	0.1	0.4	0.3	14.9	14.9	14.8	15.0	15.3	15.3	15.0	15.1	45	28	38	38
1227	0.1	0.0	-0.3	-0.1	0.1	-0.1	0.4	0.0	14.9	15.1	14.7	15.2	15.0	15.4	15.1	15.3	45	28	37	38
1268	0.1	0.1	-0.2	0.1	0.1	0.0	0.4	0.0	14.9	15.0	14.8	15.1	15.0	15.4	15.1	15.3	46	29	37	38
1545	0.2	0.1	0.3	0.2	0.0	0.0	0.2	0.1	15.3	15.3	15.4	15.6	15.3	15.5	15.5	15.5	44	39	37	46
1561	0.2	0.1	0.4	0.2	0.0	0.0	0.2	0.1	15.3	15.3	15.5	15.6	15.3	15.5	15.5	15.5	45	41	37	46
1575	0.2	0.1	0.1	0.2	0.1	0.3	0.2	0.2	15.3	15.2	15.2	15.5	15.2	15.4	15.2	15.3	45	41	38	46
1609	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.3	14.9	14.8	14.9	14.8	15.1	14.9	14.8	15.1	45	43	38	50
1650	-0.4	-0.2	-0.4	-0.1	-0.4	-0.1	-0.2	-0.1	14.5	14.6	14.9	14.7	14.3	14.5	14.1	14.4	45	43	39	51

RF Parameter Table 2

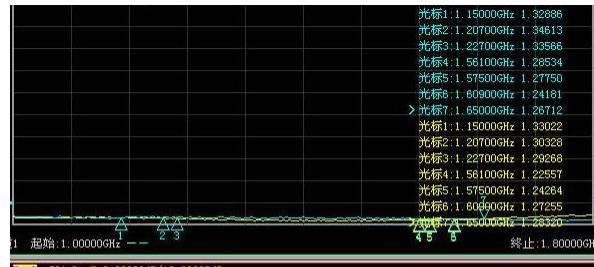
Frequency (MHz)	Noise Figure(dB)				VSWR																	
	0	5	10	15	0dB Gain								15dB Gain									
					IN	1	2	3	4	5	6	7	8	IN	1	2	3	4	5	6	7	8
1150	3.7	1.9	1.1	0.8	1.5	1.4	1.4	1.3	1.4	1.3	1.3	1.2	1.3	1.3	1.4	1.4	1.3	1.3	1.3	1.3	1.2	1.2
1176	3.4	1.9	1.1	0.8	1.5	1.4	1.4	1.3	1.4	1.3	1.3	1.2	1.2	1.3	1.4	1.4	1.3	1.3	1.3	1.3	1.2	1.2
1207	3.9	1.9	1.2	0.8	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.2	1.2	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.2	1.2
1227	3.9	1.9	1.2	0.9	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.3	1.3	1.3	1.2	1.4	1.3	1.3	1.2	1.3
1268	3.8	2.0	1.2	0.9	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.3	1.3	1.2	1.3	1.3	1.3	1.2	1.2	1.3
1545	3.7	2.0	1.21	0.9	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.3	1.3	1.3	1.2	1.3	1.2	1.3	1.3	1.3
1561	3.6	2.1	1.2	0.9	1.3	1.3	1.3	1.2	1.3	1.3	1.2	1.2	1.2	1.3	1.3	1.2	1.3	1.2	1.3	1.2	1.3	1.3
1575	3.6	2.1	1.2	1.0	1.3	1.3	1.3	1.2	1.3	1.2	1.2	1.3	1.2	1.2	1.3	1.3	1.2	1.3	1.2	1.3	1.2	1.3
1609	4.0	2.2	1.2	1.0	1.3	1.3	1.3	1.2	1.3	1.2	1.3	1.3	1.2	1.2	1.3	1.3	1.2	1.3	1.2	1.2	1.2	1.3
1650	3.9	2.2	1.3	1.0	1.3	1.3	1.3	1.2	1.3	1.2	1.5	1.3	1.2	1.3	1.3	1.2	1.3	1.2	1.2	1.2	1.3	1.3

Performance Data

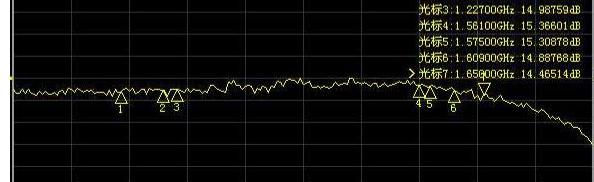


Gain :0dB

Gain :10dB



Gain :15dB



Gain :20dB

Order Informations And Available Options

GS18i - A -DC-NM-NM- BO

Pass DC or Block DC
 Options:Blank(Standard)-Pass DC In &J1BI - Pass DC on J1 and Block DC InBO-Block DC Out and Pass DC IInB- Block DC Out and In

Connector Output
 Blank(Standard)-N Female
 -SF-SMA Female
 -TF TNC Female
 -BF BNC Female

Connector Input
 Blank(Standard)-N Female
 -SF-SMA Female
 -TF TNC Female
 -BF BNC Female

Power Options:
 Blank(Standard)- Without Power adapter
 -DC With 230/5V Power adapter

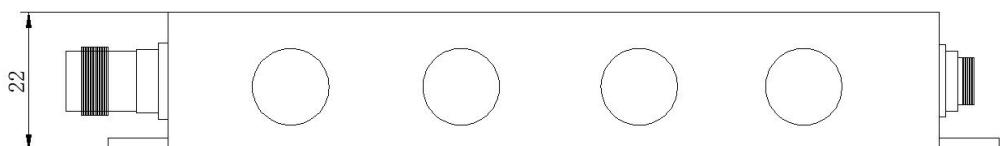
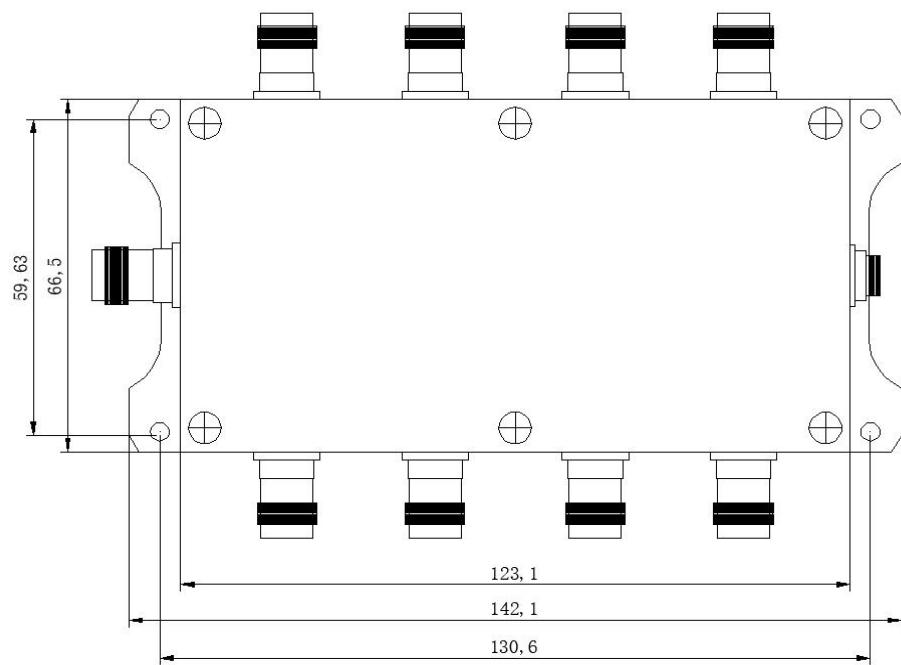
Gain Options:
 Blank(Standard)-0dB
 -Axx xx=01-10,Desired Gain Level
 -A Active,10dB gain
 -P Passive

Part Number/Standard:
 GS18: 0dB gain, N Female, Pass DC IN&J1
 GS18i: 0dB gain, N Female, Pass DC IN&J1~J8

Please contact us for more configurations and application supports. Email:

Sales@gemsnav.com.

Mechanical (mm)



Frequency reference table

Global/Compass Navigation Satellite Systems(GNSS/CNSS)	5			2			6/3			6			1																				
Frequency(MHz)	1164	1176	1188	1192	1207	1215	1219	1227	1239	1245	1252	1259	1266	1268	1278	1290	1535	1540	1545	1550	1558	1558	1561	1563	1575	1587	1592	1602	1609	1616	2491		
GPS(USA) L1,L2,L2C,L5	L5+/-12					L2/L2C+/-12											L6+/-5							L1+/-12									
Glonass(Russia) G1,G2											G2+/-7																	G1+/-7					
Galileo(European) L1.E1.E2.E5(E5a,E5b).E6	E5+/-15											E6+/-12					L6+/-5			E2	L1+/-17		E1										
Compass (Beidou 2,China)				B2+/-10							B3+/-10								B1+/-2														
Beidou 1 (China,Tx(LHCP)/Rx(RHCP))																													L	S			
IRNSS (India)				.5+/-15																				L1+/-12						S+/-15			
OmniStar																	O+/-14---->																