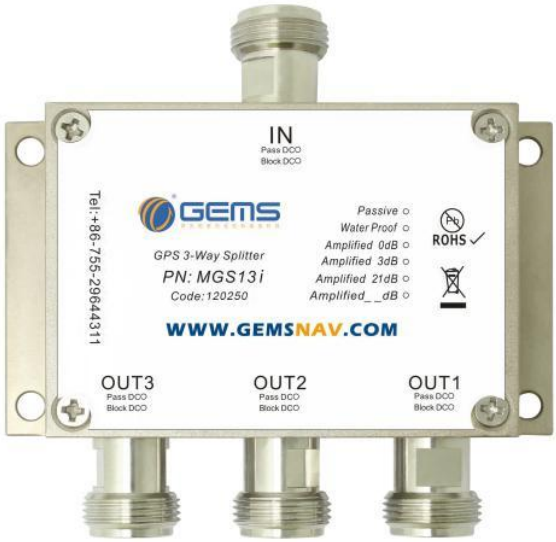
MGS13/MGS13i

GPS and GNSS Splitter



RoHS

- **Designed for wireless base station applications**
- **The MGS13 J1 output port is powered on**
- **The MGS13i is powered from any output port**
- **Gain: 0dB typical; 1dB~21dB and passive (optional)**
- **Frequency range: 1150MHz~1650MHz;**
- **Supported systems: GPS/GLONASS/Beidou/Galileo/IRNSS/QZSS/SBAS/NAVIC/OmniStar**
- **High isolation**

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Description

MGS13 and MGS13i are three-part GNSS power splitters, the main use is to share GNSS antennas, used as ordinary RF power dividers, MGS13 standard configuration is J1 through DC, to power the active GNSS antenna connected to the input port, J2 J3 port DC blocked, and has a 200 Ω DC load to simulate the DC loss of any receiver connected to this port.

The MGS13i's three output ports are DC-connected at the same time, and the three output ports are simultaneously powering the GNSS antenna, and the output port does not have a 200 Ω DC load as standard, and this option can be selected if this 200Ω load is required.

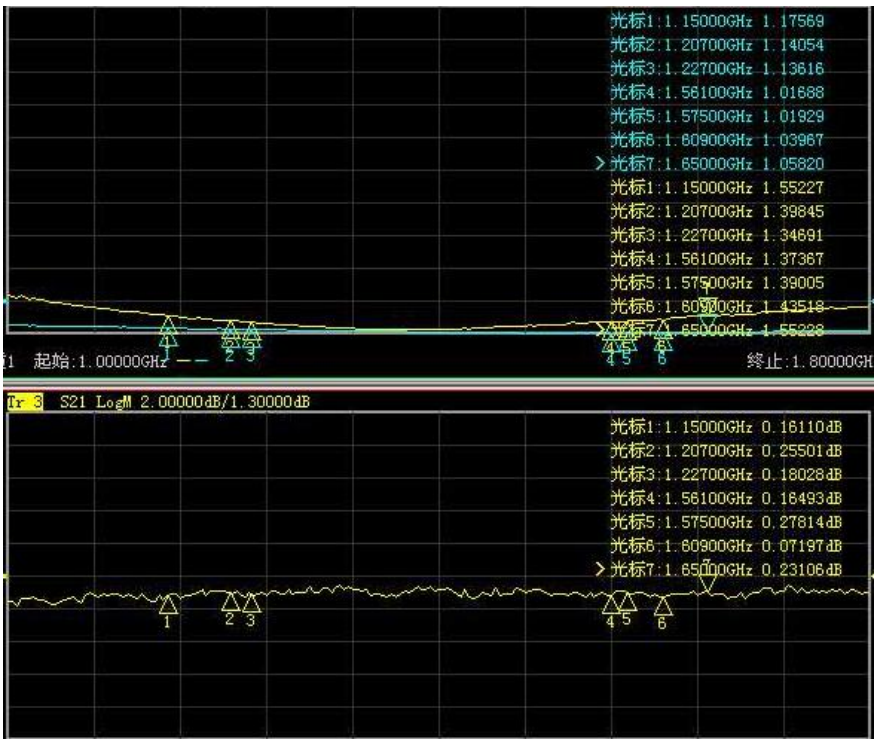
Specifications

Parameter		Conditions	Min	Typ	Max	Units
Freq. Range		Antenna - any port	1150		1650	MHz
In &Out Imped		In, all output ports		50		Ω
Gain	0dB	Input output terminal, unused port -50 Ω	-1	0	1	dB
	zoomed-in		19.5	21	22.5	
Attenuation Loss Passive Passive		Input output terminal, used port -50 Ω	6.5	7.5	8.5	dB
Input SWR					2.0:1	-
Output SWR					2.0:1	-
Noise Figure (enlarged)					1.5	dB
Gain Flatness	0`10dB				1	
	10~21dB				1.5	dB
	passive				1	dB
Current balancing					0.5	dB
Phase equilibrium					1.0	deg
Ggroup delay flatness					1	ns
Isolation	Passive	All Ports- 50Ω	8			dB
	0~10dB		34			
	10~21dB		14			
DC Input (From Output Ports)		MGS13i standard configuration	3.3	5	16	VDC
		MGS13i Output port has 200Ω load resistor	3.3	5	9	
		MGS13 standard configuration	3.3	5	16	
		Passive passive	3.3	5	16	
Equipment Current		Standard Configuration			16	mA
		MGS13i the output port has a 200Ω resistor			160	mA
Maximum supply current		Through DC, the output is powered			250	mA
Operating Temperature			-40		85	℃
Maximum RF Input	Amplified	Maximum lossless RF input			0	dBm
	Passive passive				30	

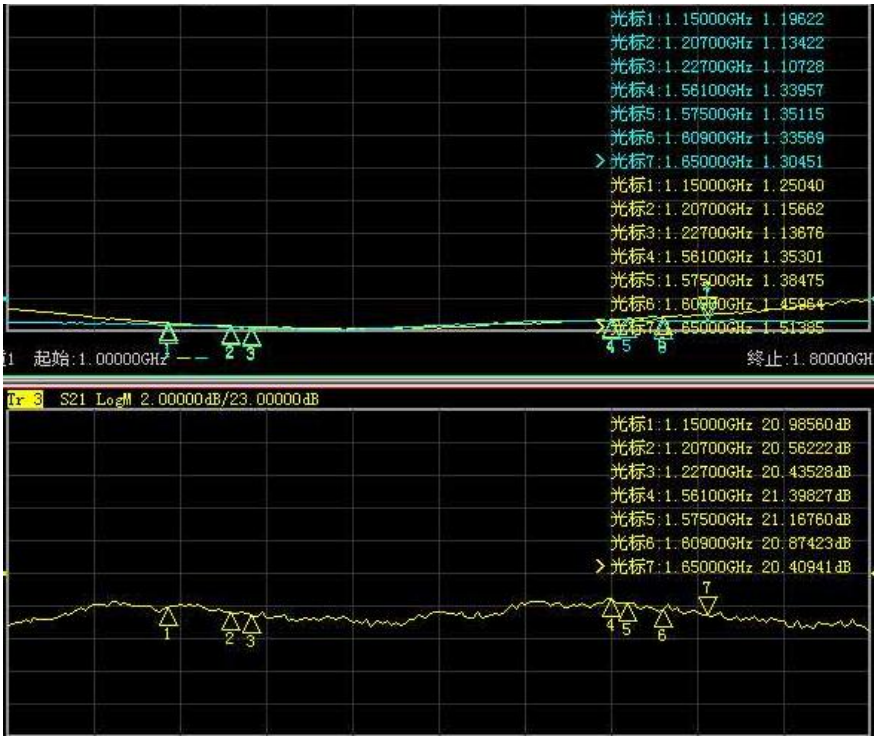
RF Characterization Parameter Table

Frequency MHZ	Gain（dB）									Noise (dB)		incommunicado（dB）						standing wave ratio (physics)								
	0			21			passive			0	21	0		21		passive		input	0			21			passive		
	S-1	S-2	S-3	S-1	S-2	S-3	S-1	S-2	S-3	S	S	1-2	2-3	1-2	2-3	1-2	2-3	S	1	2	3	1	2	3	1	2	3
1150	0.2	0.2	0.0	20.9	20.6	21.0	-7.1	-7.3	-7.5	4.0	0.7	34	39	15	18	8	17	1.6	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.5	1.4
1176	0.2	0.2	0.0	20.8	20.5	21.0	-7.1	-7.3	-7.5	4.0	0.7	35	39	15	18	8	18	1.4	1.1	1.2	1.2	1.2	1.1	1.2	1.3	1.5	1.4
1207	0.2	0.3	0.0	20.5	20.5	20.1	-7.3	-7.5	-7.6	4.0	0.7	35	39	17	18	8	18	1.4	1.2	1.1	1.2	1.1	1.1	1.1	1.3	1.4	1.3
1227	0.2	0.3	0.2	20.4	20.4	20.0	-7.4	-7.6	-7.7	4.0	0.8	35	40	17	18	8	18	1.3	1.1	1.1	1.2	1.1	1.1	1.1	1.3	1.4	1.3
1268	0.1	0.3	0.2	20.4	20.4	20.0	-7.4	7.6	-7.6	4.0	0.8	35	40	18	18	8	18	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.4	1.3
1545	0.2	0.2	0.2	21.3	21.2	21.3	-7.4	-7.5	-7.5	4.6	1.0	36	43	14	23	9	18	1.4	1.1	1.1	1.1	1.3	1.4	1.2	1.2	1.2	1.1
1561	0.2	0.2	0.3	21.4	21.2	21.4	-7.5	-7.5	-7.4	4.8	1.1	36	43	14	24	9	18	1.4	1.1	1.1	1.1	1.3	1.4	1.2	1.2	1.2	1.1
1575	0.3	0.1	0.1	21.2	21.2	21.5	-7.5	-7.5	-7.4	4.9	1.0	36	43	14	23	9	18	1.4	1.1	1.1	1.1	1.3	1.3	1.2	1.2	1.2	1.1
1609	0.0	0.0	0.0	20.8	20.5	20.7	-7.4	-7.4	-7.5	5.0	1.0	36	44	15	24	10	18	1.4	1.1	1.1	1.1	1.3	1.3	1.2	1.2	1.2	1.1
1650	0.2	0.4	0.0	20.4	20.1	19.9	-7.4	-7.5	-7.5	5.0	1.0	36	46	17	25	10	17	1.5	1.1	1.1	1.1	1.3	1.3	1.2	1.3	1.2	1.1

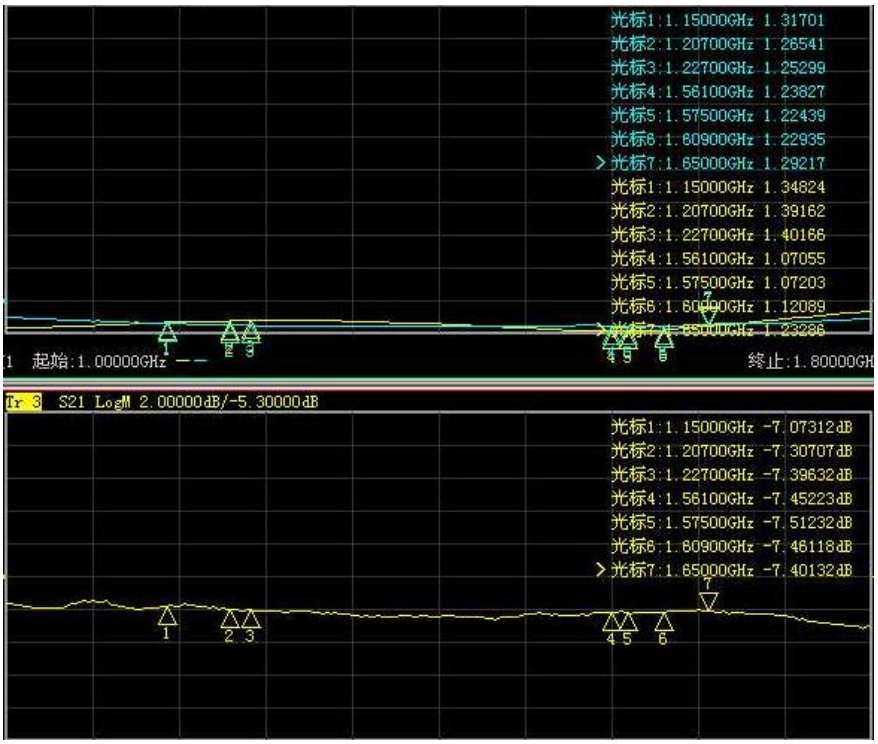
Performance Data



Gain :0dB

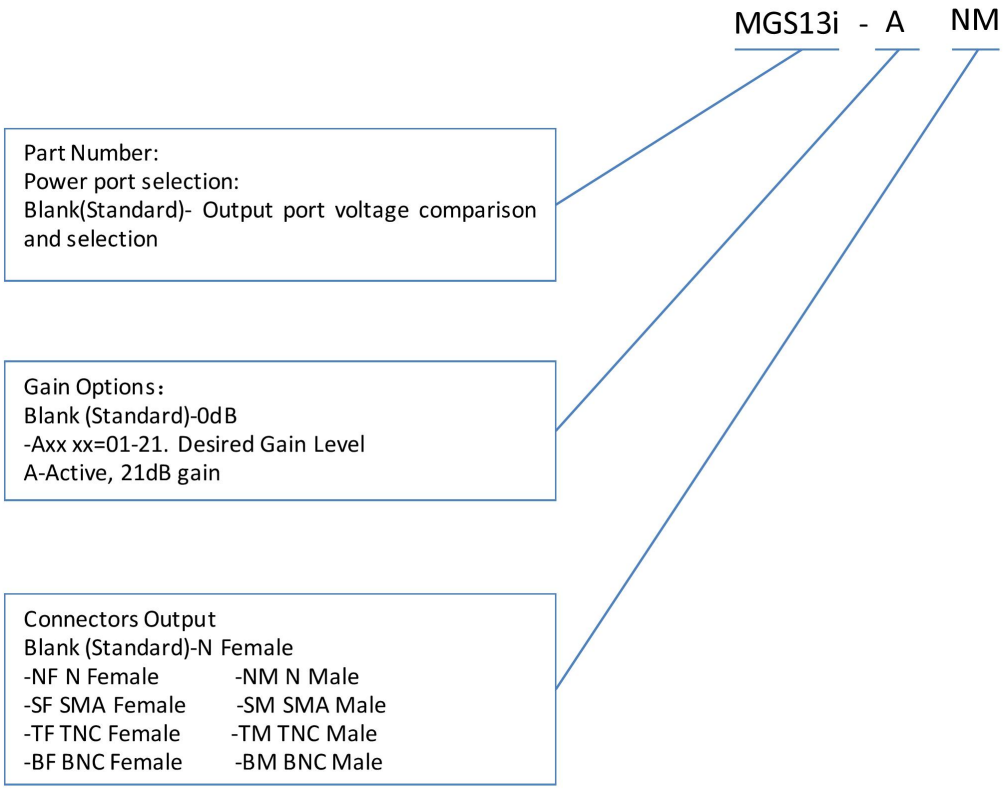


Gain :21dB



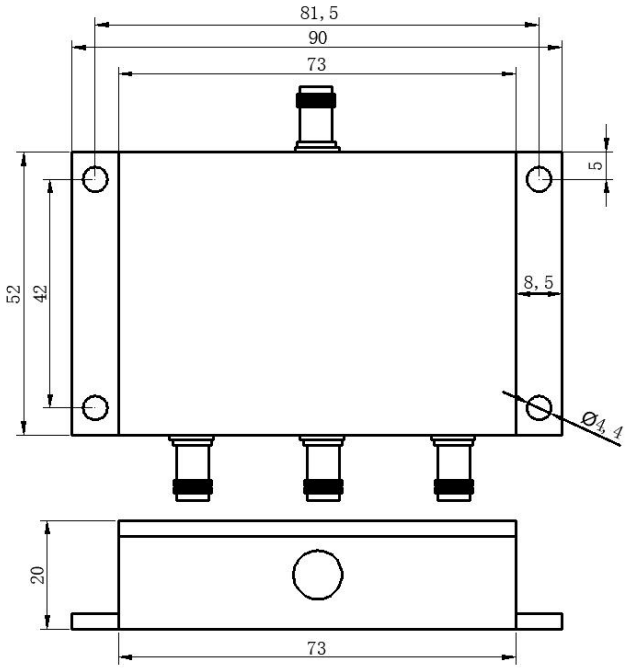
Passive passive:-7.5dB

Order Informations And Available Options



Please contact us for more configurations and application supports.Email: Sales@gemsnav.com.

Mechanical



Frequency Reference Table

Gllobal/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(Europian) L1,E1,E2,E5(E5a,E5b),E6	E5+/-15 E5a+/-12 E5b+/-12												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)			L5+/-15																					L1+/-12						S+/-15
OmniStar																	O+/-14---->														