

GA40

GPS & GNSS In-Line Digital Amplifier (water proof)



✓ RoHS

- Applications: Timing, Survey, Wireless Communication etc.
- Gain 40dB, 30dB, 20dB, 10dB (can be Specified).
- Noise Figure < 2.5dB
- Response For
 - GPS: L1, L2, L2C, L5;
 - Glonass: G1, G2;
 - Galileo: L1, E1, E2, E5 (E5a, E5b), E6;
 - Beidou2: B1, B2, B3;
 - IRNSS: L1, L5;
 - OmniStar
- Note: GPS L1 amplifier can be customized
- Pass DC.

GEMS NAVIGATION Electronics Co., Ltd. Floor 2, building 6, rundongsheng Industrial Zone, Longzhu community, Xixiang street, Bao'an District, Shenzhen China

Tel: +86-755-29644311 Fax: +86-755-29644383 Email: sales@gemsnav.com

Document Number 120108 Rev 002 2018-11-16 Page 1 / 8

Description

The GA40 line amplifier is a single stage, low noise, waterproof amplifier. Coverage frequencies include GPS, Galileo, GLONASS and Beidou2 (including GPS L1 amplifiers). It has a gain of 40dB, a noise figure of less than 2.5dB, and a power consumption of less than 20mA. Both the device and the receiving antenna are vertically mounted, and the power is output from the receiving antenna voltage output. Our company's GA40 is more practical than other similar products on the market.

Specifications

Electrical Specifications, Operating Temperature -40 to 85°C

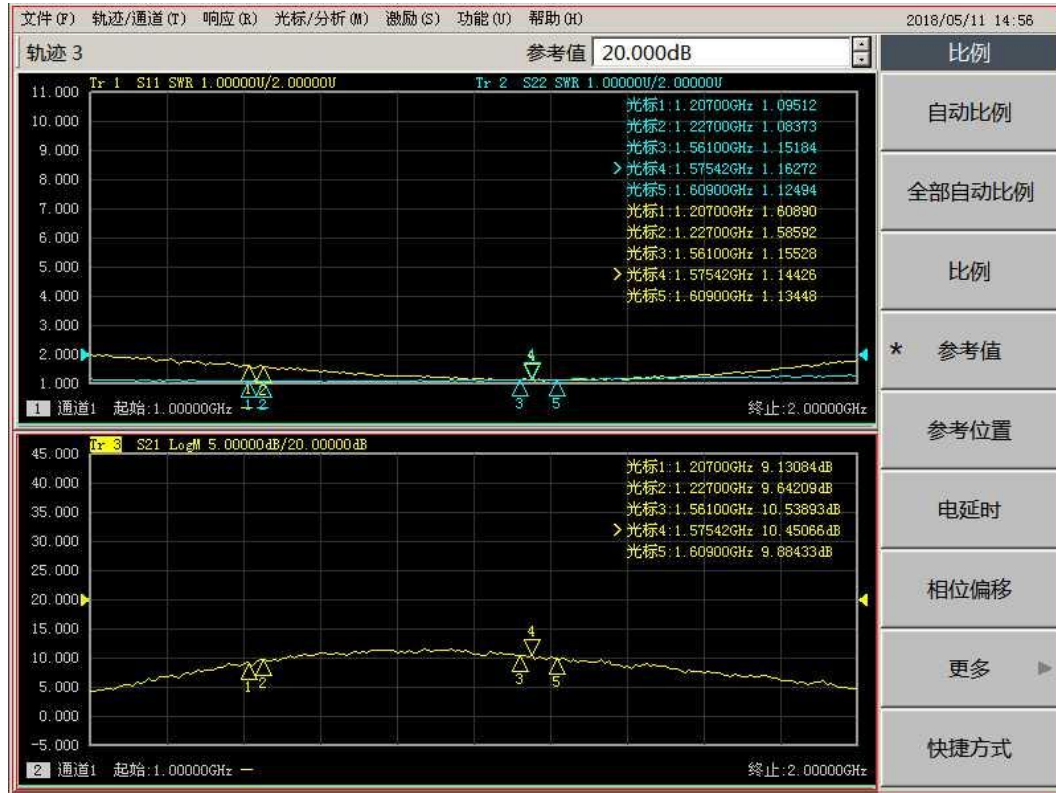
Parameter	Conditions	Min	Typ	Max	Units
Freq. Range	In- Output ports, 50Ω	1164		1616	MHz
In &Out Imped.	In, all output ports		50		Ω
Gain	In- Output ports	37	40	43	dB
Input SWR				2.0:1	-
Output SWR				2.0:1	-
Noise Figure			2		dB
Gain Flatness				3	dB
Amp. Balance				0.5	dB
Phase Balance				1.0	deg
Group Delay Flatness			1		ns
DC IN	DC input on IN or OUT port	3	5	9	VDC
Device Current	Current consumption of device			20	mA
Ant or Thru Current	Pass DC, No Powered configuration, DC input on Out Port			250	mA
Max RF Input	Max RF input without damage			0	dBm
1dB Compression			-6		dBm

Table 1 Multi-system waterproof amplifier Specifications

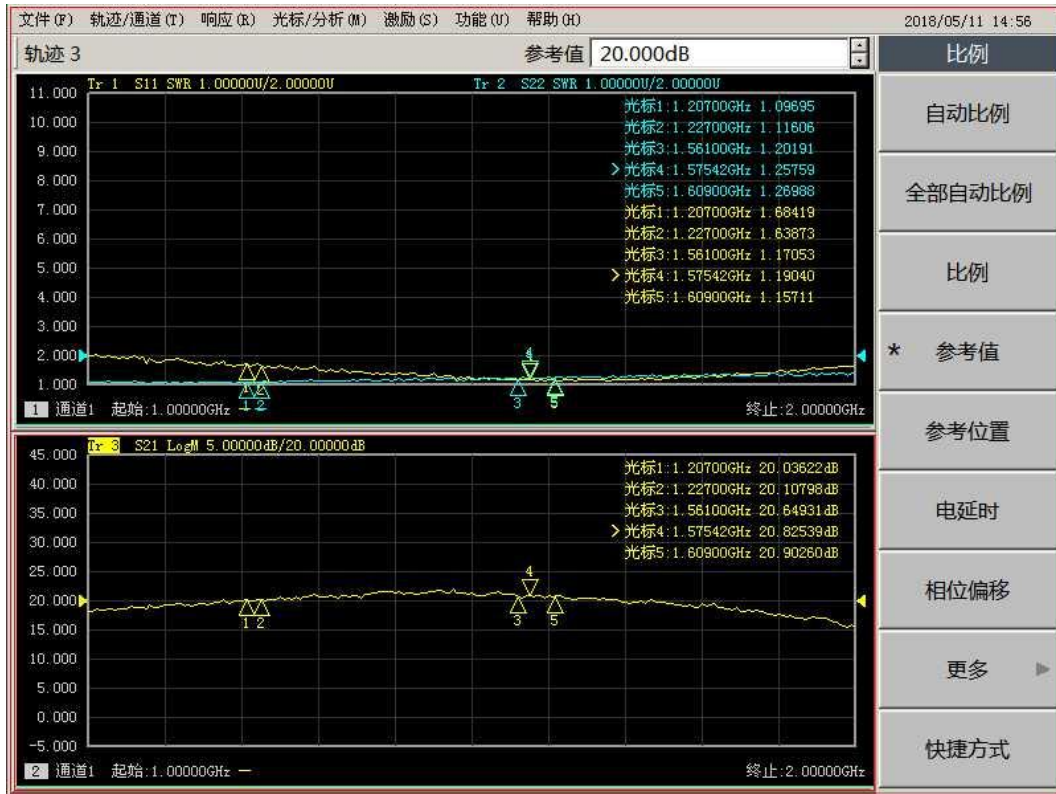
Parameter	Conditions	Min	Typ	Max	Units
Freq. Range	In- Output ports, 50Ω	1557		1588	MHz
In &Out Imped.	In, all output ports		50		Ω
Gain 1575MHz	In-out port -45dBm Input Level	38	40	42	dB
Input SWR				1.5:1	-
Output SWR				1.5:1	-
Noise Figure			2		dB
Gain Flatness	1575.42 ± 1.023MHz,		2		dB
1dB compression point output		-8		0	dBm
Out of band rejection	DC~15250MHz	35			dBc
	1625~3000MHz	30			
Voltage		3	5	9	V
Max RF Input	Max RF input without damage			10	dBm

Table 2 GPS L1 waterproof amplifier Specifications

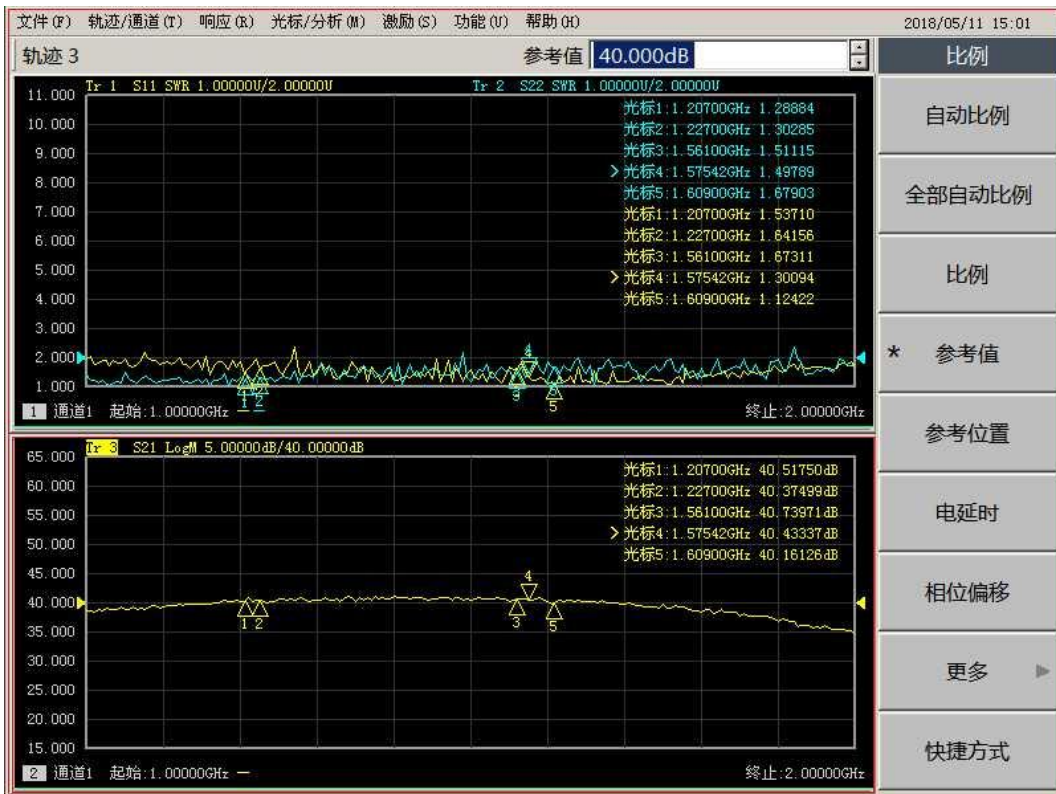
Performance Data



Gain :10dB

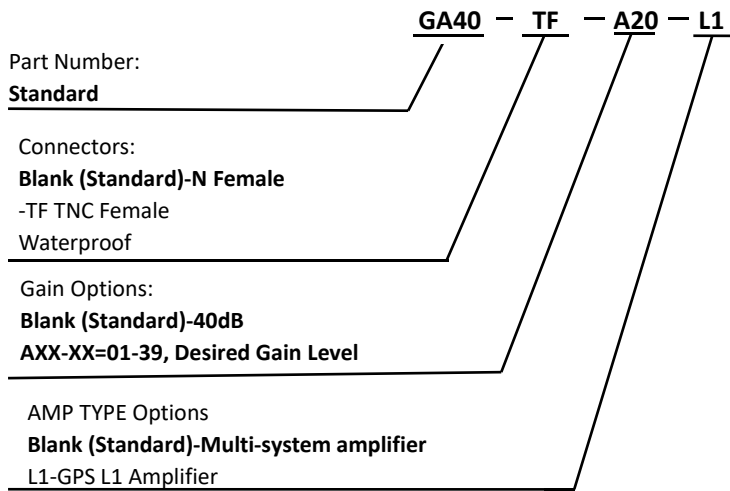


Gain :20dB



Gain :40dB

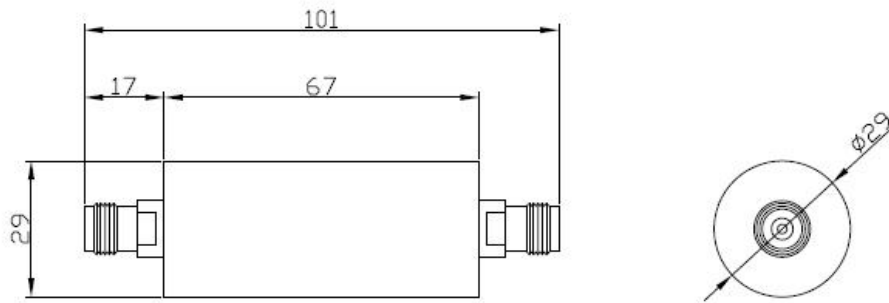
Order Informations And Available Options



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

Mechanical

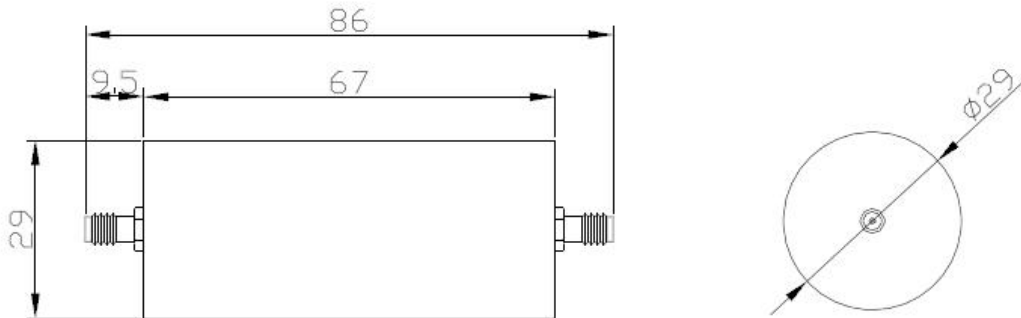
- ◇ Name:GPS/GNSS In-Line Amplifier
- ◇ Modle:GA40-TF
- ◇ Material:Aluminium
- ◇ Units:mm
- ◇ Tolerance:±0.05



 <p>GEMS</p>	PHONE:(86)75529644311 FAX:(86)75529644383-816 WWW.GEMSNAV.COM E-MAIL:SALES@GEMSNAV.COM
MODEL GA40-TF	ORDERING CODE
NOTES: ► UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL; ► ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.	

2016-05-04

- ◇ Name: GPS/GNSS In-Line Amplifier
- ◇ Modle: GA40-SF
- ◇ Material: Aluminium
- ◇ Connector: SMA-Female/SMA-Female
- ◇ Units: mm
- ◇ Tolerance: ±0.05



	PHONE: (86)75529644311 FAX: (86)75529644383-816 WWW.GEMSNV.COM E-MAIL: SALES@GEMSNV.COM
	MODEL GA40-SF
NOTES: ▶UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL, ▶ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.	

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	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																			
Galileo(Europian) 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)		L5+/-15																						L1+/-12						S+/-15
OmniStar																	O+/-14---->													