AQPM070600C-50

0.7 – 6.0 GHz 50W CW Power Amplifier

Features

- Class AB solid state design
- Psat≥50W
- Protection against over heat/ over current

Applications

- Communication
- EMC

Electrical Specifications

Parameter	Specification	Notes
Frequency	700-6000MHz	
Psat	50W Min.	
P1dB	44dBm Typ.	
Gain	47dB Min.	
Gain Flatness	±3dB	
Input VSWR	2:1 Max.	50 Ohm
Harmonics	-15 dBc Typ.	
Spurious	-60 dBc Typ.	
Power Supply	+ 28V DC	
Power Consumption	305W Max.	At rated output
Input Power	+ 5dBm Max.	

Environmental Characteristics

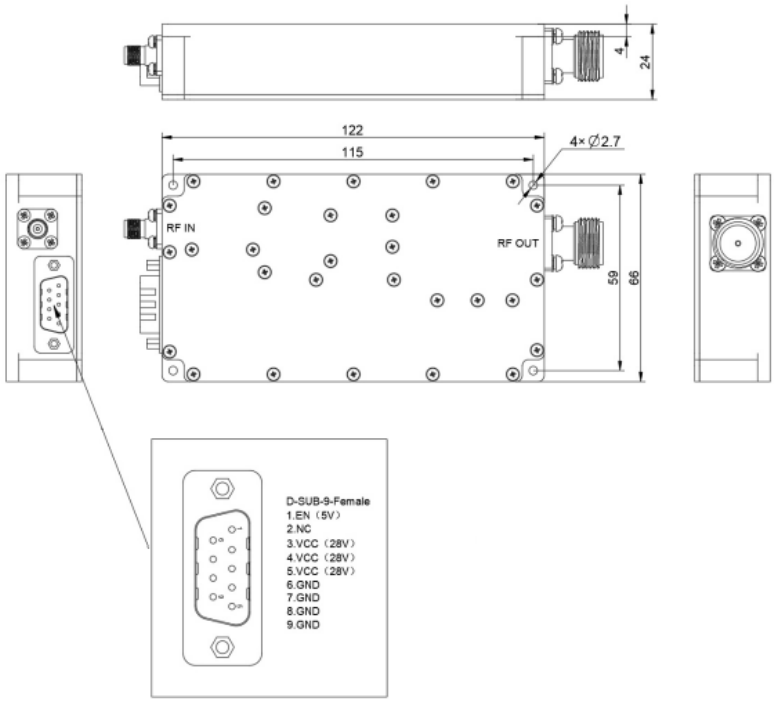
Parameter	Specification	Notes
Operation Temperature	0 ~ +40 ℃	
Storage Temperature	-20 ~ +75 ℃	
Relative Humidity	5 ~ 95%	

Other Specifications

Parameter	Specification	Notes
Dimensions	122×66×24mm	
In/Out Connector	SMA-Female / SMA-Female	
Power/Control Supply Connector	7W2- Male	
Control mode	EN +5V	
Weight	1kg Max.	
Cooling	Fan Cooling	Need to adapt heat sink

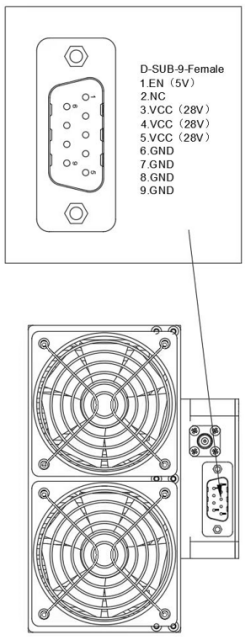
Outline Drawing

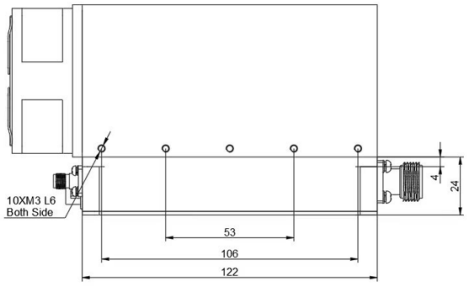
All Dimensions in mm; Outline Tolerances ±0.5

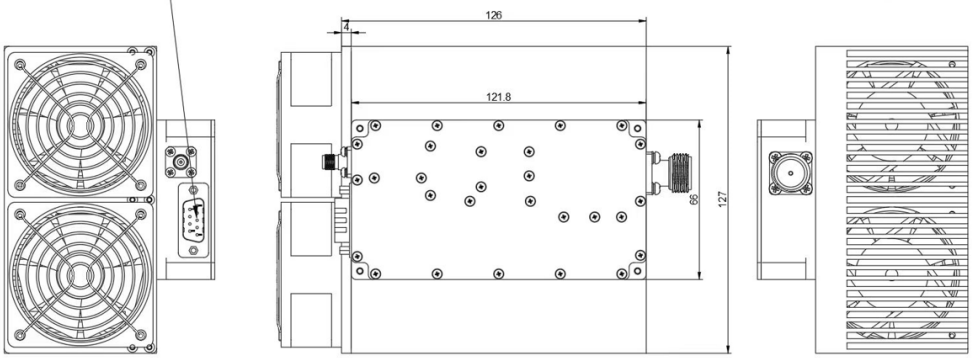


Outline Drawing: SSPA with Heatsink and Fan

All Dimensions in mm; Outline Tolerances ±0.5





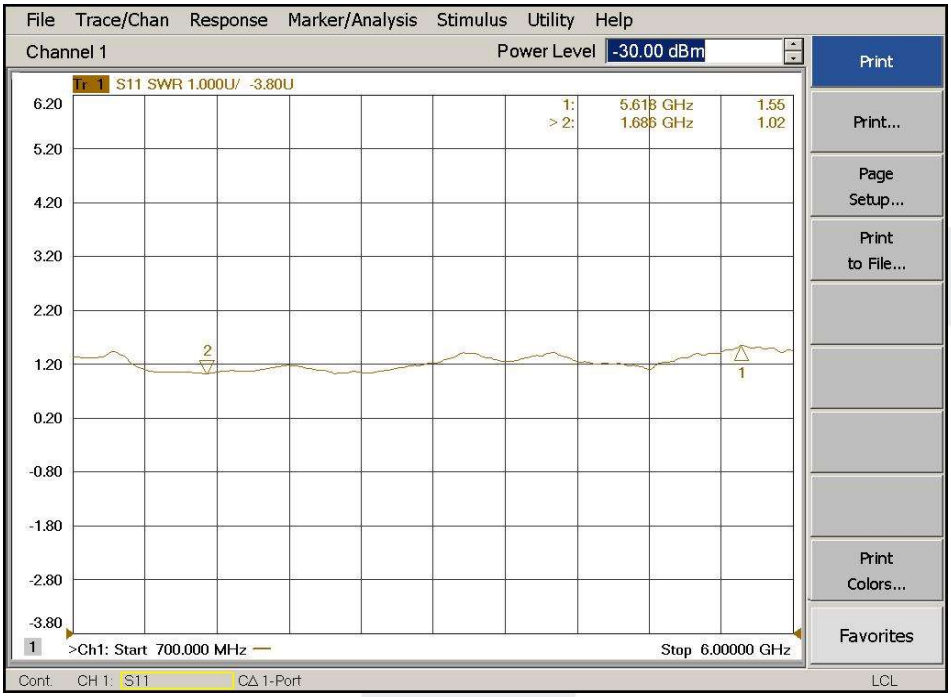


Reference Test Results

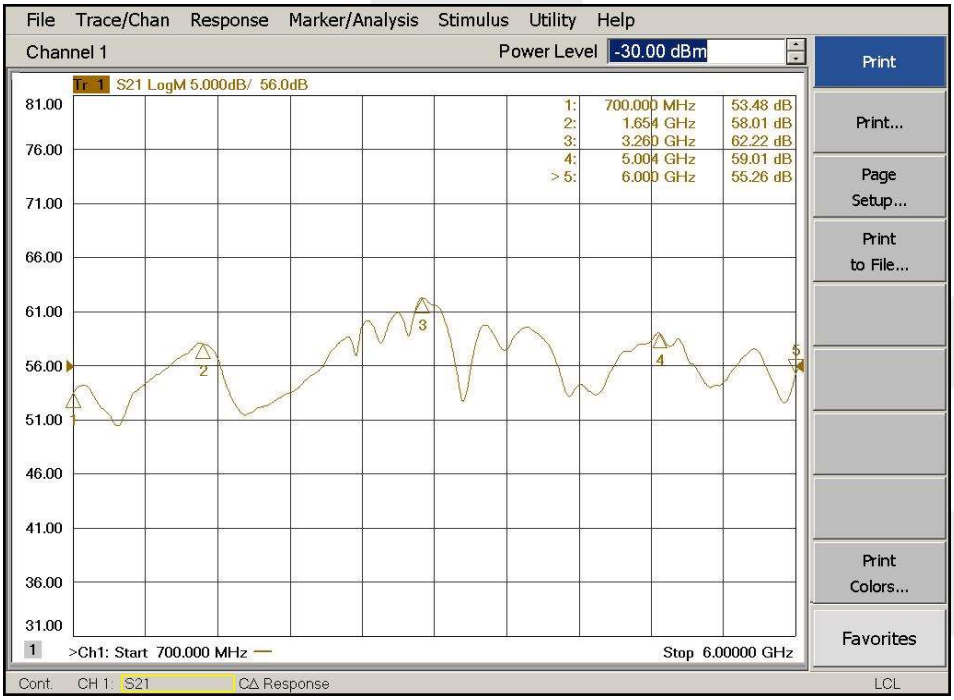
Freq. (MHz)	Pin @P1dB (dBm)	Pout @P1dB (dBm)	Pin @47dBm (dBm)	Pout @47dBm (dBm)	Pin @Psat (dBm)	Pout @Psat (dBm)	Harmonic @47dBm (dBc)	Flatness (dB)
700	-5.31	46.53	-5.41	47.36	-0.31	48.75	-14.73	±3
800	-4.45	48.40	-6.75	47.35	0.55	49.46	-16.45	
900	-2.51	48.18	-5.51	47.34	-0.51	49.09	-13.90	
1000	-1.52	48.63	-4.52	47.15	-0.52	48.82	-16.85	
1200	-4.58	48.21	-6.88	47.40	-0.58	49.16	-19.52	
1400	-8.63	46.40	-7.63	47.32	-2.63	48.92	-21.15	
1600	-10.59	46.42	-9.59	47.22	-2.59	50.00	-19.58	
1800	-6.80	47.31	-7.10	47.38	0.20	50.12	-17.29	
2000	-2.74	47.63	-4.04	47.36	2.26	49.46	-16.65	
2200	-5.70	45.93	-4.70	47.28	2.30	49.43	-14.38	
2400	-8.79	44.84	-4.79	47.08	0.21	48.58	-12.32	
2600	-10.76	45.52	-7.96	47.36	-2.76	48.95	-16.28	
2800	-10.81	46.30	-9.81	47.15	-1.81	50.28	-23.35	
3000	-12.66	45.11	-9.66	47.30	-2.66	49.65	-24.20	
3200	-16.84	42.76	-10.04	47.39	-5.84	48.28	-12.58	
3400	-15.87	44.26	-9.87	47.21	-7.87	47.79	-26.68	
3600	-6.90	46.15	-5.90	47.18	1.10	49.10	-33.37	
3800	-11.89	45.45	-8.89	47.20	-1.89	49.26	-31.84	
4000	-14.89	43.28	-7.89	47.04	-1.89	48.78	-35.22	
4200	-12.92	43.26	-6.92	47.29	-1.92	48.75	-24.06	
4400	-6.03	45.47	-4.23	47.34	1.97	49.50	-28.24	
4600	-5.98	46.50	-4.98	47.14	0.02	49.02	-41.82	
4800	-11.96	45.13	-7.96	47.39	-1.96	48.83	-40.81	
5000	-16.10	43.96	-8.10	47.09	-3.10	49.16	-31.62	
5200	-15.02	42.84	-9.02	47.00	-3.02	48.94	-27.13	
5400	-7.21	46.42	-5.21	47.37	-0.21	49.75	-33.28	
5600	-10.01	45.69	-8.01	47.11	-2.01	49.23	-40.86	
5800	-9.34	44.89	-5.44	47.39	-0.34	49.19	-33.07	
6000	-7.16	46.34	-5.16	47.38	-1.16	48.87	-38.59	

Reference Test Results

S11:-20℃, 25℃, 75℃



S21:-20℃, 25℃, 75℃



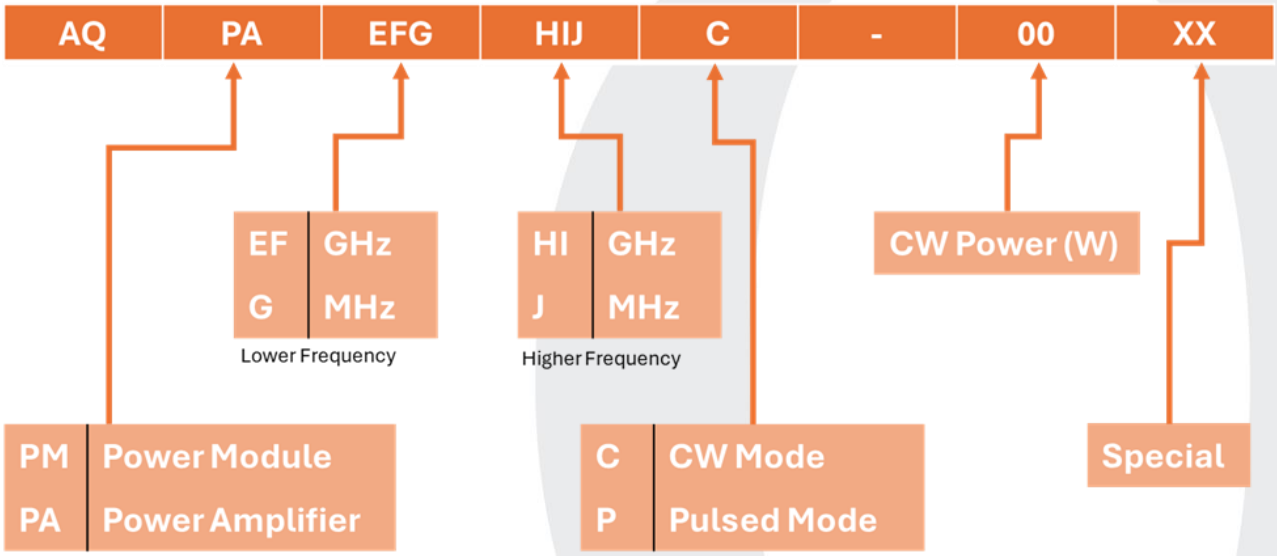
Documentation and Test Reports

All arQana Products are delivered with Electrical Test Report and Certificate of Conformance as standard. arQana can provide additional testing for any of our existing products according to your requirements. Please contact us for a discussion.

Customization

arQana can fully design or configure any of our existing products according to your specifications. Please contact us for a discussion.

Part Numbering



Example: AQPA020060C-20: Power Amplifier, 2.0 to 6.0GHz, CW, 20W.

Notice

This document and its contents are property of arQana Technologies Pte Ltd. arQana Technologies Pte Ltd has the right to change the document at any time without notice. arQana Technologies Pte Ltd distributes this document as a service to its customers. arQana Technologies Pte Ltd supports its customers to help them create market leader products. Customer is responsible from choosing the product and the configuration the product. This document is provided `as is` and does not provide any warranty.

Customer is responsible for the usage of this document, the information provided in the document and the usage of products. arQana Technologies Pte Ltd shall have no responsibility from the customer products, customer applications and doings of customers.

Document Revision History

Date	Description	Version	Done by
29 Aug 25	• Document Creation.	1.0	CMW