

Product Features

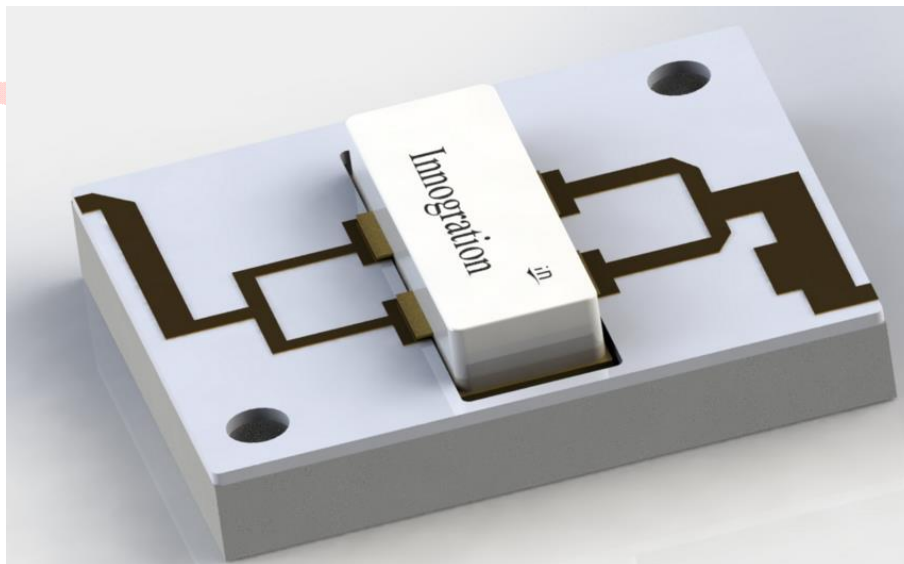
100-2000MHz
80W CW @50V,
40% Drain Efficiency@50V
>11dB power gain
50ohm in and out, 60*90mm, screw down
Linear or saturated use
Device used: SU6012V

Applications

HF/VHF/UHF Power amplifier
UAV Jammer
ISM
Land Mobile

Description

The SMPA0120-80V is designed for HF/VHF/UHF comm, test and measurement and other ISM applications at 100-2000MHz. This Amplifier pallet is suitable for use in linear and saturated applications, and 50ohm fully matched at input and output, drop-in placement by screwing it down and 100% RF test, it enables easier power combination to reach higher power with high production yield as part of customer's power amplifier system.





Electrical Specifications @Vds=28V, T=25°C, 50Ωsystem

PARAMETER	UNIT	MIN	TYP	MAX	SYMBOL
Operating Frequency	MHz	100	-	2000	fo
Operating Bandwidth	MHz		1900	-	OBW
CW Output Power	W		80	-	Pout
Power Gain	dB	10	11	-	Gp
Gain Flatness	dB	-	±4	-	Gf
Input Return Loss	dB	-	-	-10	S11
Operating Voltage	V	-	50	55	VDS
Quiescent Current	mA	-	150	-	IdQ
Efficiency@Psat	%	35	40	-	Eff

Environmental Characteristics

PARAMETER	UNIT	MIN	TYP	MAX	SYMBOL
Operating Case Temperature	°C	-20	-	85	Ta
Storage Temperature	°C	-40		100	Tstg
Relative humidity w/o condensation	%	-	-	95	RH

Mechanical Specifications

PARAMETER	UNIT	VALUE
Dimensions(L × W)	mm	90*60
Weight	g	TBD
RF Input Connector	-	N/A
RF Output Connector	-	N/A
Cooling	-	External Heat-sink

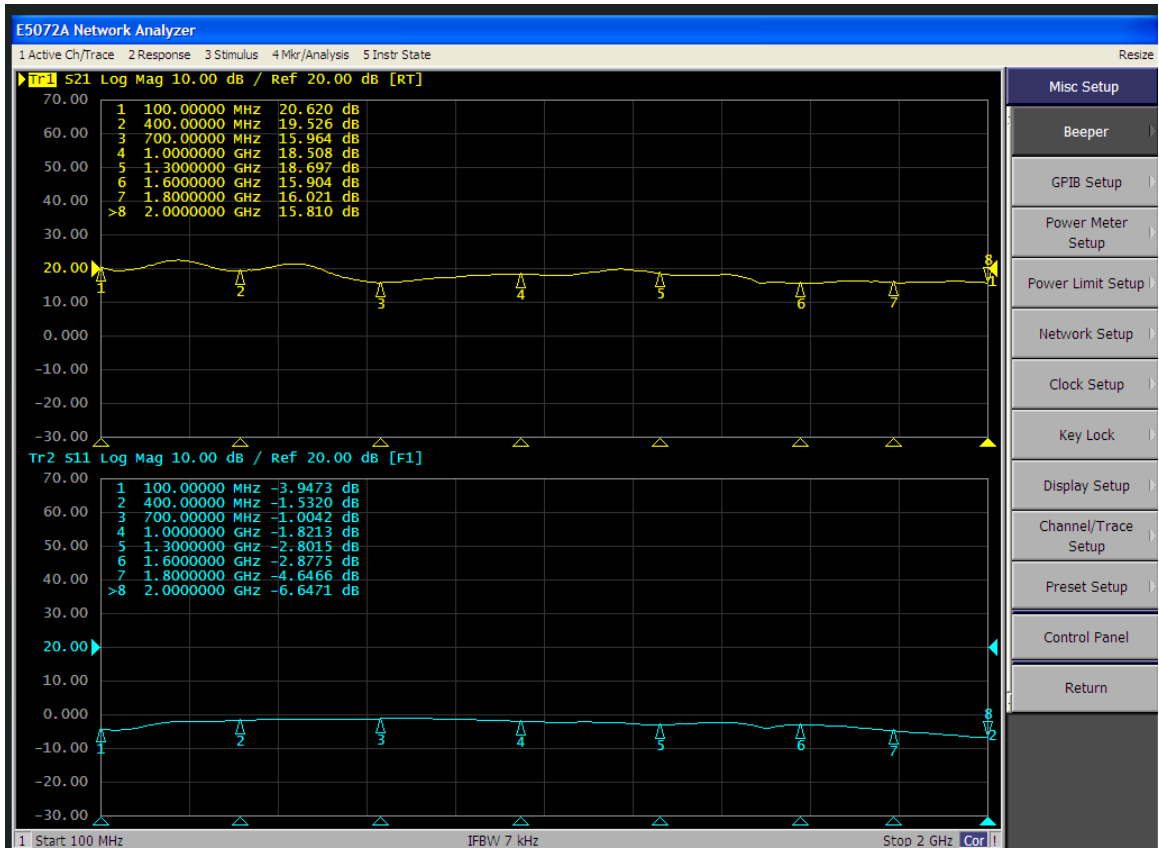


Typical performance

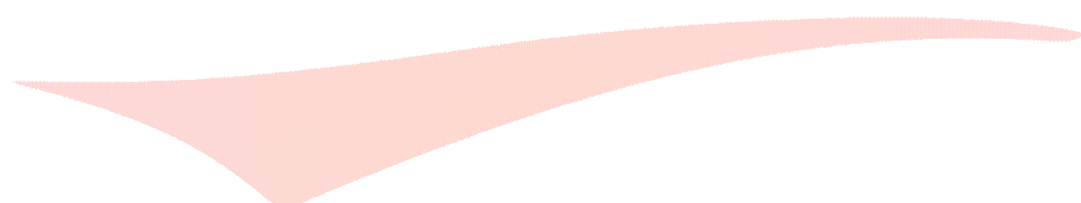
- CW performance: Vds=+50V, IDQ=150mA, T=25°C

Freq(MHz)	Pin(dBm)	Pout(dBm)	Pout(W)	IDS(A)	Gain(dB)	Eff(%)	2 nd	3 rd
100	33.28	49.66	92.47	3.21	16.38	57.61	-8.90	-12.70
200	31.28	50.58	114.29	4.6	19.3	49.69	-10.00	-19.70
300	34.01	50.96	124.74	3.94	16.95	63.32	-14.80	-14.30
400	35.2	50.1	102.33	4.92	14.9	41.60	-8.70	-16.50
500	30.91	50.91	123.31	3.57	20	69.08	-12.00	-16.30
600	36.46	50.26	106.17	3.78	13.8	56.17	-11.00	-18.30
700	39.41	50.55	113.50	4.7	11.14	48.30	-8.50	-14.70
800	36.25	51.22	132.43	4.86	14.97	54.50	-11.60	-14.80
900	36.75	50.95	124.45	4.67	14.2	53.30	-12.80	-18.60
1000	35.9	50.19	104.47	4.76	14.29	43.90	-12.70	-15.90
1100	35.2	50.16	103.75	4.46	14.96	46.53	-11.40	-13.70
1200	34.02	49.42	87.50	3.36	15.4	52.08	-20.20	-16.30
1300	34.9	50.49	111.94	4.13	15.59	54.21	-17.20	-18.80
1400	35.5	50.4	109.65	3.83	14.9	57.26	-12.70	-25.00
1500	37.28	49.08	80.91	2.8	11.8	57.79	-17.20	-30.00
1600	37.34	49.84	96.38	4.15	12.5	46.45	-18.70	-28.20
1700	37.34	49.87	97.05	4.16	12.53	46.66	-22.00	-28.10
1800	36.38	49.18	82.79	4.36	12.8	37.98	-17.00	-28.50
1900	36.41	49.68	92.90	4.24	13.27	43.82	-16.60	-29.00
2000	37.94	49.61	91.41	3.33	11.67	54.90	-18.70	-28.40

- S21/S11 from network analyzer VDS=50V IDQ=200mA



Pallet outline



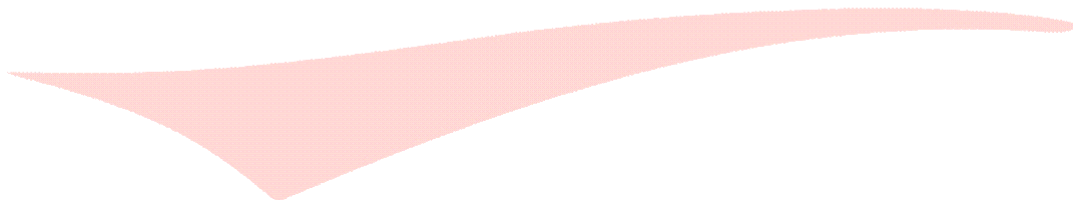


Revision History

Document revision history

Date	Revision	Datasheet Status
2026/5/26	Rev 1.0	Preliminary Datasheet

Application data based on YHG-26-16



Disclaimers

Specifications are subject to change without notice. Innograti believes the information contained within this data sheet to be accurate and reliable. However, no responsibility is assumed by Innograti for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Innograti . Innograti makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose. "Typical" parameters are the average values expected by Innograti in large quantities and are provided for information purposes only. These values can and do vary in different applications and actual performance can vary over time. All operating parameters should be validated by customer's technical experts for each application. Innograti products are not designed, intended or authorized for use as components in applications intended for surgical implant into the body or to support or sustain life, in applications in which the failure of the Innograti product could result in personal injury or death or in applications for planning, construction, maintenance or direct operation of a nuclear facility. For any concerns or questions related to terms or conditions, pls check with Innograti and authorized distributors

Copyright © by Innograti (Suzhou) Co.,Ltd.