

Product Features

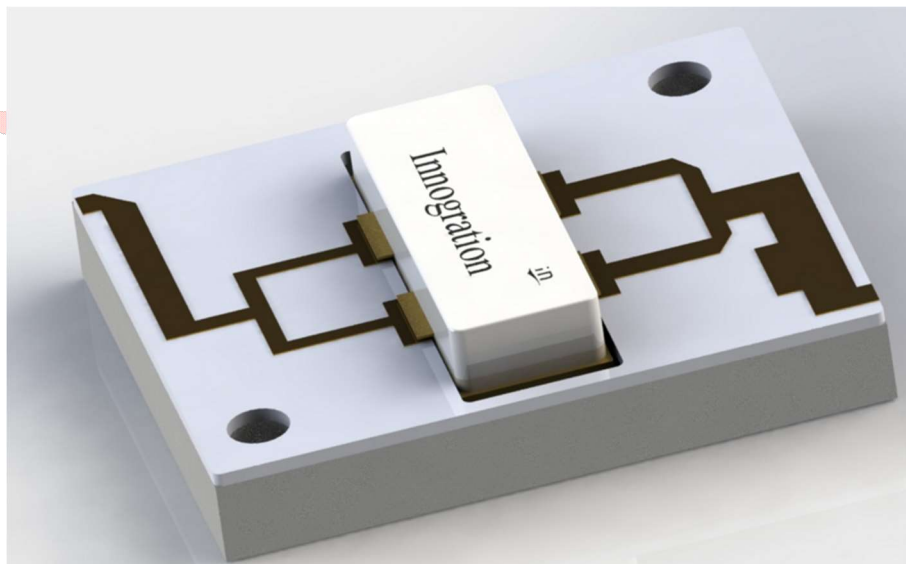
- 6.4-7.2GHz(C band)
- 75W Pulsed CW or CW
- 50% Drain Efficiency@28V
- 50ohm in and out, 20*24mm, screw down
- Linear or saturated use

Applications

- 5G Power amplifier
- C band Satcom
- ISM
- Point to point
- Radio link

Description

The GMPA6472-75H is designed for 5G or satcom, test and measurement and other ISM applications at 6400-7200MHz. This Amplifier pallet is suitable for use in linear and saturated applications. Featured by its tiny size 20*24mm, 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 @VCC=28V, T=25°C, 50Ωsystem

PARAMETER	UNIT	MIN	TYP	MAX	SYMBOL
Operating Frequency	MHz	6400	-	7200	fo
Operating Bandwidth	MHz	800		-	OBW
Pulse CW Output Power	W	75	80	-	Pout
Power Gain	dB	7	8	-	Gp
Gain Flatness	dB	-	±0.75	-	Gf
Input Return Loss	dB	-	-	-10	S11
Operating Voltage	V	-	28	36	VDS
Quiescent Current	mA	-	100	-	IdQ
Efficiency@Psat	%		50	-	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 × H)	mm	20×24×4
Weight	g	50
RF Input Connector	-	N/A
RF Output Connector	-	N/A
Cooling	-	External Heat-sink



Typical performance

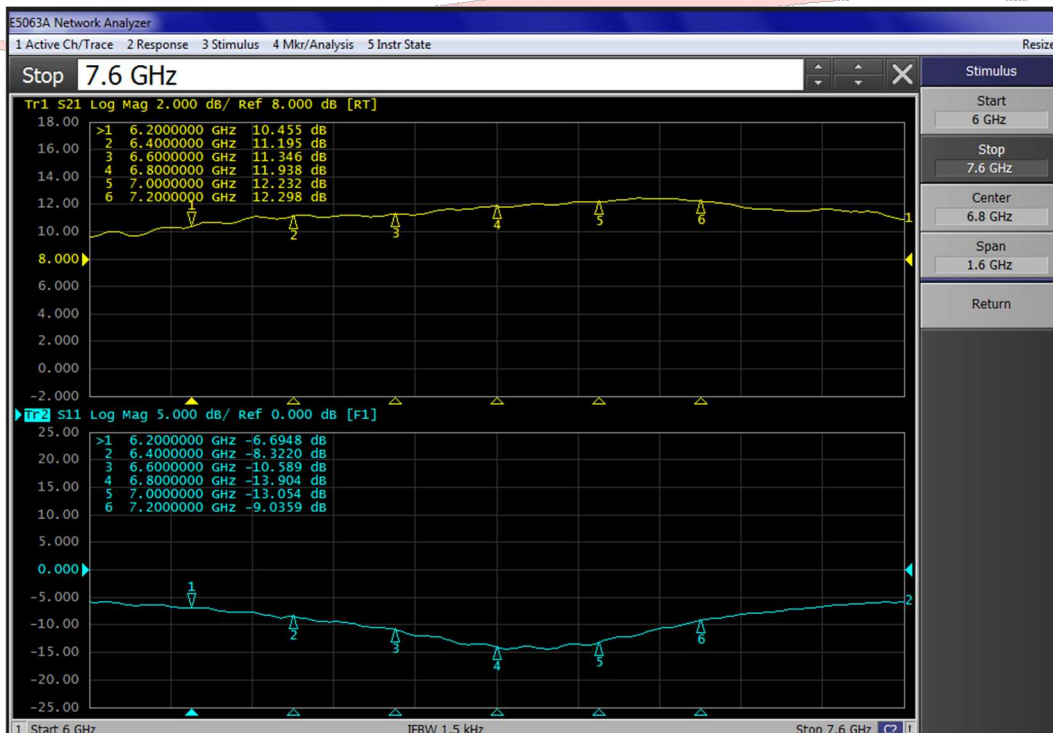
- Pulsed CW performance: $V_{ds}=+28V$, $I_{DQ}=100mA$, $T=25^{\circ}C$, pulse width 100us, duty cycle 10%,

Freq(MHz)	Pin(dBm)	PoutdBm)	Pout(W)	IDS(A)	Gain(dB)	Eff(%)
6400	41.75	49.53	89.74	0.65	7.78	49.31
6500	41.32	50	100.00	0.7	8.68	51.02
6600	40.54	49.87	97.05	0.67	9.33	51.73
6700	42.06	49.88	97.27	0.67	7.82	51.85
6800	40.95	50.02	100.46	0.69	9.07	52.00
6900	40.87	49.56	90.36	0.63	8.69	51.23
7000	41.62	49.55	90.16	0.6	7.93	53.66
7100	40.73	49.68	92.90	0.62	8.95	53.51
7200	41.73	49.2	83.18	0.57	7.47	52.12

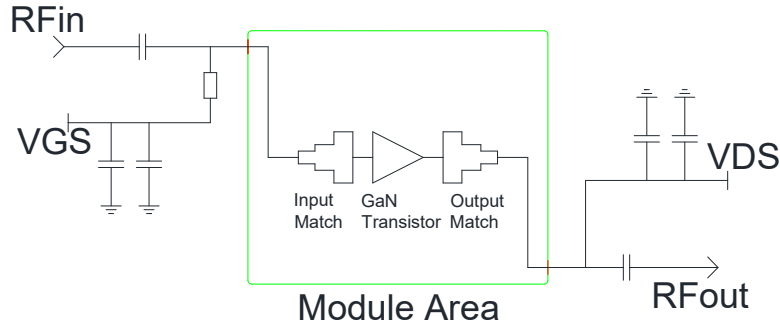
- CW performance: $V_{ds}=+28V$, $I_{DQ}=100mA$, $T=25^{\circ}C$

Freq(MHz)	Pin(dBm)	PoutdBm)	Pout(W)	IDS(A)	Gain(dB)	Eff(%)
6400	42.15	49.15	82.22	6.16	7	47.67
6500	41.59	49.68	92.90	6.84	8.09	48.50
6600	40.81	49.47	88.51	6.49	8.66	48.71
6700	42.17	49.47	88.51	6.4	7.3	49.39
6800	41.04	49.67	92.68	6.71	8.63	49.33
6900	40.78	49.11	81.47	5.93	8.33	49.07
7000	41.53	49.2	83.18	5.83	7.67	50.95
7100	40.61	49.42	87.50	6.16	8.81	50.73
7200	41.5	48.85	76.74	5.39	7.35	50.85

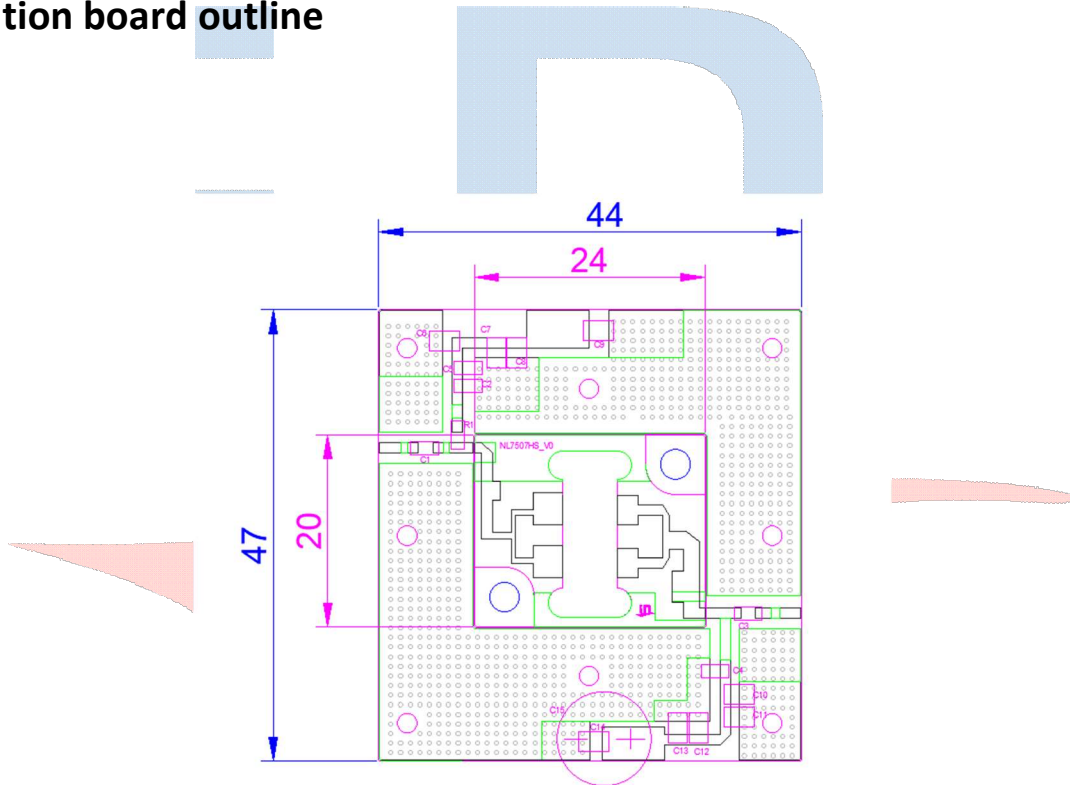
- S21/S11 from network analyzer $V_{DS}=28V$ $V_{GS}=-3.23V$ $I_{DQ}=400mA$



Evaluation board Block Diagram



Evaluation board outline



Component	Description	Suggestion
C1、C2、C3、C4	2.4pF	DLC75D
C5	100pF	DLC75D
C6-C14	Ceramic multilayer capacitor, 10uF, 100V	10uF/100V
C15	470UF	63V/470UF
R1	Chip Resistor, 10 Ω ,0805	
PCB	3.508mm 1/0oz TACONIC RF-35TC-0200-A-CL1/C3mm	



Revision History

Document revision history

Date	Revision	Datasheet Status
2023/02/09	Rev 1.0	Preliminary Datasheet

Application data based on YHG-23-03 (NL7507HS)



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