

Product Features

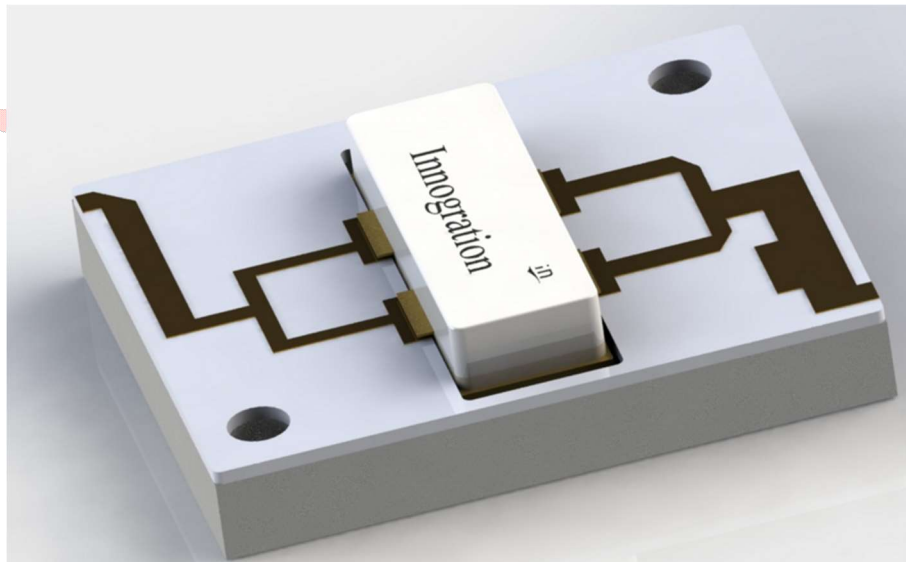
6.4-7.2GHz(C band)
85W Pulsed CW or CW
45% Drain Efficiency@28V
50ohm in and out, 20*24mm, screw down
Linear or saturated use

Applications

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

Description

The GMPA6472-85H 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		85	-	Pout
Power Gain	dB	7	8	-	Gp
Gain Flatness	dB	-	±0.5	-	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

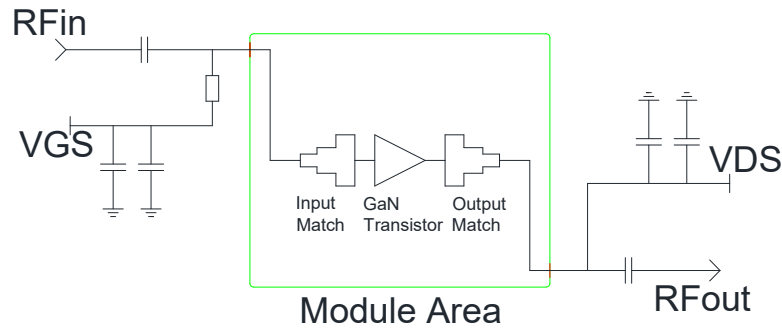
- Pulsed CW performance: $V_{ds}=+28V$, $IDQ=100mA$, $T=25^{\circ}C$, pulse width 100us, duty cycle 10%,

Freq (MHz)	Psat (dBm)	Psat (W)	IDS (A)	Pin (dBm)	Gain (dB)	Eff(%)
6400	49.63	91.8	0.70	40.58	9.05	46.85
6500	49.49	88.9	0.69	40.45	9.04	46.02
6600	49.50	89.1	0.70	41.29	8.21	45.47
6700	49.59	91.0	0.71	41.69	7.90	45.77
6800	49.50	89.1	0.71	41.87	7.63	44.83
6900	49.59	91.0	0.73	42.34	7.25	44.52
7000	49.72	93.8	0.75	42.07	7.65	44.65
7100	49.90	97.7	0.75	41.74	8.16	46.54
7200	49.80	95.5	0.73	41.44	8.36	46.72

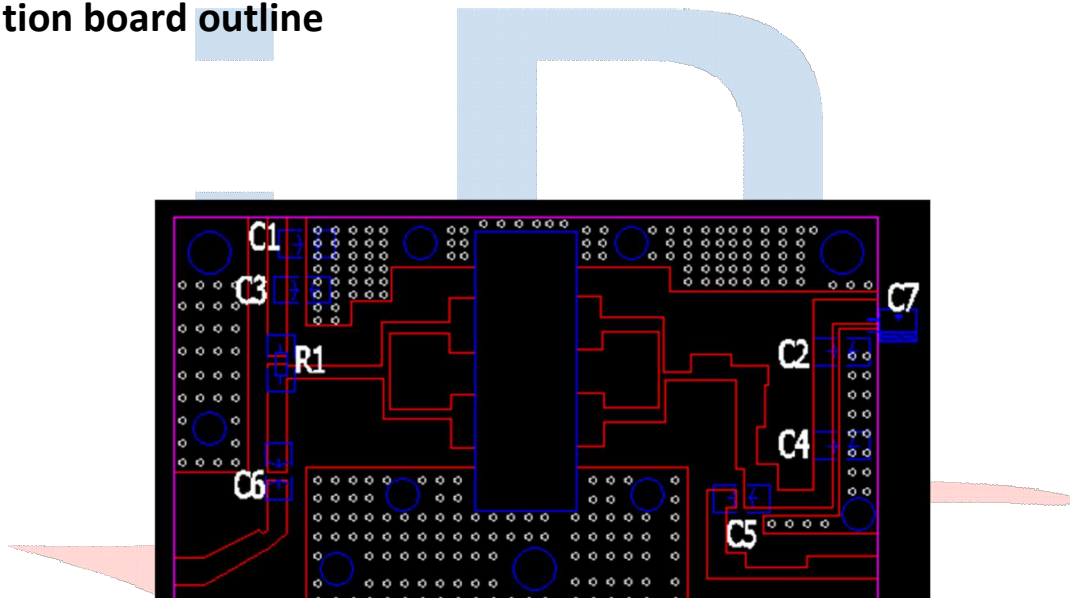
- S21/S11 from network analyzer $V_{DS}=28V$ $V_{GS}=-3.23V$ $IDQ=400mA$



Evaluation board Block Diagram



Evaluation board outline



Component	Description	Suggestion
C1,C2	1uF	0805
C3,C4,C5,C6	2.4pF	0805
C7	470uF/63V	Electrolytic Capacitor
R1	10 Ω	Chip Resistor
PCB	Rogers tc350-plus, Er = 3.5, thickness 20 mils, 1oz copper	



Revision History

Document revision history

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

Application data based on TC-23-49 (NL7508HS)



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