Product Features

5.7-7.7GHz(C band)

60W CW @28V, 75W CW@32V

45% Drain Efficiency@28V

50ohm in and out, 20*40mm, screw down

Linear or saturated use

Device used：NL7506HS

Applications

5G Power amplifier

C band Satcom

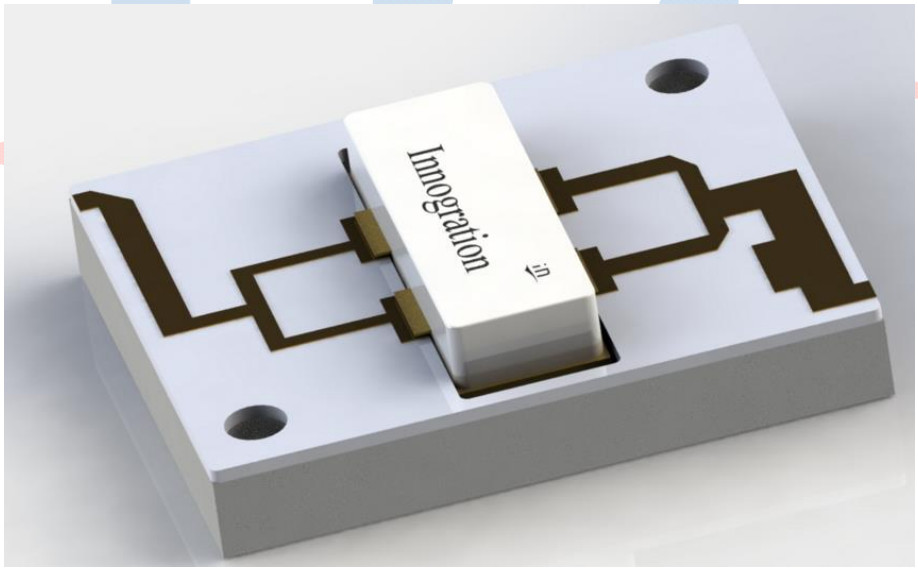
ISM

Point to point

Radio link

Description

The GMPA5777-60H is designed for 5G or satcom, test and measurement and other ISM applications at 5700-7700MHz. This Amplifier pallet is suitable for use in linear and saturated applications. Featured by its tiny size 20*40mm, 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℃, 50Ωsystem

PARAMETER	UNIT	MIN	TYP	MAX	SYMBOL
Operating Frequency	MHz	5700	-	7700	fo
Operating Bandwidth	MHz		2000	-	OBW
Pulse CW Output Power	W		60	-	Pout
Power Gain	dB		7.5	-	G_P
Gain Flatness	dB	-	±0.5	-	G_F
Input Return Loss	dB	-	-	-10	S_{11}
Operating Voltage	V	-	28	36	V_{DS}
Quiescent Current	mA	-	100	-	I_{DQ}
Efficiency@Psat	%	40		-	Eff

Environmental Characteristics

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

Mechanical Specifications

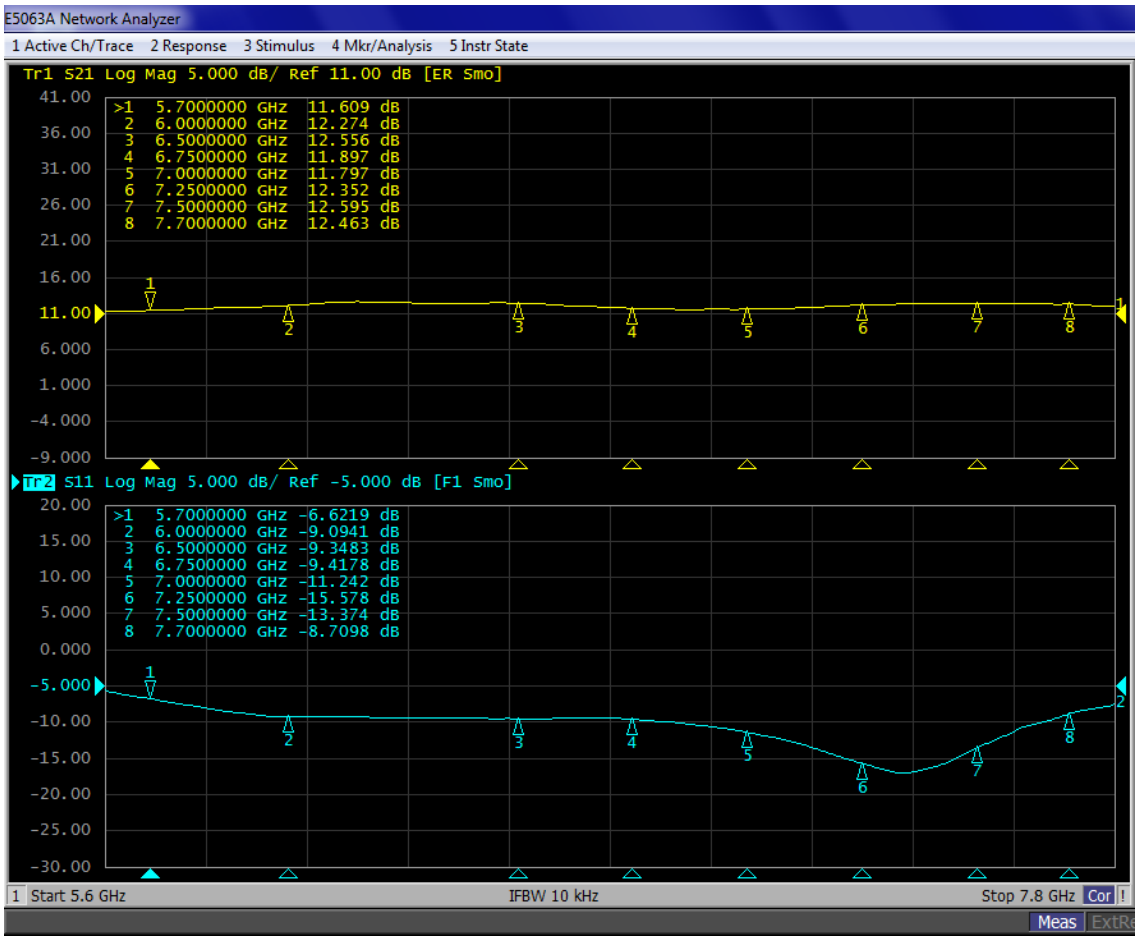
PARAMETER	UNIT	VALUE
Dimensions(L × W × H)	mm	20×40×6 （including device soldered）
Weight	g	50
RF Input Connector	-	N/A
RF Output Connector	-	N/A
Cooling	-	External Heat-sink

Typical performance

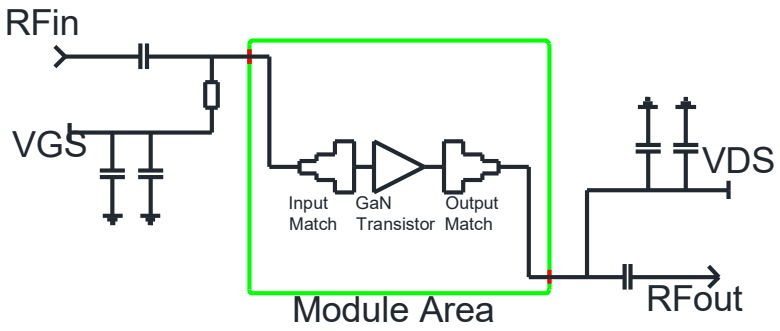
- CW performance: Vds=+28V, IDQ=100mA, T=25℃

Freq(MHz)	Pin(dBm)	Pout(dBm)	Pout(W)	Ids(A)	Gain(dB)	Eff (%)
5700	41.0	48.60	72.4	4.78	7.6	54.1
5800	41.0	48.65	73.3	4.91	7.7	53.3
5900	41.0	48.75	75.0	5.05	7.8	53.0
6000	41.0	49.00	79.4	5.31	8.0	53.4
6100	41.0	48.95	78.5	5.25	8.0	53.4
6200	41.0	48.62	72.8	5.14	7.6	50.6
6300	41.0	48.60	72.4	5.38	7.6	48.1
6400	41.0	48.82	76.2	5.61	7.8	48.5
6500	41.0	48.82	76.2	5.59	7.8	48.7
6600	41.0	48.65	73.3	5.48	7.7	47.8
6700	41.0	48.56	71.8	5.37	7.6	47.7
6800	41.0	48.47	70.3	5.48	7.5	45.8
6900	41.0	48.40	69.2	5.60	7.4	44.1
7000	41.0	48.59	72.3	5.86	7.6	44.0
7100	41.0	48.72	74.5	6.12	7.7	43.5
7200	41.0	48.80	75.9	6.20	7.8	43.7
7300	41.0	48.90	77.6	6.30	7.9	44.0
7400	41.0	48.95	78.5	6.20	8.0	45.2
7500	41.0	48.85	76.7	6.13	7.9	44.7
7600	41.0	48.69	74.0	5.93	7.7	44.5
7700	41.0	48.47	70.3	5.78	7.5	43.4

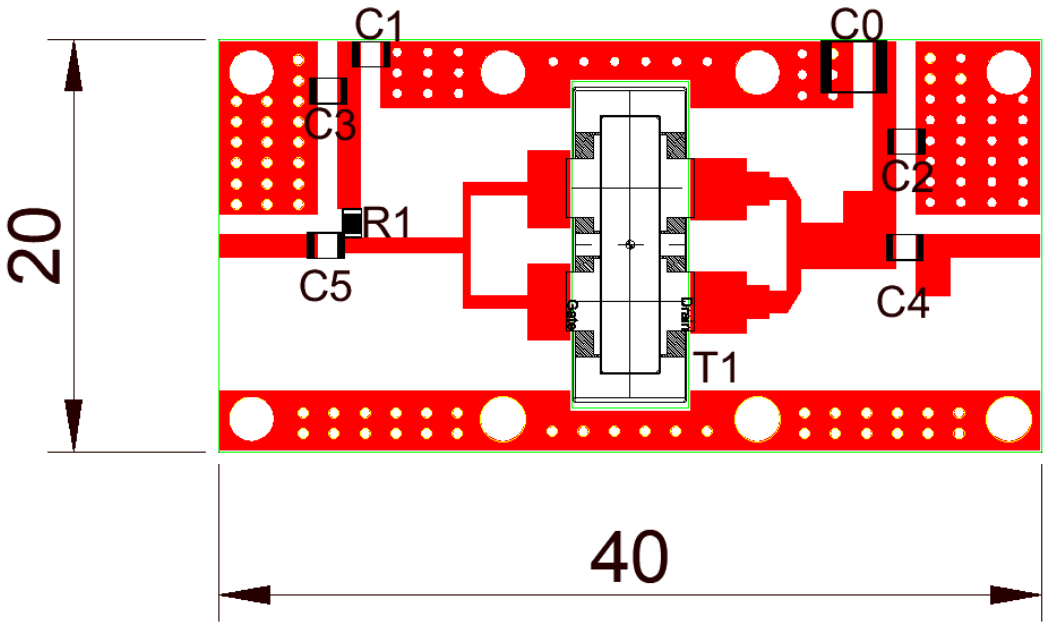
- **S21/S11 from network analyzer VDS=28V VGS=-2.4V IDQ=400mA**



Evaluation board Block Diagram

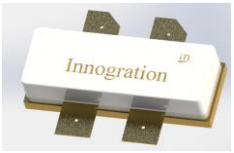


Evaluation board outline

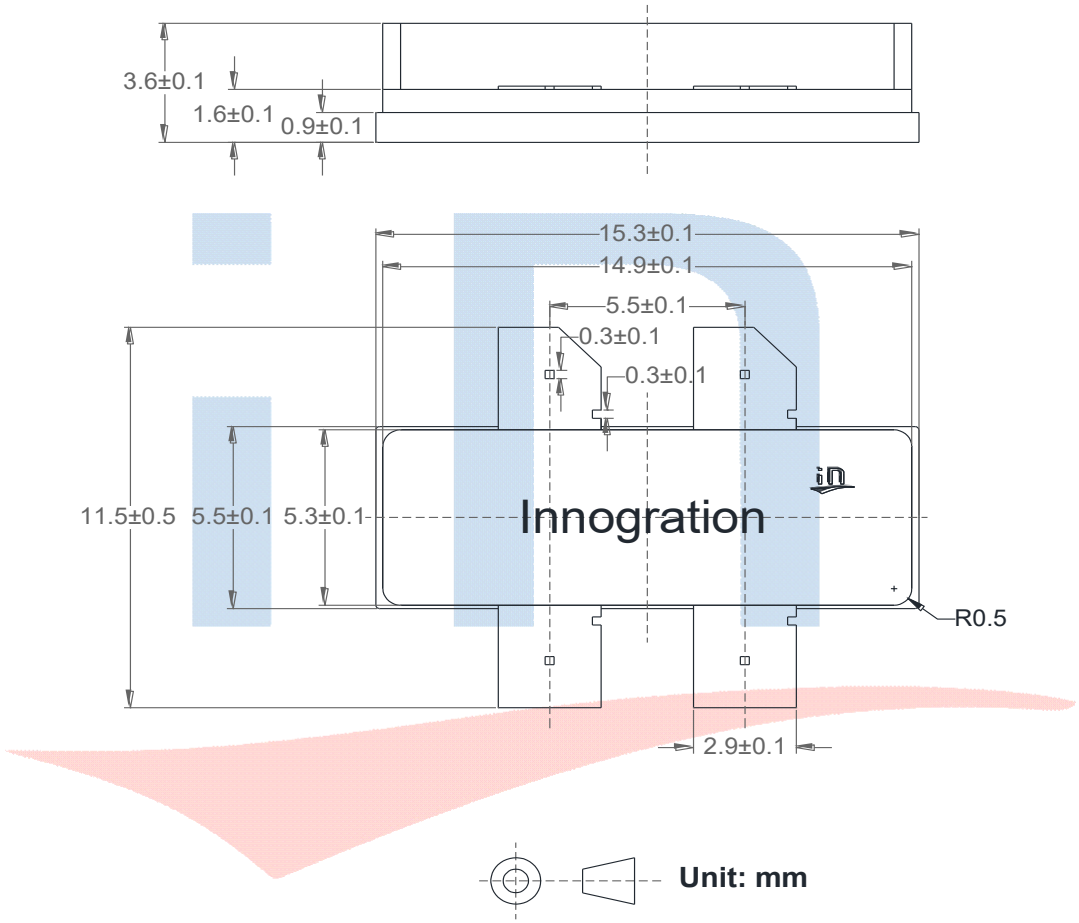


Reference Designator	Description	Quantity
C0	10uF/100V, 1210	1
C1	1uF/100V, 0805	1
C2, C3, C4, C5	2.4 pF, 0805	4
R1	10 Ω, 0603	1
T1	NL7506HS V0	1

Transistor information：NL7506HS



Earless Flanged Ceramic Package; 4 leads



Revision History

Document revision history

Date	Revision	Datasheet Status
2025/9/23	Rev 1.0	Preliminary Datasheet

Application data based on RXT-25-31

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