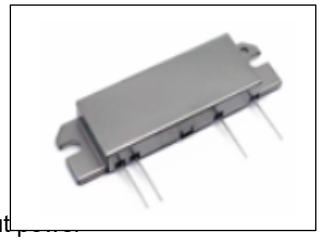
SA60H1540 PA module

Document Number: SA60H1540
Advanced Datasheet V1.0

150-400MHz,60W, 28V, 2 stage VHF/UHF module



Description

SA60H1540 is a rugged 28V 60W RF GaN Amplifier Module operating in the 150 to 400MHz range. This module is designed for non-linear modulation, but may also be used for linear modulation by setting the drain quiescent current with the gate voltage and controlling the output power with the input power.

Features

- Rugged GaN technology
- Pout>60W (CW), Eff>45% @ Vds=28V, Vgs=5V
- Broadband Frequency Range: 150-400MHz
- Metal shielding structure
- Module Size: 67 x 19.4 x 9.9 mm
- DC block capacitor integrated
- Linear and non linear operation supported

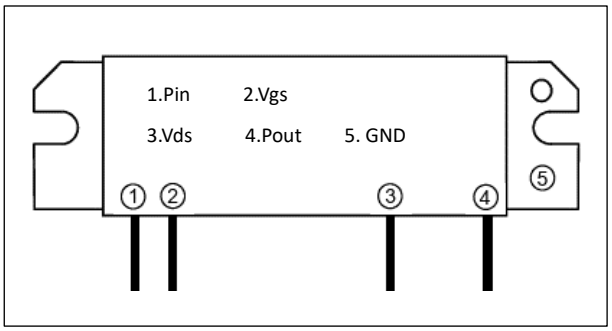


Table 1. Maximum Ratings

Rating	Symbol	Value	Unit
Drain--Source Voltage	V_{DSS}	150	Vdc
Gate--Source Voltage	V_{GS}	-10 to +2	Vdc
Operating Voltage	V_{DD}	+36	Vdc
Storage Temperature Range	Tstg	-65 to +150	°C
Case Operating Temperature	T_C	+150	°C
Operating Junction Temperature	T_J	+225	°C

Figure 1： Network analyzer Output S11/S21

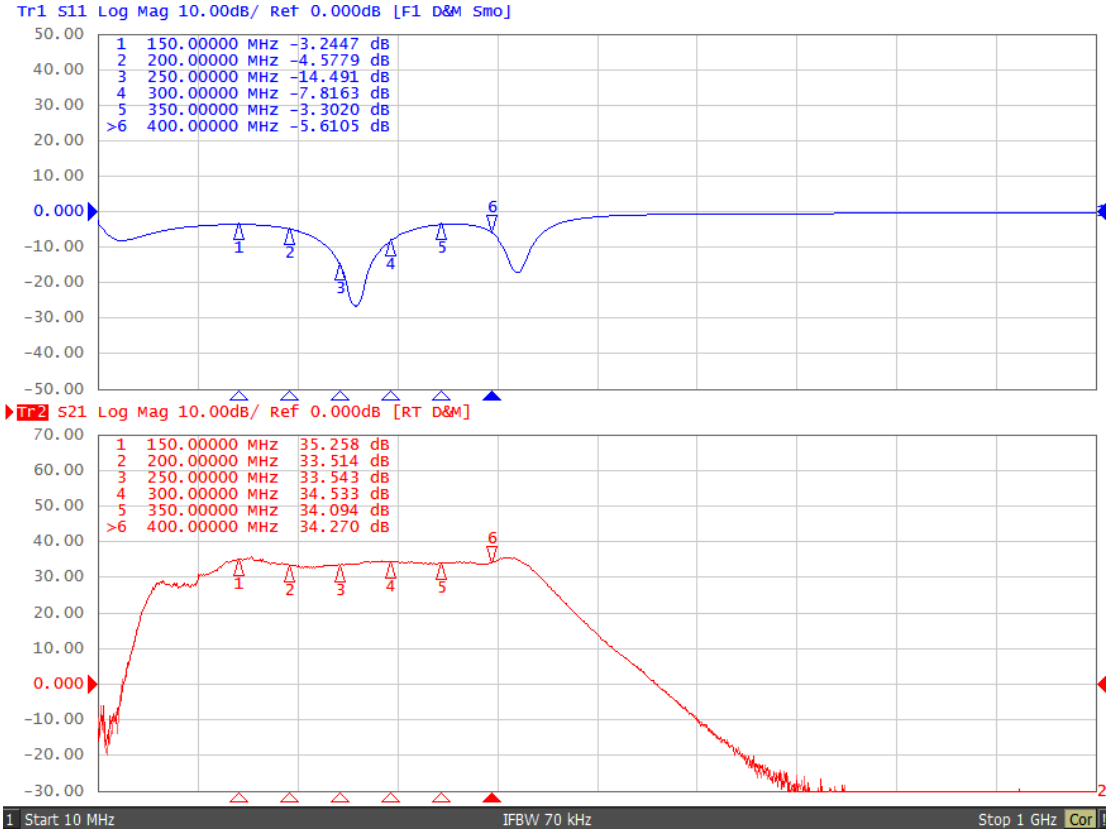
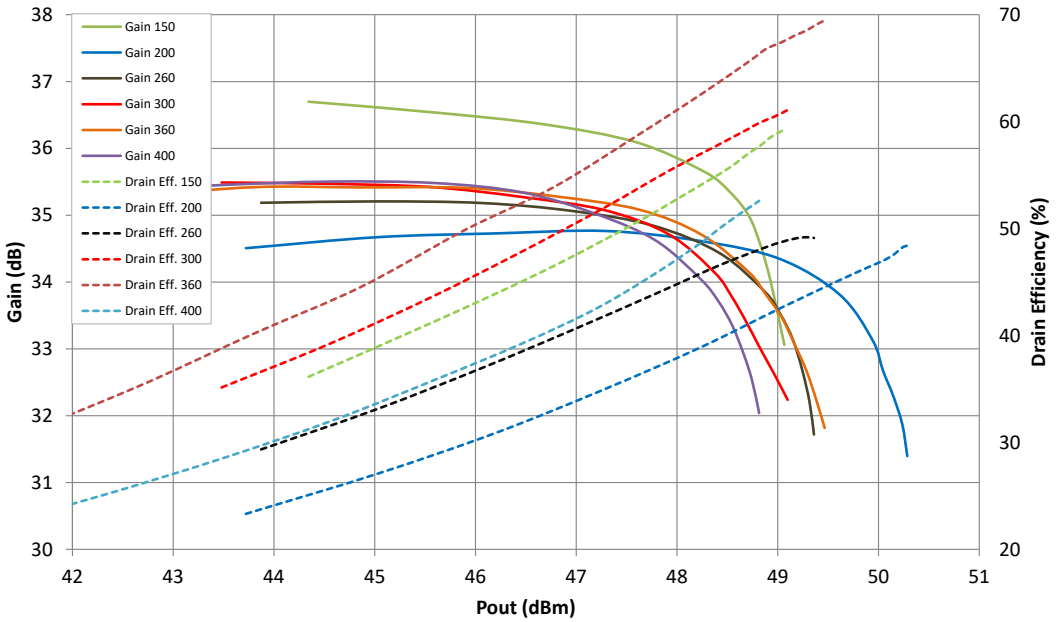
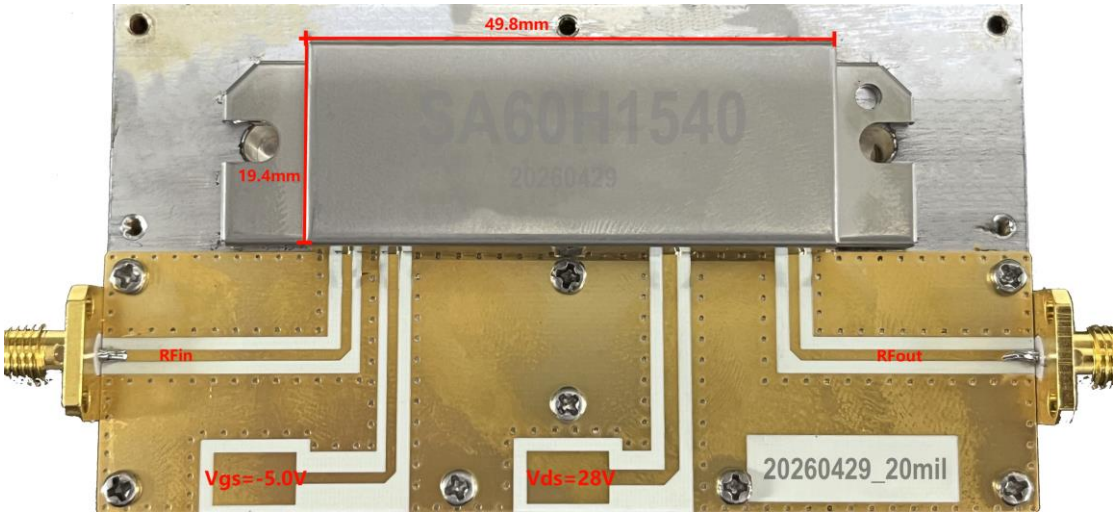


Figure 2： Pulsed CW Power gain，Efficiency as function of output Power



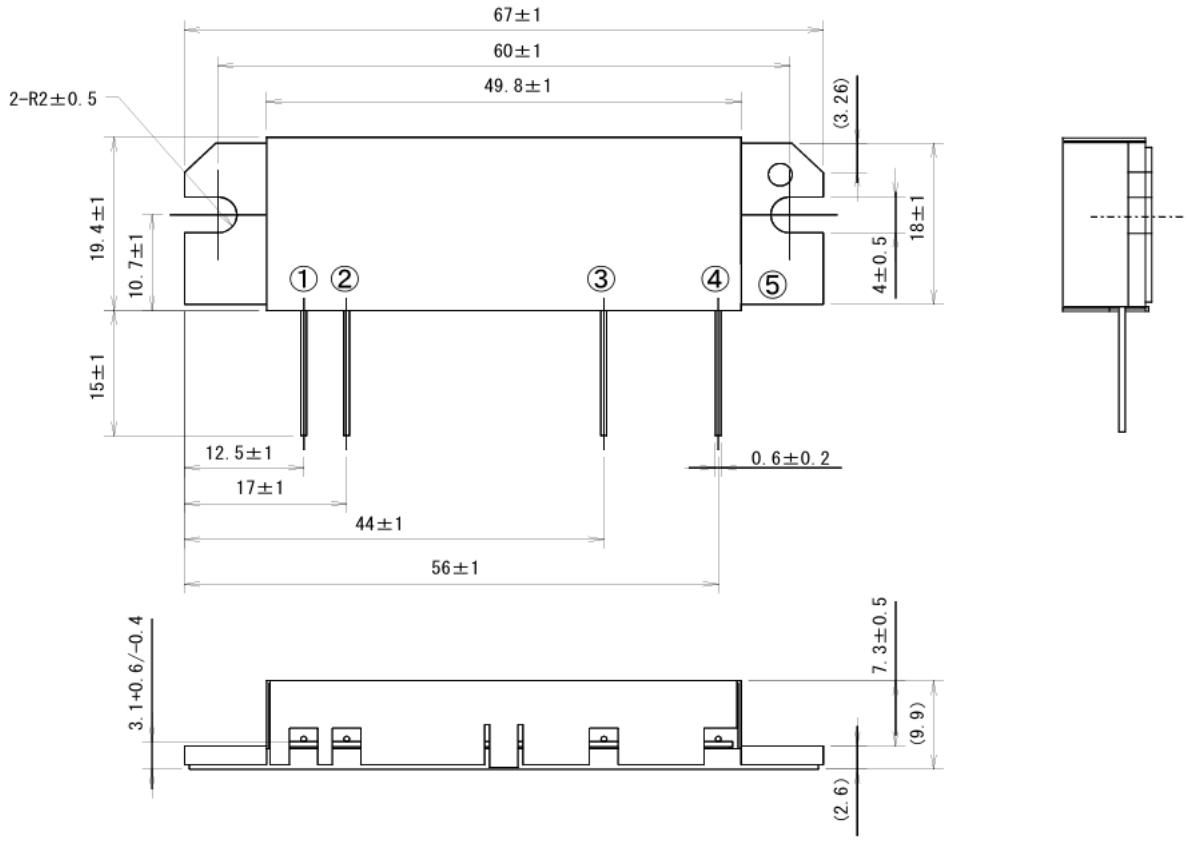
V_{DS}= 28V, V_{gs}= -5.0V, I_{dq}=100mA (CW)					
Freq(MHz)	P1(dBm)	P1 Gain(dB)	P3dB(dBm)	P3dB(W)	EFF (%)
150	48.39	33.8	48.82	76	56
160	48.87	33.5	49.41	87	54
180	48.60	32.3	49.60	91	46
200	49.16	31.9	49.81	95	45
220	49.22	31.1	50.11	102	45
240	48.81	31.6	49.55	90	45
260	47.99	32.7	48.80	75	45
280	48.86	33.2	49.85	96	59
300	48.06	33.1	48.98	79	59
320	47.09	33.2	47.84	61	50
340	47.48	33.2	48.17	66	55
360	48.53	33.6	49.33	85	67
380	49.30	33.8	50.06	101	67
400	47.24	33.3	48.25	67	48

Figure 3： Test circuit



Package Outline

Flanged package; 2 mounting holes; 4 Pins, Unit:mm



OUTLINE VERSION	REFERENCE			EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA		
PKG-					06/17/2024

Revision history

Table 5. Document revision history

Date	Revision	Datasheet Status
2026/4/29	Rev 1.0	Advanced Datasheet Creation

Application data based on HJ-26-02

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