

HJ-26-06**AC5185:2000-2800MHz****AC5185:2000-2800MHz**
August 7, 2026**Introduction**

This amplifier is designed with 5V GaAs.

Demo and Transistor

Frequency Band :2000-2800MHz
Application : Telecom
Configuration :Class AB
Test signal : CW
Transistor : AC5185
Date code : 20260807
PCB : 10mil Rogers 4350B

Note:

The amplifier has been characterized under the following conditions:

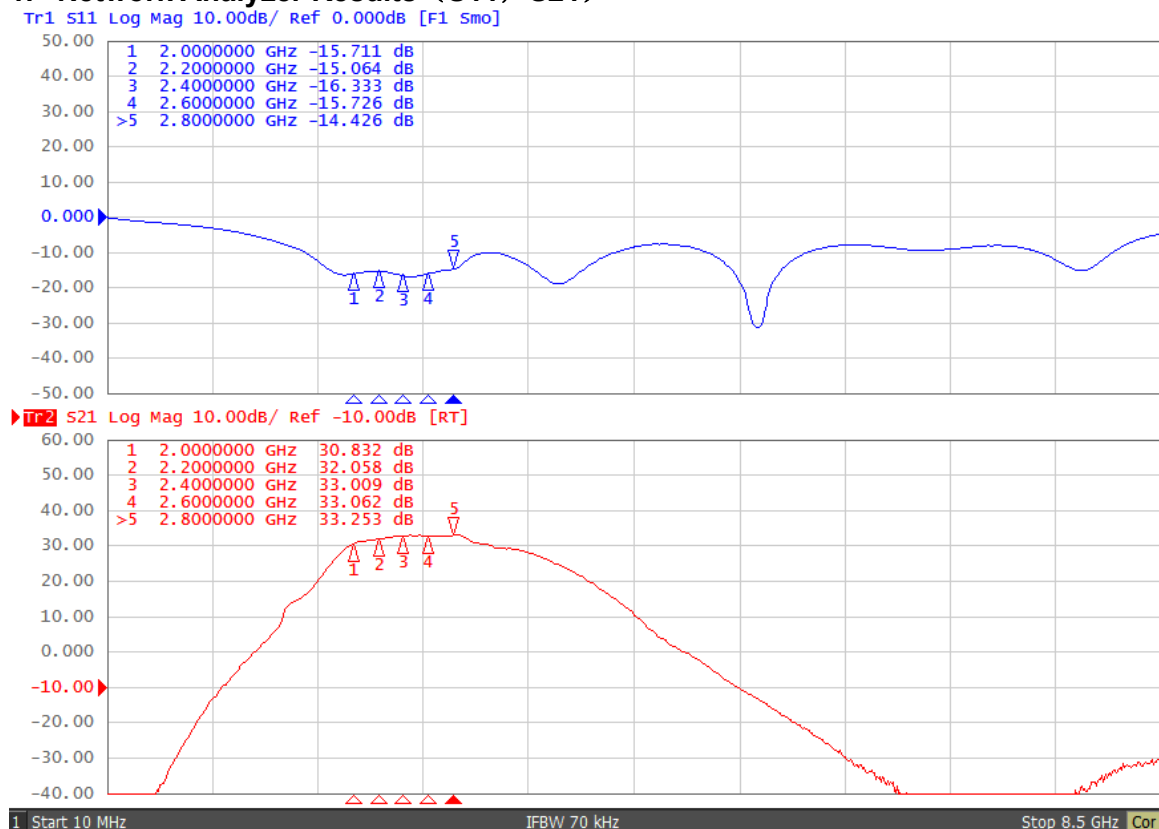
- Network Analyzer plots for gain and IRL.
- P1dB and P3dB Peak power measurement using the CW.
- RF Test Bench 2

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Test Results:

1. Network Analyzer Results (S11, S21)

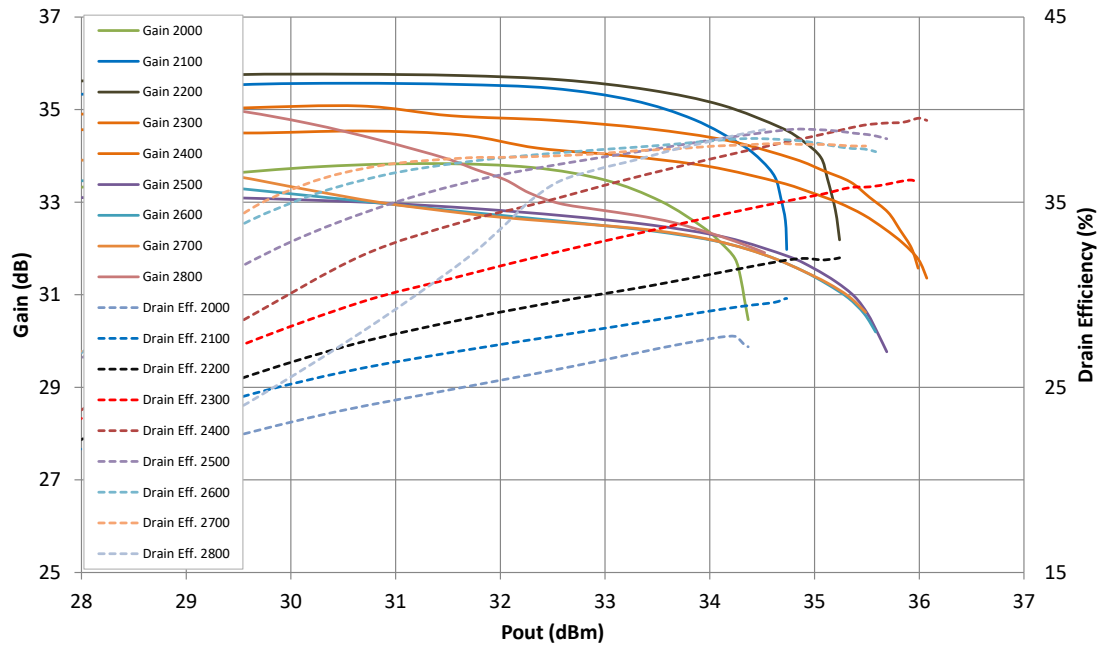


2. CW Test

$V_{bias}/V_{cc1}/V_{cc2}/V_{cc3}=5.0V, V_{EN}=3.0V, I_{dq}=200mA$					
CW					
Freq(MHz)	P-1(dBm)	P-1Gain(dB)	P-3(dBm)	P-3(W)	EFF (%)
2000	33.66	32.9	34.34	2.7	27.3
2100	34.02	34.6	34.72	3.0	28.9
2200	34.49	34.8	34.97	3.1	30.4
2300	34.56	34.1	35.90	3.9	36.2
2400	34.28	33.6	36.02	4.0	39.5
2500	34.42	32.5	35.85	3.9	39.3
2600	33.77	32.7	35.82	3.8	38.6
2700	31.17	32.9	35.55	3.6	38.8
2800	31.03	34.2	34.15	2.6	38.5

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Bill of Materials

Component	Value	Manufacturer	Footprint	Description
C10, C11	47 pF	Murata	0402	DC block capacitor
C5, C6, C9, C12	100 pF	Murata	0402	De-coupling capacitor
C13	10 nF	Murata	0402	De-coupling capacitor
C3, C4, C8, C14, C15	100 nF	Murata	0402	De-coupling capacitor
C1, C2, C7, C16	10 uF	Murata	0603	De-coupling capacitor
C17, C18, C19, C20	NC			
R1, R2	0 Ω		0402	
R3	50 Ω		0402	

EVB Layout

