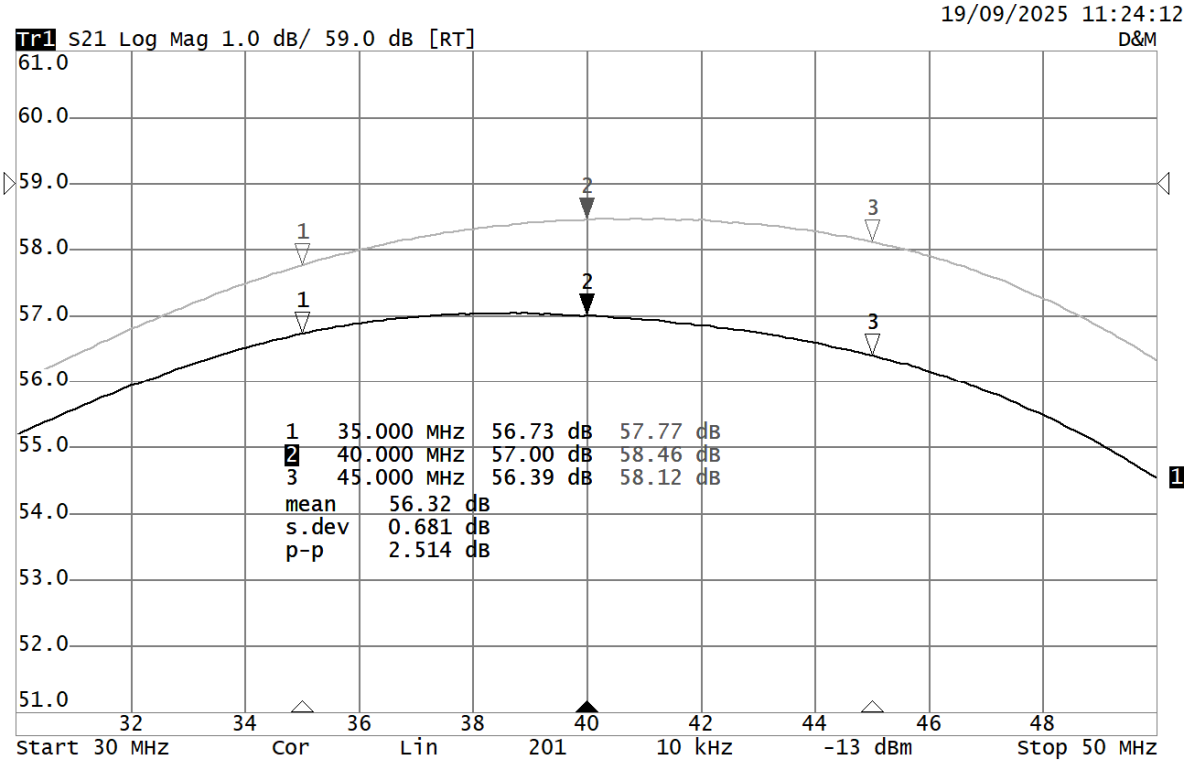
Part Number:
PA-35M45M-55-50W

electrical specifications Measuring operation : +24V Power Supply Min: +22V Power Supply ; Max: +32V Power Supply		DB15 – pin 1, 3, 5, 6, 8, 9, 11, 13 : NC DB15 – pin 2, 4, 7, 10, 12, 14: GND DB15 – pin 15: Thermoswitch state output (0V=open, 4V=close)		
	Measuring conditions	**Specifications**	**Measured**	**Units**
Frequency Range	*T° amb*	35 – 45	35 - 45	MHz
Burn in	*T° amb*	12	> 12	h

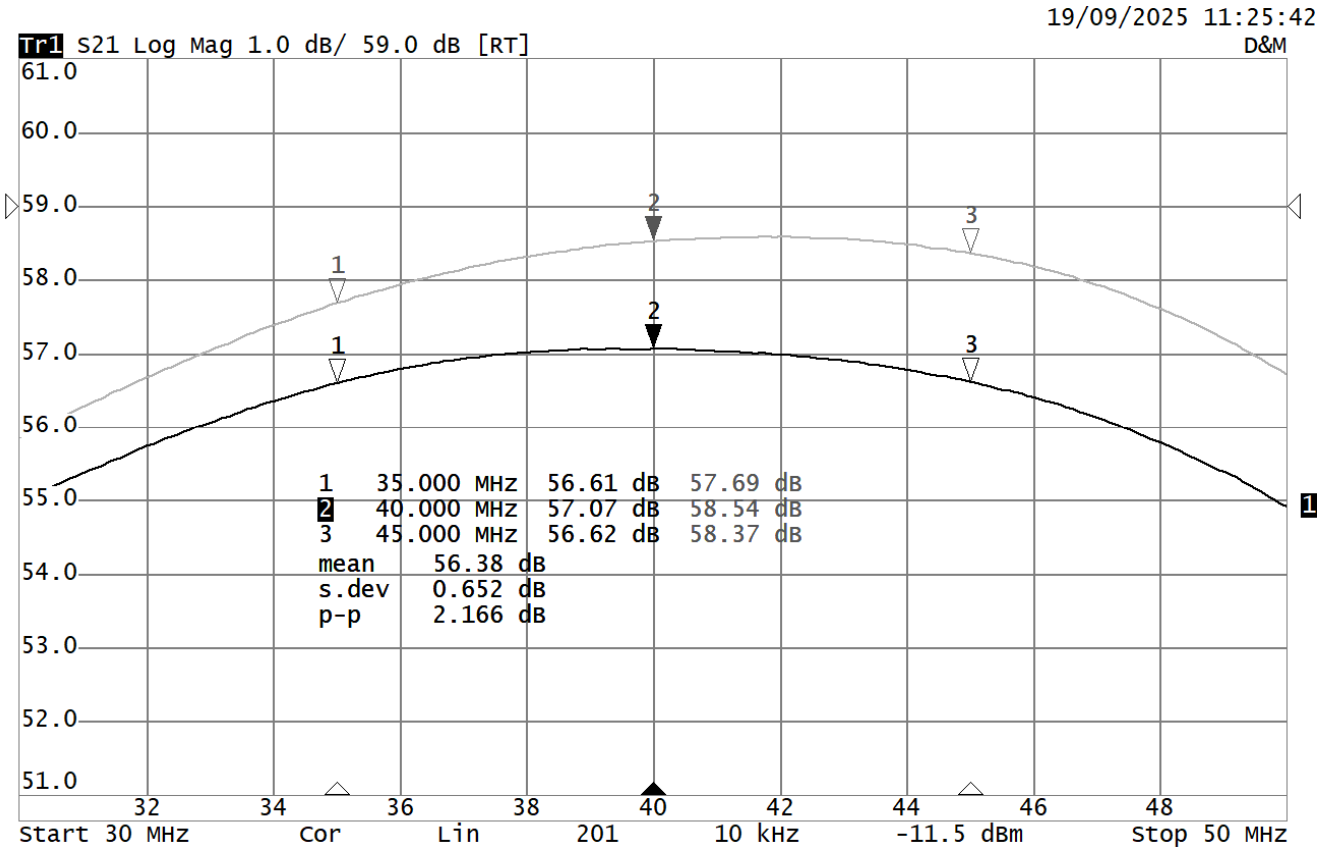
24 V

	Measuring conditions	**Specifications**	**Measured**	**Units**
Minimum RF OUT power	*@P1dB*	44 typ.	44	dBm
Gain	*35 – 45 MHz @P1dBm*	≥ 55	>56	dB
Current RF off	*24V*	< 4.0	3,3	A
Current RF on	*44dBm*	< 4.5	3,4	A



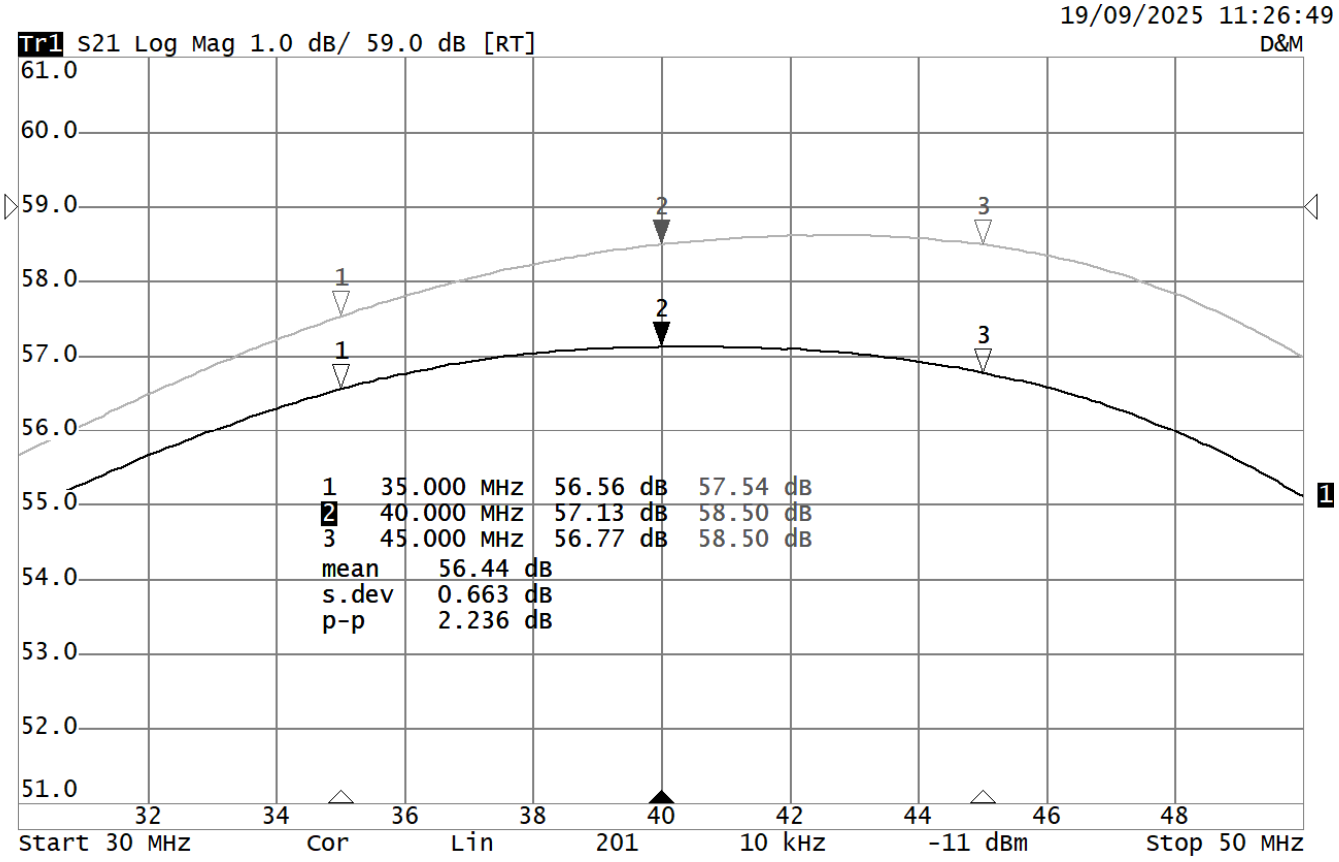
28 V

	Measuring conditions	Specifications	Measured	Units
Minimum RF OUT power	*@P1dB*	44 typ.	45	dBm
Gain	*35 – 45 MHz @P1dBm*	≥ 55	56	dB
Current RF off	*28V*	< 4.0	3,4	A
Current RF on	*44dBm*	< 4.5	3,6	A



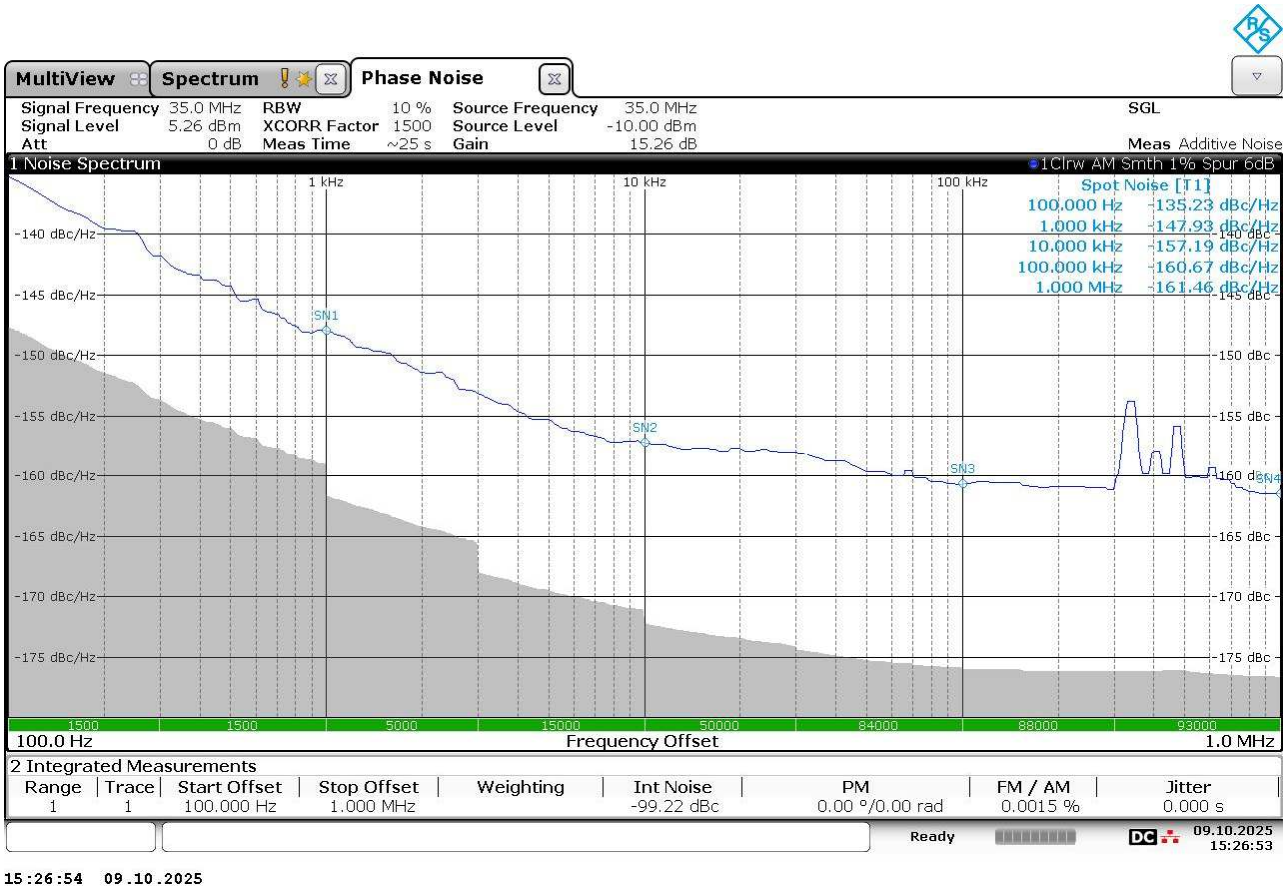
30 V

	Measuring conditions	Specifications	Measured	Units
Minimum RF OUT power	*@P1dB*	45 typ.	45	dBm
Gain	*35 – 45 MHz @P1dBm*	≥ 55	> 56	dB
Current RF off	*30V*	< 4.0	3,4	A



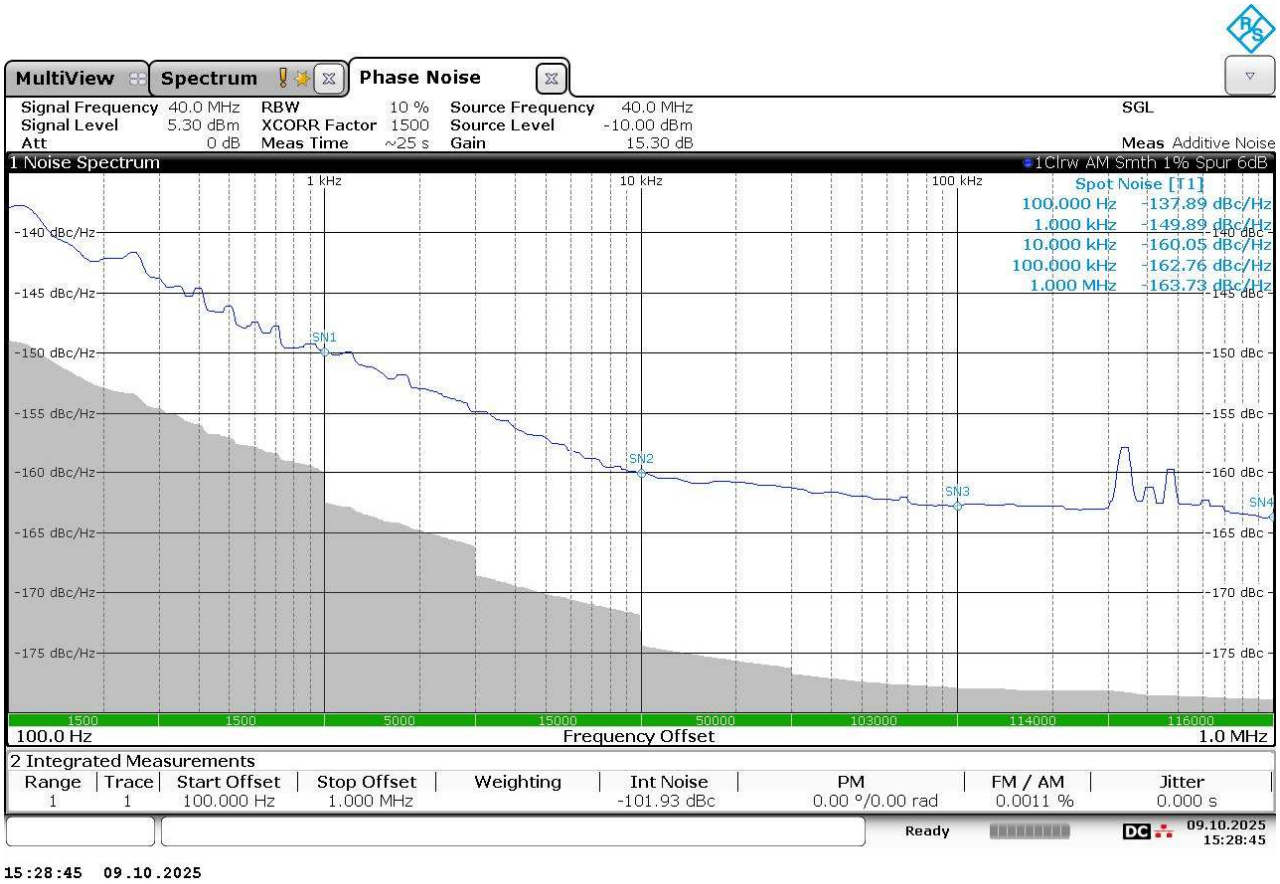
Additive Phase Noise at 35MHz

	Measuring conditions	Specifications	Measured	Units
Minimum RF OUT power	*@P1dB*	44 typ.	44	dBm
Gain	*35 MHz @P1dBm*	≥ 55	>56	dB
Current Consumption	*24V*	< 4.0	3,575	A



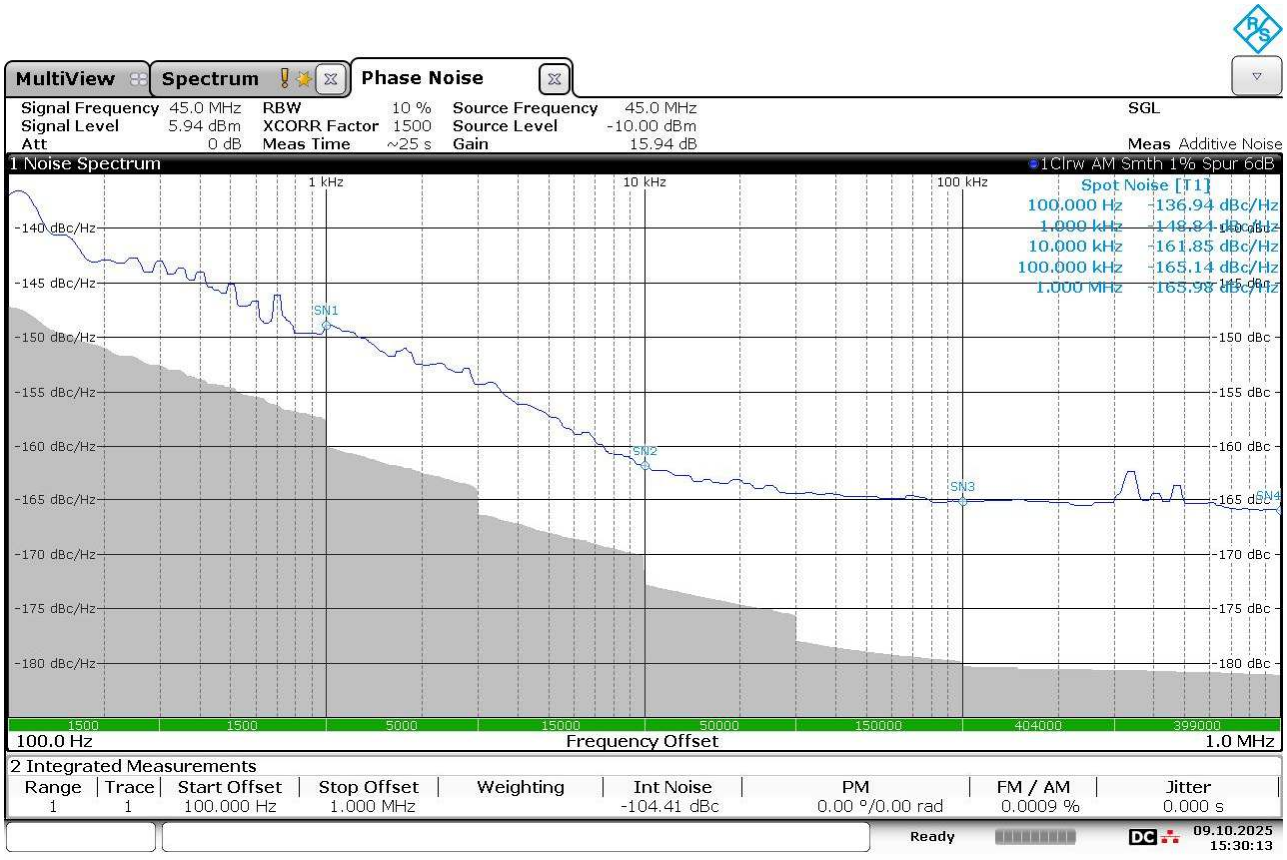
Additive Phase Noise at 40MHz

	Measuring conditions	Specifications	Measured	Units
Minimum RF OUT power	*@P1dB*	44 typ.	44	dBm
Gain	*40 MHz @P1dBm*	≥ 55	>56	dB
Current Consumption	*24V*	< 4.0	3,383	A



Additive Phase Noise at 45MHz

	Measuring conditions	Specifications	Measured	Units
Minimum RF OUT power	*@P1dB*	44 typ.	44	dBm
Gain	*45 MHz @P1dBm*	≥ 55	>56	dB
Current Consumption	*24V*	< 4.0	3,280	A



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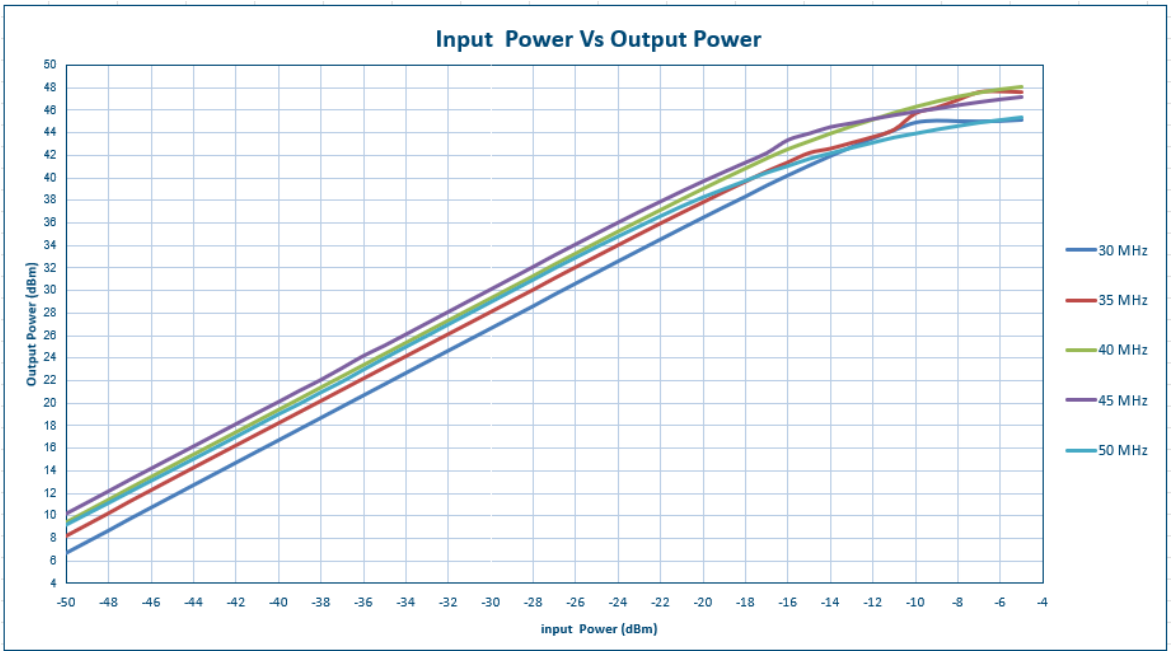
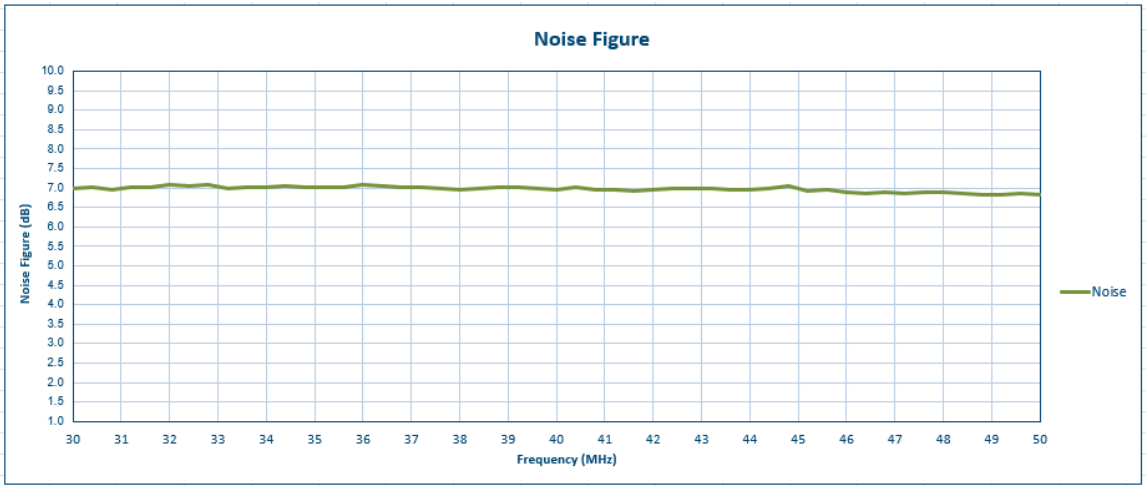
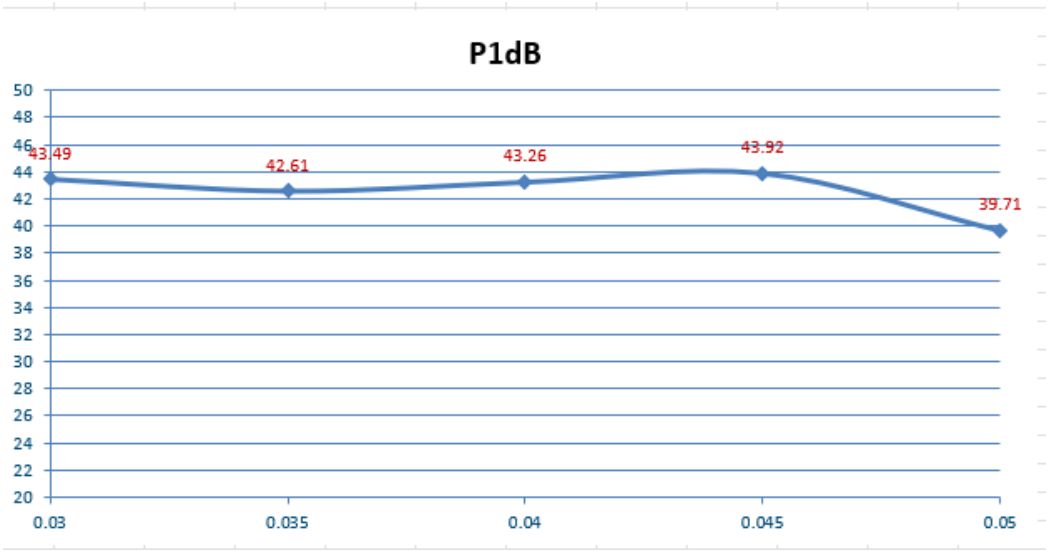

Input Power Vs Output Power
Output Power (dBm)
input Power (dBm)
30 MHz
35 MHz
40 MHz
45 MHz
50 MHz


Noise Figure
Noise Figure (dB)
Frequency (MHz)
Noise


P1dB
43.49
42.61
43.26
43.92
39.71

Conclusions: The additive AM noise levels of the PA-35M45M-55-50W power amplifier may be better than the measurement capability of the FSWP. However, due to receiver sensitivity limitations, it is not possible to accurately measure this performance. Although the specified target at 100 Hz offset is -145 dBc/Hz, the measurable value remains approximately 10 dB above this limit.

Note: Please check the FSWP specifications for additive AM noise measurement sensitivity limits as shown below. It indicates that the PA-35M45M-55-50W amplifier's specification is at the sensitivity threshold of the FSWP.

AM noise sensitivity

Start offset 1 Hz, correlations = 1, signal level ≥ 10 dBm [4], specified values in dBc (1 Hz), for typical values subtract 6 dB									
RF input frequency	**Offset frequency from the carrier**								
	1 Hz	10 Hz	100 Hz	1 kHz	10 kHz	100 kHz	1 MHz	10 MHz	30 MHz
100 MHz ≤ f ≤ 1 GHz	–105	–120	–135	–150	–158	–165	–165	–165	–165
1 GHz < f ≤ 12 GHz	–100	–115	–130	–145	–155	–160	–165	–165	–165
12 GHz < f ≤ 18 GHz	–90	–105	–120	–135	–150	–160	–165	–165	–165
18 GHz < f ≤ 33 GHz	–80	–95	–110	–125	–140	–150	–160	–165	–165
33 GHz < f ≤ 50 GHz	–70	–85	–100	–115	–130	–140	–150	–160	–160