



Test Data Report



SU 600 DC
600 W, CW
1 GHz – 2.5 GHz

Go green !



SN : 1606-1903

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PRÂNA	<u>Model Reference :</u> SU 600 DC SN:1606-1903		<u>Resp. Product :</u> Vayne F.	<u>Operator :</u> Deshors S.
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1. Certificate of conformity

PRÂNA	Model Reference : SU 600 DC SN:1606-1903		Resp. Product : Vayne F. Visa :	Operator : Deshors S. Visa :
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2. Certificate CE

PRÂNA	Model Reference : SU 600 DC SN:1606-1903		Resp. Product : Vayne F. Visa :	Operator : Deshors S. Visa :
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3. Technical specifications

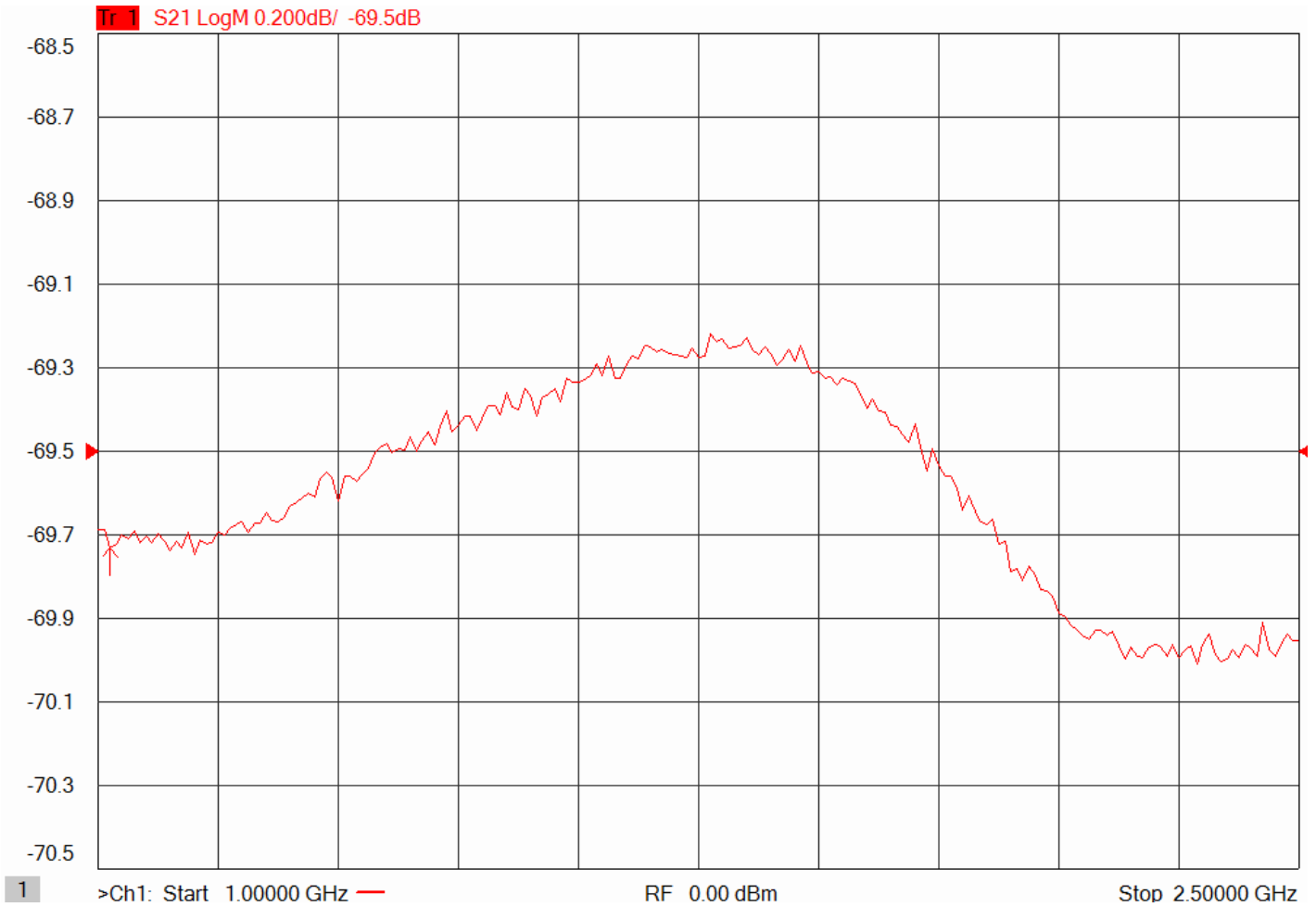
Specifications	
Bande de fréquence	1 GHz - 2.5 GHz
Puissance de sortie typique	600 W
Puissance à 3dB de compression	600 W min jusqu'à 1.6 GHz / 520 W min entre 1.6 GHz et 2.5 GHz *
Puissance à 1dB de compression	500 W min jusqu'à 1.6 GHz / 450 W min entre 1.6 GHz et 2.5 GHz *
Taux d'harmoniques	H2,H3 <-20dBc pour la puissance à 1 dB de compression minimale
Type de classe de fonctionnement	Classe A
Gain	56 dB
Ondulation du gain petit signal	± 4 dB max
Tolérance à la désadaptation	Infinie sans dommage
Impédance d'entrée	50 ohms / VSWR: 2:1max
Impédance de sortie	50 ohms / VSWR: 2:1max
Puissance d'entrée	+ 10 dBm max
Connecteur RF d'entrée	Type N fem. (Face avant ou face arrière) autres connecteurs sur demande
Connecteur RF de sortie	Type 7/16 fem. (Face avant ou face arrière) autres connecteurs sur demande
Interlock de sécurité	Connecteur type BNC
Contrôle numérique	Transistors, alimentations et température interne
Interface de communication	IEEE 488
Affichage digital 4 lignes	Status, défauts, puissance instantanée directe et réfléchie
Température de fonctionnement	0 °C / +35 °C
Température de stockage	-20 °C / +70 °C
Refroidissement	Air forcé: 240 l/sec max (Ventilateurs intégrés)
Secteur	47-63 Hz, triphasé (Etoile ou delta)
Consommation secteur	4 kVA
Dimensions	600 x 840 x 1050 mm (18U)
Poids	230 kg

Version SU 600 DC :

Coupleur de puissance bidirectionnel intégré	Facteur de couplage 69 dB typ. (Version DC)
Connecteurs des couplages de puissance	Type N fem. (Face avant ou face arrière)
Pertes estimées dues au coupleur intégré	0.4 dB * A prendre en compte dans les spécifications de puissances de sortie minimale

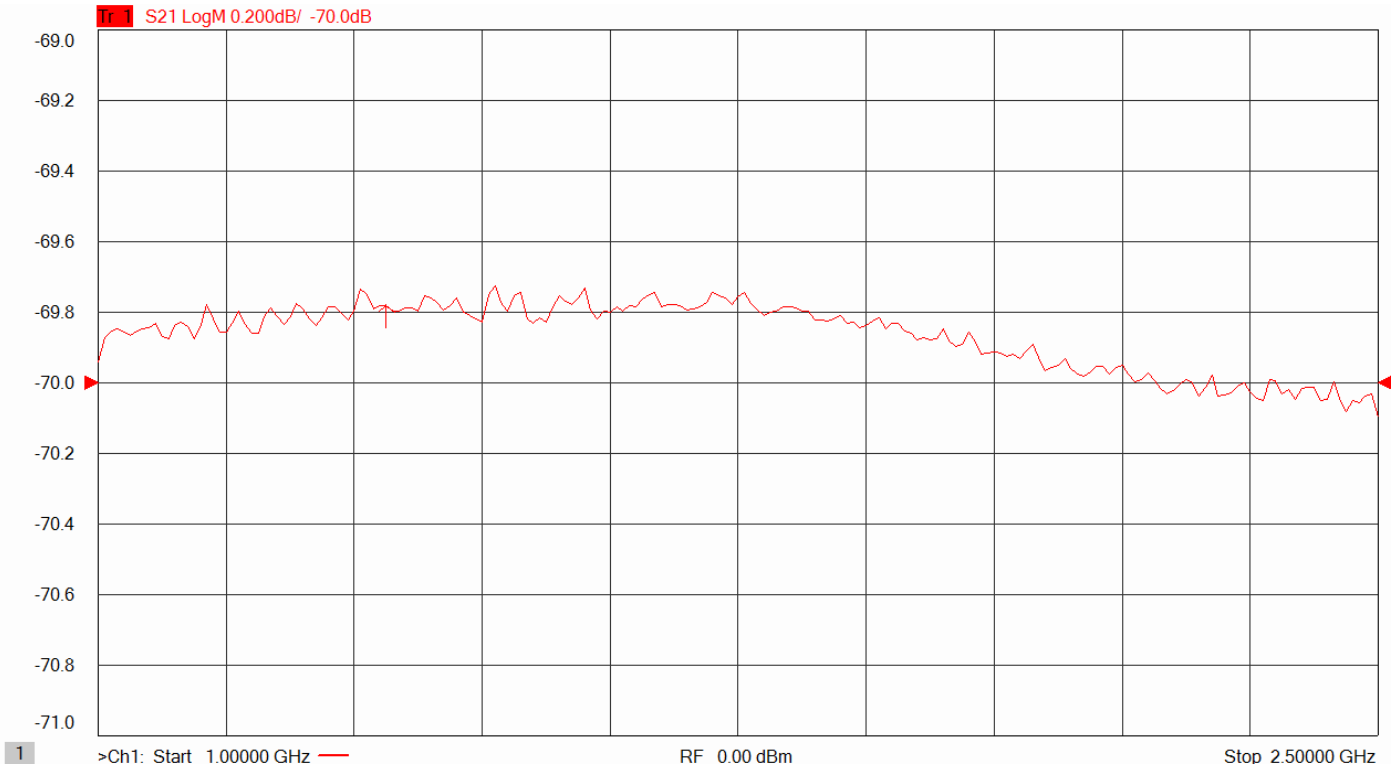
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4. Coupler reference curve – "Forward Sample" :



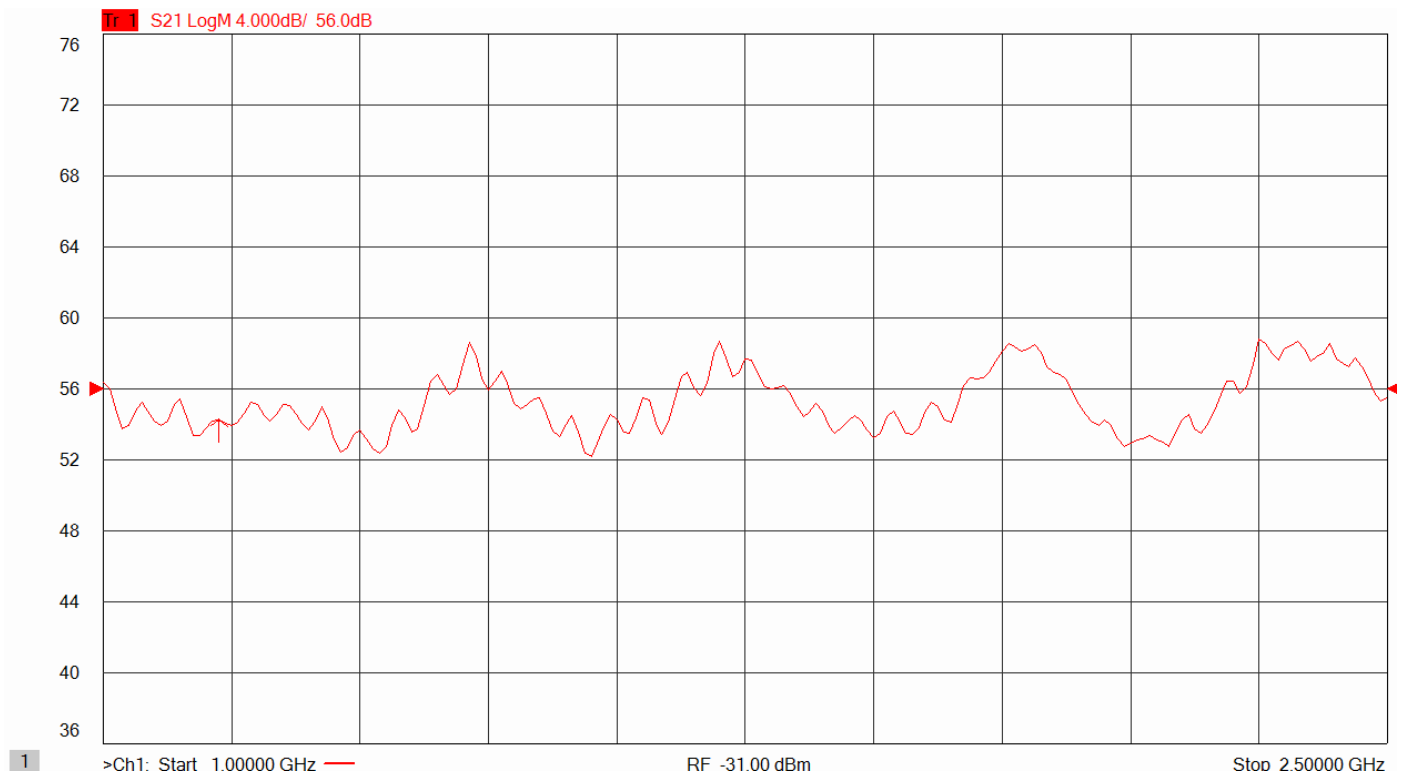
PRÂNĂ	Model Reference : SU 600 DC SN:1606-1903		Resp. Product : Vayne F.	Operator : Deshors S.
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5. Coupler reference curve – "Reverse Sample" :



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6. Small signal gain reference curve :




PRÂNA	Model Reference : SU 600 DC SN:1606-1903		Resp. Product : Vayne F.	Operator : Deshors S.
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7. Displayed power to delivered nominal power comparison

Frequency MHz	RF Power delivered by the amplifier	RF Power displayed	Difference	
	Watt	Watt	dB	%
1000	727	707	-0.12	2.8
1020	712	669	-0.27	6.0
1040	716	682	-0.21	4.7
1060	676	658	-0.12	2.6
1080	689	710	0.13	3.0
1100	715	714	-0.01	0.2
1120	766	741	-0.14	3.2
1140	734	733	-0.01	0.2
1160	762	726	-0.21	4.7
1180	734	718	-0.10	2.2
1200	716	735	0.12	2.7
1220	716	728	0.07	1.7
1240	601	655	0.37	9.0
1260	688	723	0.22	5.1
1280	686	690	0.02	0.5
1300	736	740	0.02	0.5
1320	716	695	-0.13	3.0
1340	704	705	0.01	0.1
1360	685	699	0.09	2.1
1380	733	715	-0.11	2.4
1400	715	729	0.08	2.0
1420	674	654	-0.13	3.0
1440	720	715	-0.03	0.6
1460	704	684	-0.13	2.9
1480	678	661	-0.11	2.5
1500	668	678	0.06	1.5
1520	686	699	0.08	1.9
1540	715	747	0.19	4.5
1560	713	735	0.13	3.1
1580	702	696	-0.04	0.9
1600	718	716	-0.01	0.3
1620	711	727	0.09	2.2
1640	731	723	-0.05	1.1
1660	717	715	-0.01	0.3
1680	681	685	0.02	0.6
1700	659	661	0.01	0.3
1720	658	660	0.01	0.3
1740	693	691	-0.02	0.4
1760	669	684	0.10	2.3
1780	691	702	0.07	1.6
1800	688	704	0.10	2.3
1820	641	667	0.18	4.1
1840	665	697	0.21	4.8

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1860	653	702	0.31	7.5
1880	624	641	0.12	2.8
1900	589	599	0.07	1.7
1920	578	576	-0.02	0.4
1940	568	554	-0.11	2.5
1960	548	531	-0.14	3.1
1980	588	555	-0.25	5.6
2000	596	601	0.04	0.9
2020	603	580	-0.17	3.9
2040	636	616	-0.14	3.2
2060	619	611	-0.06	1.3
2080	621	585	-0.26	5.8
2100	617	570	-0.34	7.6
2120	617	570	-0.34	7.6
2140	618	546	-0.54	11.7
2160	593	516	-0.61	13.0
2180	591	517	-0.58	12.6
2200	618	517	-0.77	16.3
2220	619	533	-0.65	13.9
2240	621	531	-0.68	14.5
2260	633	551	-0.60	12.9
2280	605	545	-0.45	9.9
2300	617	528	-0.68	14.4
2320	655	570	-0.61	13.0
2340	615	578	-0.27	6.1
2360	600	554	-0.34	7.6
2380	609	586	-0.17	3.8
2400	604	567	-0.28	6.1
2420	564	533	-0.24	5.5
2440	575	542	-0.26	5.7
2460	571	536	-0.28	6.2
2480	569	536	-0.26	5.8
2500	572	542	-0.24	5.3

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8. Linear output power at 1 dB compression max. : measurements

Frequency	Input power	Output power	Output power	Compression
MHz	dBm	dBm	Watt	dB
1000	4.71	58.62	727	1
1020	6.43	58.52	712	1
1040	5.67	58.55	716	1
1060	6.62	58.30	676	1
1080	5.86	58.38	689	1
1100	6.43	58.55	715	1
1120	7.42	58.84	766	1
1140	7.22	58.66	734	1
1160	6.83	58.82	762	1
1180	5.47	58.66	734	1
1200	6.62	58.55	716	1
1220	6.24	58.55	716	1
1240	6.05	57.79	601	1
1260	5.86	58.38	688	1
1280	8.60	58.37	686	1
1300	7.40	58.67	736	1
1320	8.20	58.55	716	1
1340	6.60	58.48	704	1
1360	7.42	58.35	685	1
1380	4.88	58.65	733	1
1400	4.72	58.54	715	1
1420	3.41	58.29	674	1
1440	4.10	58.57	720	1
1460	3.92	58.48	704	1
1480	5.63	58.31	678	1
1500	5.63	58.25	668	1
1520	6.43	58.37	686	1
1540	7.00	58.54	715	1
1560	8.40	58.53	713	1
1580	7.80	58.46	702	1
1600	6.60	58.56	718	1
1620	7.03	58.52	711	1
1640	6.05	58.64	731	1
1660	6.81	58.56	717	1
1680	3.58	58.33	681	1
1700	5.08	58.19	659	1
1720	1.93	58.18	658	1
1740	4.10	58.41	693	1
1760	3.20	58.25	669	1
1780	5.08	58.39	691	1
1800	4.89	58.38	688	1
1820	6.05	58.07	641	1
1840	6.05	58.23	665	1
1860	7.03	58.15	653	1
1880	5.66	57.95	624	1
1900	7.03	57.70	589	1
1920	5.47	57.62	578	1
1940	6.43	57.54	568	1
1960	5.29	57.39	548	1


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1980	6.05	57.69	588	1
2000	4.72	57.75	596	1
2020	3.60	57.81	603	1
2040	3.56	58.04	636	1
2060	1.90	57.92	619	1
2080	1.98	57.93	621	1
2100	2.95	57.90	617	1
2120	3.92	57.90	617	1
2140	5.08	57.91	618	1
2160	6.05	57.73	593	1
2180	6.81	57.72	591	1
2200	7.81	57.91	618	1
2220	6.83	57.92	619	1
2240	7.61	57.93	621	1
2260	6.44	58.01	633	1
2280	6.81	57.82	605	1
2300	5.10	57.90	617	1
2320	4.52	58.17	655	1
2340	3.74	57.89	615	1
2360	1.58	57.78	600	1
2380	2.25	57.85	609	1
2400	2.32	57.81	604	1
2420	2.32	57.51	564	1
2440	2.15	57.60	575	1
2460	2.83	57.57	571	1
2480	4.10	57.55	569	1
2500	4.64	57.58	572	1


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9. Saturated output power at 3 dB compression max. : measurements

Frequency	Input power	Output power	Output power	Compression
MHz	dBm	dBm	Watt	dB
1000	7.81	59.62	916	3.0
1020	9.39	59.44	879	3.0
1040	8.36	59.35	861	3.0
1060	9.39	59.06	805	3.0
1080	8.98	59.30	851	3.0
1100	9.18	59.32	854	3.0
1120	10.00	59.45	881	3.0
1140	9.80	59.30	852	3.0
1160	9.39	59.44	879	3.0
1180	8.36	59.39	869	3.0
1200	9.39	59.22	836	3.0
1220	8.77	59.15	823	3.0
1240	9.18	58.75	749	3.0
1260	8.77	59.11	814	3.0
1280	10.00	58.77	753	1.9
1300	10.00	59.28	847	3.0
1320	10.00	59.04	802	2.2
1340	9.39	59.10	812	3.0
1360	10.00	58.93	782	3.0
1380	7.34	59.26	844	3.0
1400	7.34	59.17	826	3.0
1420	5.90	58.95	785	3.0
1440	6.83	59.20	831	3.0
1460	6.44	59.08	810	3.0
1480	8.20	58.88	772	3.0
1500	8.20	58.83	763	3.0
1520	8.98	58.90	775	3.0
1540	9.39	58.99	793	3.0
1560	10.00	58.88	773	2.3
1580	10.00	59.01	795	2.6
1600	9.18	59.12	817	3.0
1620	9.59	59.09	811	3.0
1640	8.77	59.22	836	3.0
1660	9.39	59.18	828	3.0
1680	6.31	59.10	813	3.0
1700	7.80	58.92	780	3.0
1720	4.80	58.96	787	3.0
1740	6.62	59.00	794	3.0
1760	5.86	58.89	774	3.0
1780	7.61	58.88	772	3.0
1800	7.22	58.82	761	3.0
1820	8.80	58.59	722	3.0
1840	8.60	58.70	742	3.0
1860	9.39	58.47	704	3.0
1880	8.16	58.34	683	3.0
1900	9.39	57.97	626	3.0
1920	8.16	58.14	652	3.0
1940	8.98	57.98	628	3.0
1960	7.95	57.79	601	3.0

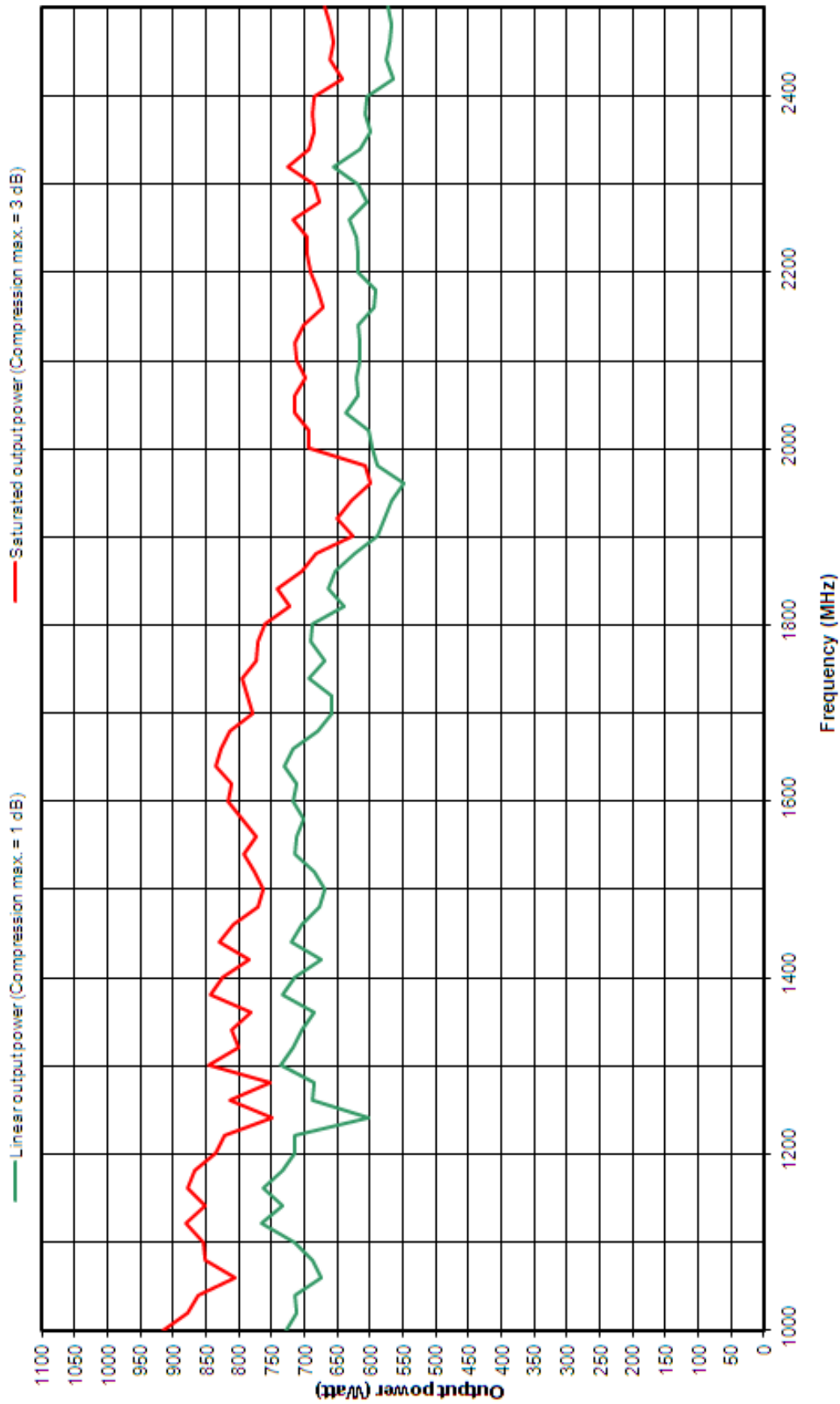
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1980	8.36	57.84	608	3.0
2000	7.34	58.40	692	3.0
2020	6.25	58.41	694	3.0
2040	6.05	58.53	714	3.0
2060	4.49	58.54	715	3.0
2080	4.52	58.44	698	3.0
2100	5.63	58.52	712	3.0
2120	6.62	58.54	715	3.0
2140	7.81	58.46	702	3.0
2160	8.60	58.28	673	3.0
2180	9.39	58.32	679	3.0
2200	10.00	58.39	690	2.9
2220	9.39	58.43	697	3.0
2240	10.00	58.42	695	3.0
2260	8.98	58.56	718	3.0
2280	9.39	58.31	677	3.0
2300	7.54	58.36	686	3.0
2320	6.93	58.60	725	3.0
2340	6.25	58.40	692	3.0
2360	3.91	58.35	685	3.0
2380	4.89	58.38	689	3.0
2400	4.89	58.35	684	3.0
2420	4.89	58.08	642	3.0
2440	4.71	58.20	661	3.0
2460	5.45	58.17	656	3.0
2480	6.64	58.21	662	3.0
2500	7.42	58.26	670	3.0

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10. Output power – Curves at 1 and 3 dB compression

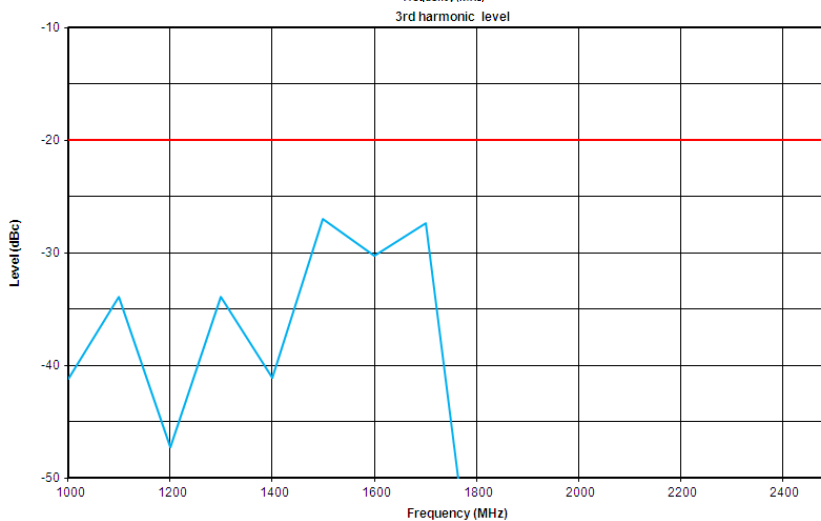
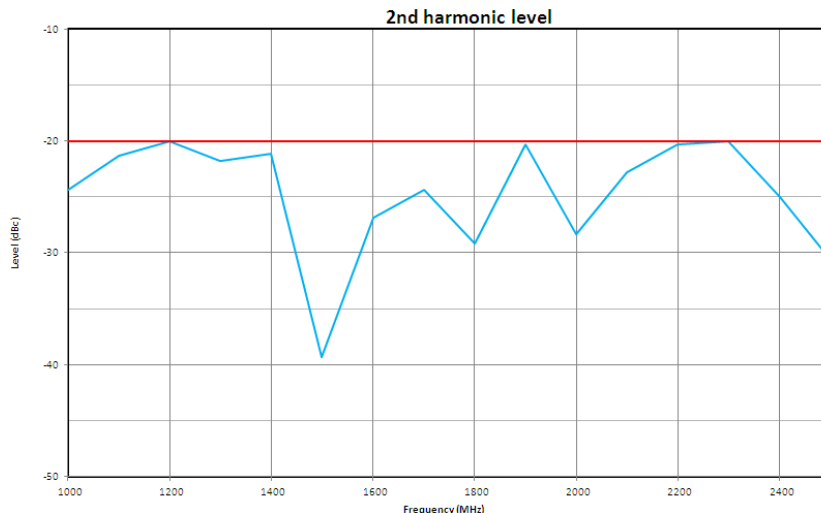
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	Date of measurement: 16/JUN/16	Temperature: 25°C	Visa :	Visa :

11. Harmonic distortion at 1 dB compression or nominal power


Frequency MHz	Harmonic Level		Compression dB	Output Power Watt
	H2 dBc	H3 dBc		
1000	-24	-41	1	727
1100	-21	-34	1	715
1200	-20	-47	1	716
1300	-22	-34	1	736
1400	-21	-41	1	715
1500	-39	-27	1	668
1600	-27	-30	1	718
1700	-24	-27	1	659
1800	-29	-63	1	688
1900	-20	-81	1	589
2000	-28	-82	1	596
2100	-23	-91	1	617
2200	-20	-90	1	618
2300	-20	-96	1	617
2400	-25	-87	1	604
2500	-31	-93	1	572



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12. Lists of measuring instruments

Type	Model	Serial number	Last Calibration	Contract ¹
Network analyser	Hewlett Packard 8753ES 30kHz-6GHz	US39170129	18/JUN/15	Keysight n° 1-6994006692-1
Power meter	Rohde & Schwarz NRP-Z91 1168.8004.02 9kHz-6GHz	101012	03/AUG/15	Rohde & Schwarz n° 1100-104227
Network analyser	Keysight ENA 5071C 9kHz-6.5GHz	MY46110058	03/AUG/15	Keysight n° 1-7095622787-1
Network analyser	Keysight ENA E5080A 9kHz-6.5GHz	MY55100382	03/AUG/15	Keysight n° 1-4155187- 4968297-1
Power meter	Rohde & Schwarz NRVS 1020.1809K02	10486	04/AUG/15	Rohde & Schwarz n° 1100-104225
Power sensor	Rohde & Schwarz NRV-Z51 857.9004.02 DC-18GHz	833490/0005	03/AUG/15	Rohde & Schwarz n° 1100-104226
Power meter	Rohde & Schwarz NRP-Z91 1168.8004.02 9kHz-6GHz	102568	19/FEB/16	Rohde & Schwarz n° 10-300379402
Spectrum analyser	Keysight N9000A 9kHz-26.5GHz/CXA	MY53030118	31/JUL/15	Keysight n° 1-7095622883-1
Network analyser	Keysight ENA 5071C 9kHz-6.5GHz	MY46520441	03/AUG/15	Keysight n° 1-7095622842-1
Power meter	Rohde & Schwarz NRP-Z91 1168.8004.02 9kHz-6GHz	100063	03/AUG/15	Rohde & Schwarz n° 1100-104230

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