



**SUMMARY TEST DATA
ON
SDLVA-2020-OPT112**

PL42085/2345

Customer: _____ Tested By: **EA Valdez**
SO No: _____ Temperature: **+25°C**
Model No: **SDLVA-2020-OPT112** Date: **11/09/23**
Serial No: **PL42085/2345** Drawing No: **27623423** Rev: **B1**

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	1 – 12 GHz	1 – 12 GHz	
2	Frequency Flatness	±2.0 dB Typical, ±2.5 dB Max	1.1 dB	
3	Tss	-65 dBm Max	<-72 dBm	
4	VSWR	3.0:1 Max (@-20 dBm Input)	1.64:1	
5	Logging Range	-65 to -35 dBm	-65 to -35 dBm (See Plot)	
6	Log Linearity	±1.75 dB Max (-65 to -35 dBm)	-0.94 dB (See Plot)	
7	Log Slope	5 LSB / dB	5.80 / dB	
8	Rise Time (10% to 90%)	20 ns Max	<20 ns	
9	Recovery Time	200 ns Max	<200 ns	
10	Output Power	+10 dBm ±2.5 dB Typ	12.4 dBm	
11	Power Supply	+12V @ 700 mA Max -12V @ 200 mA Max	+12V @ 560 mA -12V @ 40 mA	
12	ADC Clock Rate	100 MHz	100 MHz	
13	Digital Log Video Output	8-bit LVTTTL	Pass	
14	LVTTTL Logic Output	3.3 V Typical	Pass	
15	LVTTTL Comparator Delay	50 ns Typical	Pass	
16	LVTTTL Threshold Level	Adjustable (Analog) -60 dBm ±3 dB Typical Lowest Level	-65 dB	

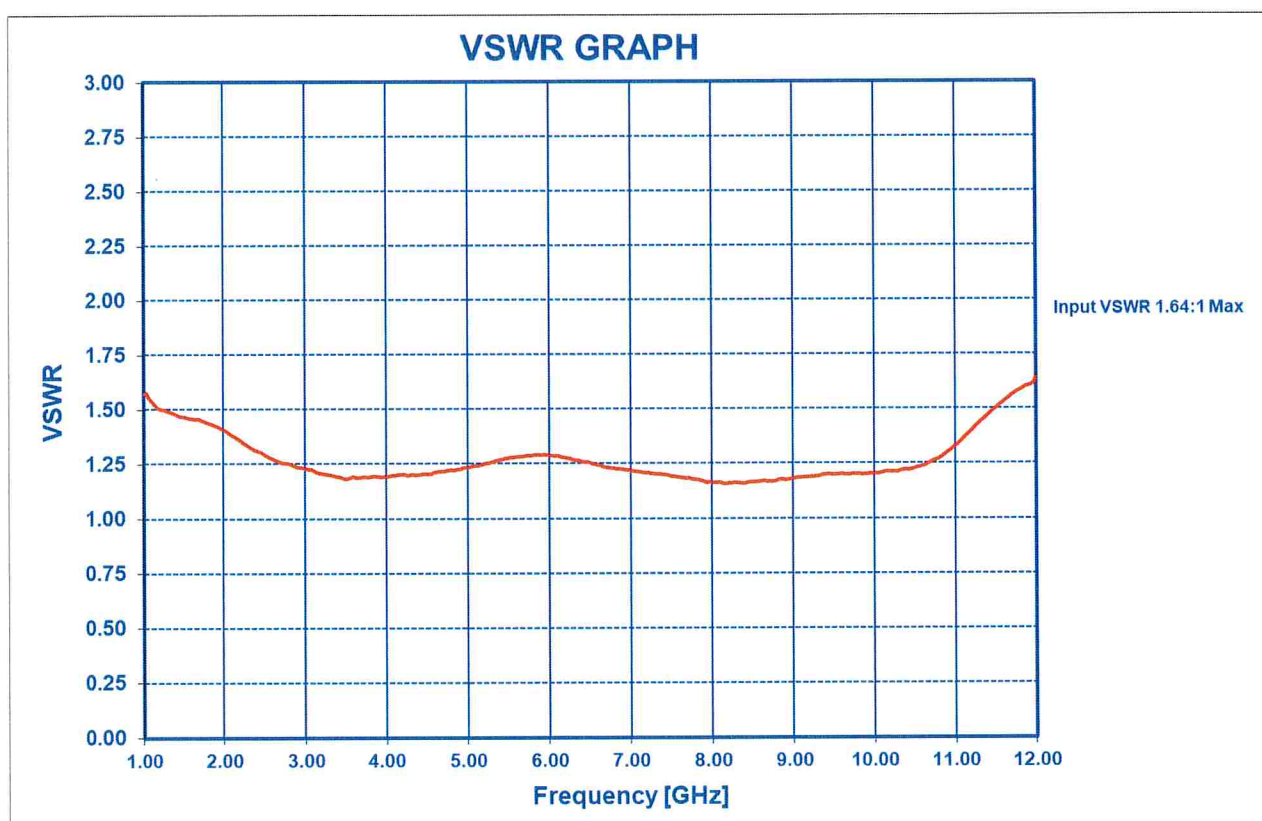
QA/QC Approval: Date: 11-10-23



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VSWR PLOT

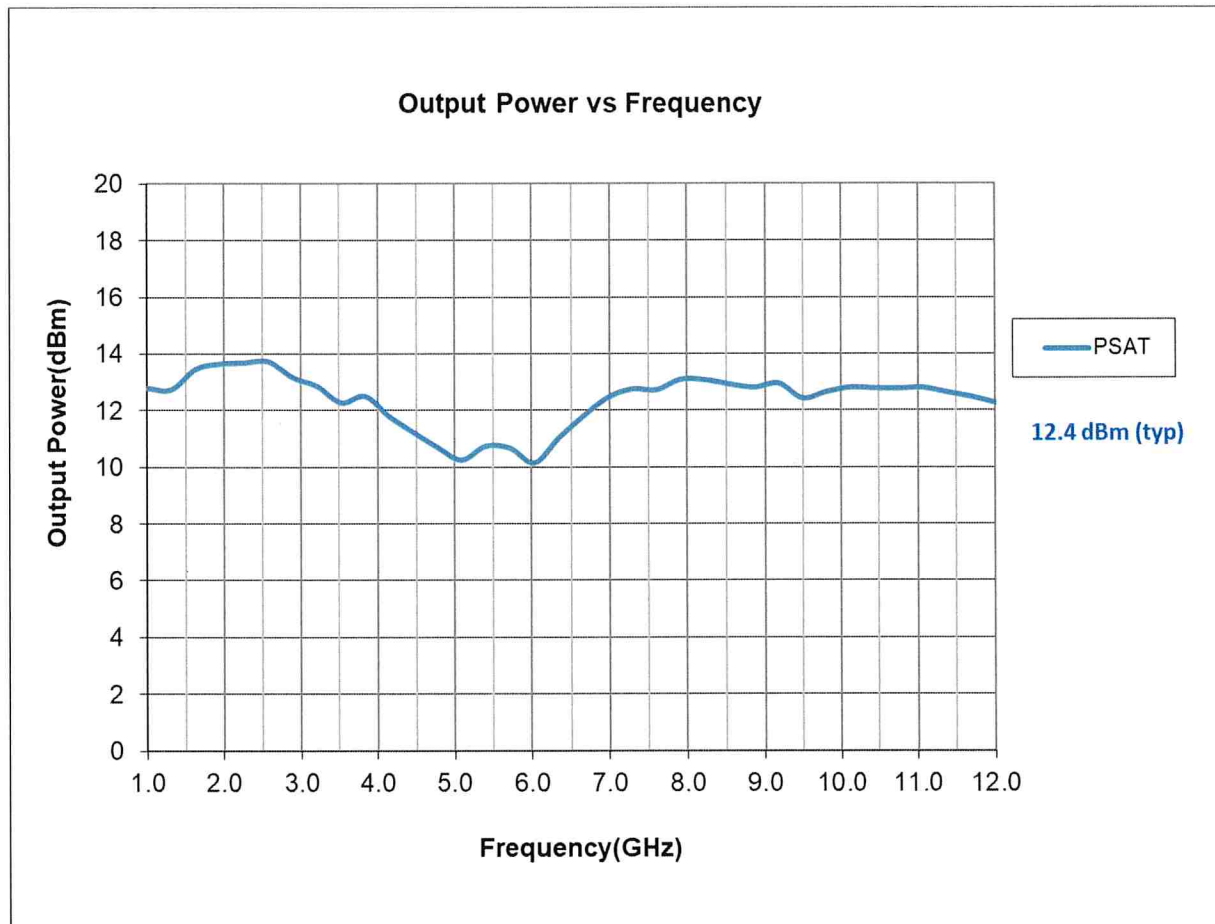




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OUTPUT POWER PLOT





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TRANSFER RESPONSE – DATA

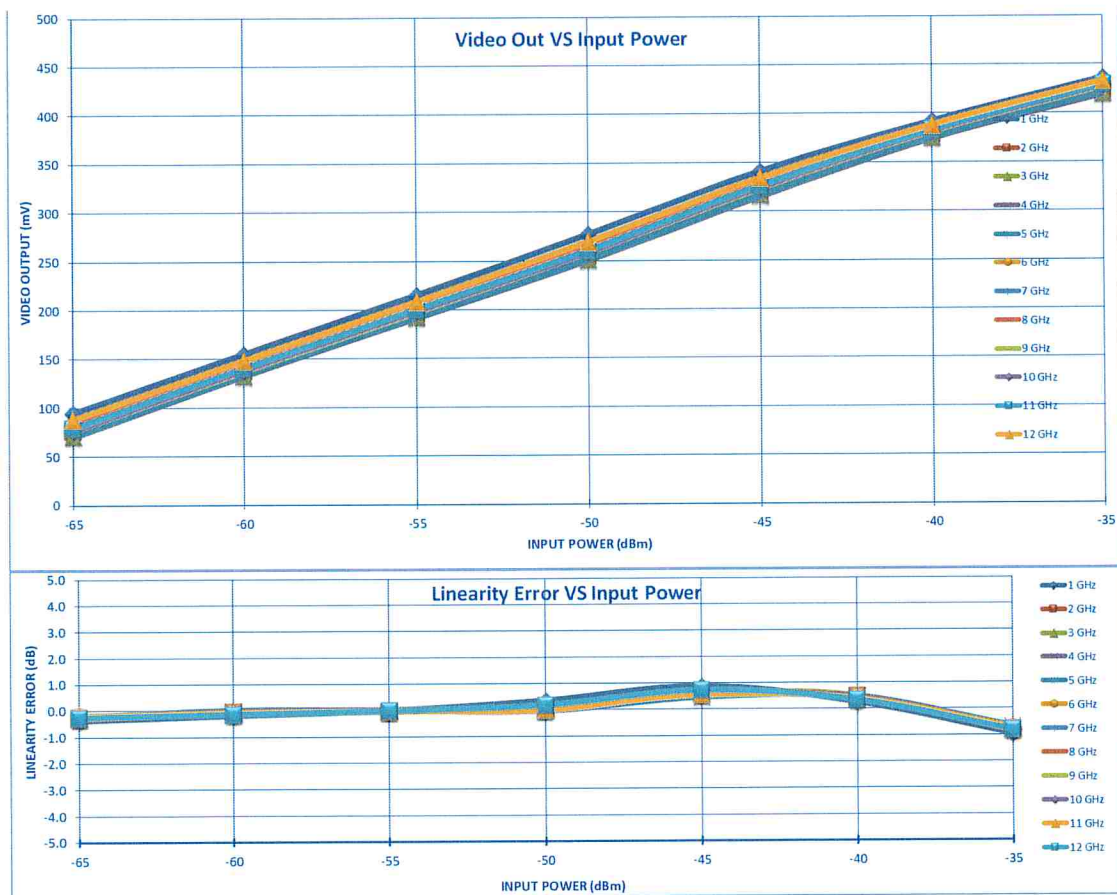
LOG TRANSFER VS FREQUENCY @ 25 °C MODEL: SDLVA-2020-OPT112 TESTED BY: EA Valdez SERIAL No. : PL42085									
Frequency									RF Input Power (dBm)
1 GHz	INTERCEPT (mV)	853	95	155	215	277	341	392	436
	SLOPE (mV/dB)	11.6	-4	-2	0	4	10	3	-11
			-0.35	-0.18	0.00	0.35	0.87	0.26	-0.94
2 GHz	INTERCEPT (mV)	843	76	137	196	255	321	378	422
	SLOPE (mV/dB)	11.8	-3	-1	0	0	7	6	-9
			-0.23	-0.04	-0.02	0.00	0.62	0.47	-0.79
3 GHz	INTERCEPT (mV)	843	72	133	193	252	318	376	420
	SLOPE (mV/dB)	11.8	-3	-1	0	0	7	6	-9
			-0.23	-0.07	0.01	0.00	0.58	0.49	-0.79
4 GHz	INTERCEPT (mV)	841	70	132	191	250	315	374	419
	SLOPE (mV/dB)	11.8	-3	0	0	0	6	6	-8
			-0.24	0.01	0.00	-0.01	0.49	0.48	-0.72
5 GHz	INTERCEPT (mV)	843	71	133	192	251	316	375	421
	SLOPE (mV/dB)	11.8	-3	0	0	0	5	5	-8
			-0.22	0.01	-0.01	-0.02	0.46	0.45	-0.67
6 GHz	INTERCEPT (mV)	850	82	142	202	261	327	384	429
	SLOPE (mV/dB)	11.8	-2	-1	0	0	7	5	-9
			-0.19	-0.10	-0.01	0.00	0.60	0.44	-0.75
7 GHz	INTERCEPT (mV)	853	86	147	207	267	333	387	432
	SLOPE (mV/dB)	11.7	-3	-1	0	1	9	4	-10
			-0.29	-0.10	0.01	0.12	0.74	0.34	-0.83
8 GHz	INTERCEPT (mV)	851	84	145	205	265	330	386	430
	SLOPE (mV/dB)	11.8	-3	-1	0	1	8	5	-10
			-0.28	-0.09	0.02	0.12	0.65	0.42	-0.84
9 GHz	INTERCEPT (mV)	852	76	137	197	258	323	381	427
	SLOPE (mV/dB)	11.9	-2	-1	0	1	6	5	-9
			-0.20	-0.08	-0.04	0.08	0.54	0.41	-0.72
10 GHz	INTERCEPT (mV)	854	76	138	198	258	324	382	428
	SLOPE (mV/dB)	11.9	-3	0	0	0	7	5	-9
			-0.23	-0.04	-0.01	0.02	0.56	0.42	-0.72
11 GHz	INTERCEPT (mV)	853	79	140	200	260	326	383	429
	SLOPE (mV/dB)	11.9	-2	-1	0	0	7	5	-9
			-0.21	-0.07	-0.02	0.04	0.60	0.40	-0.73
12 GHz	INTERCEPT (mV)	853	88	148	208	269	334	388	433
	SLOPE (mV/dB)	11.7	-3	-2	0	2	9	4	-10
			-0.26	-0.14	-0.02	0.18	0.73	0.34	-0.83
Average Slope			1.1	1	1	1.1	1.1	0.8	0.7
Flatness ± dB			70	132	191	250	315	374	419
Average Offset @-65dBm			95	155	215	277	341	392	436



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TRANSFER RESPONSE – PLOT





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DIGITAL RESPONSE

Digital Output Vs. Input Power Level				
Input Power Level	1 GHz	5 GHz	9 GHz	12 GHz
-65 dBm	30	24	26	2C
-60 dBm	4F	43	45	4B
-55 dBm	6D	61	64	6A
-50 dBm	8D	80	83	89
-45 dBm	AD	A1	A4	AA
-40 dBm	C7	BF	C2	C5
-35 dBm	DE	D6	D9	DC
	Digital Code (HEX)	Digital Code (HEX)	Digital Code (HEX)	Digital Code (HEX)