



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

PL42388/2341

Customer: _____ Tested By: **EA Valdez**
SO No: _____ Temperature: **+25°C**
Model No: **SDLVA-2020-OPT112** Date: **10/13/23**
Serial No: **PL42388/2341** 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	1.9 dB	
3	Tss	-65 dBm Max	<-72 dBm	
4	VSWR	3.0:1 Max (@-20 dBm Input)	1.71:1	
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	5.66 / 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	15.2 dBm	
11	Power Supply	+12V @ 700 mA Max -12V @ 200 mA Max	+12V @ 500 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:

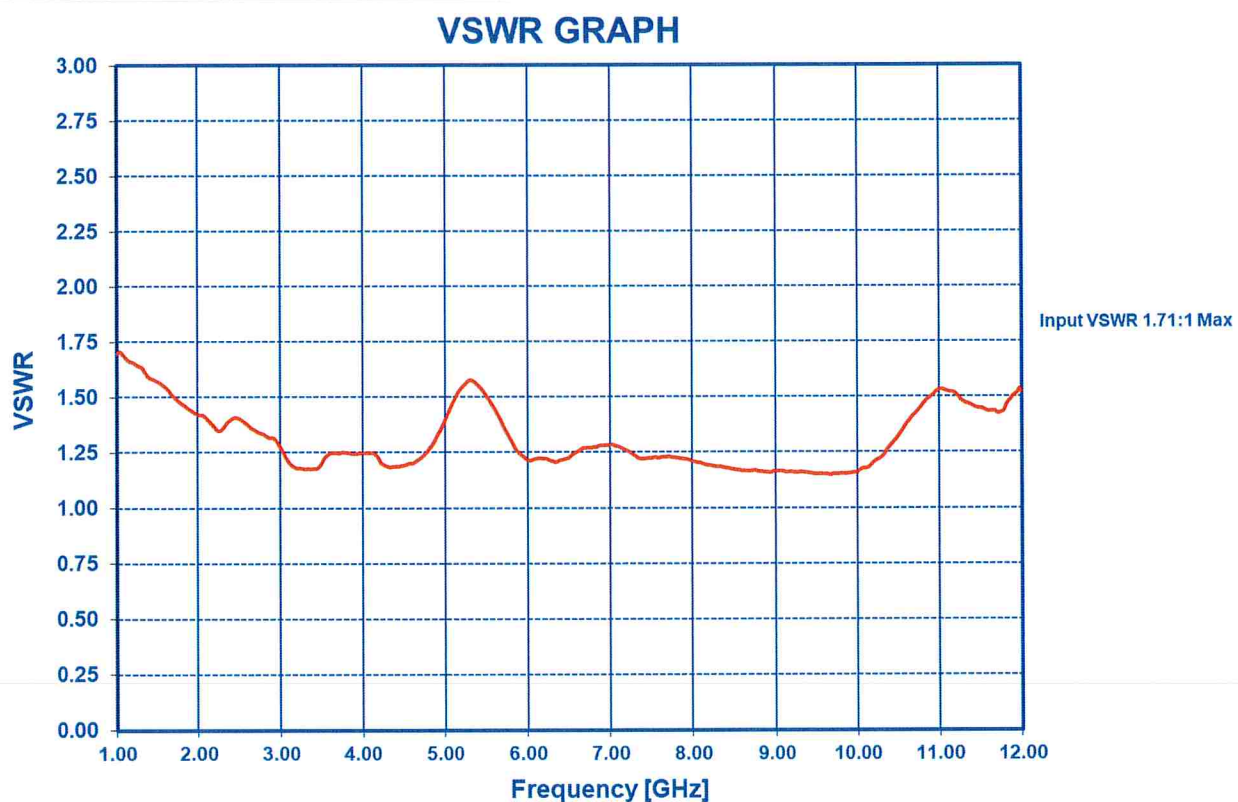
10-16-23



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VSWR PLOT

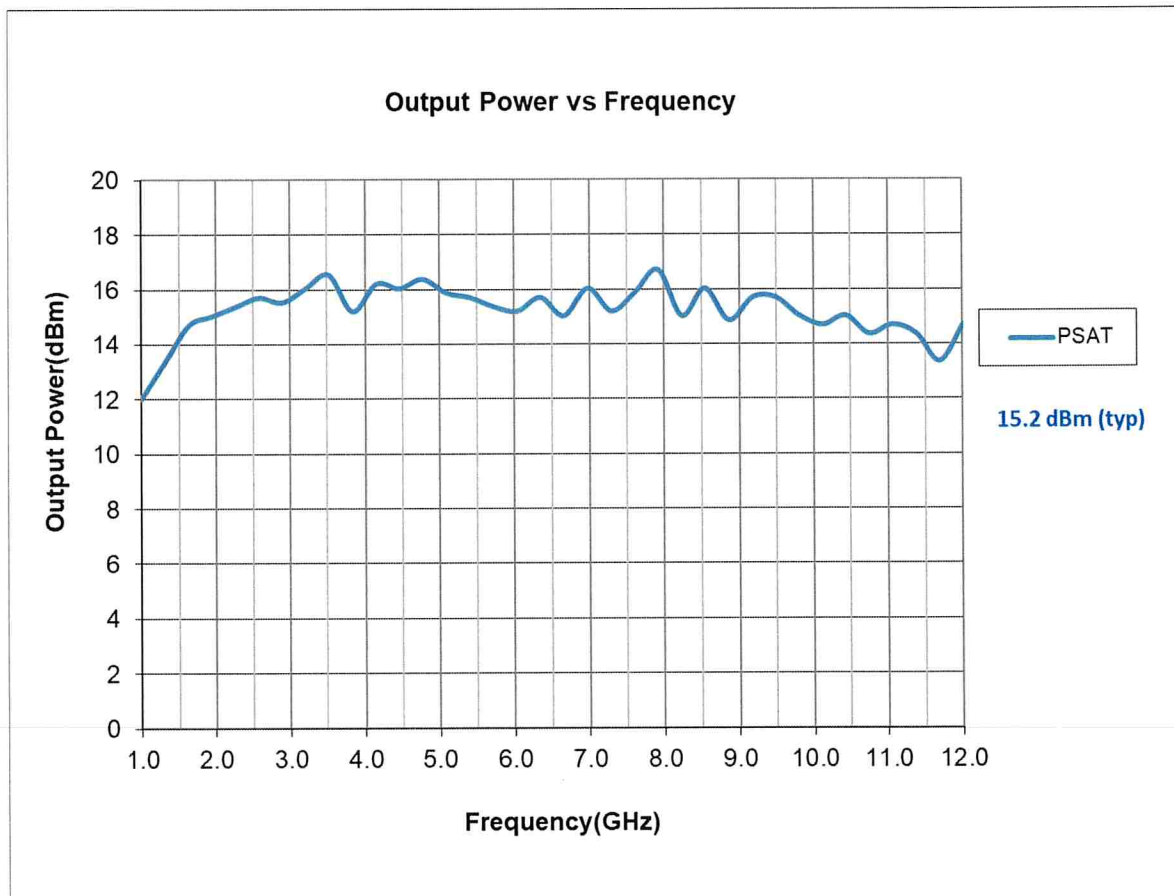




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OUTPUT POWER PLOT





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TRANSFER RESPONSE – DATA

LOG TRANSFER VS FREQUENCY @ 25 °C
MODEL: SDLVA-2020-OPT112
TESTED BY: EA Valdez
SERIAL No. : PL42388



Frequency

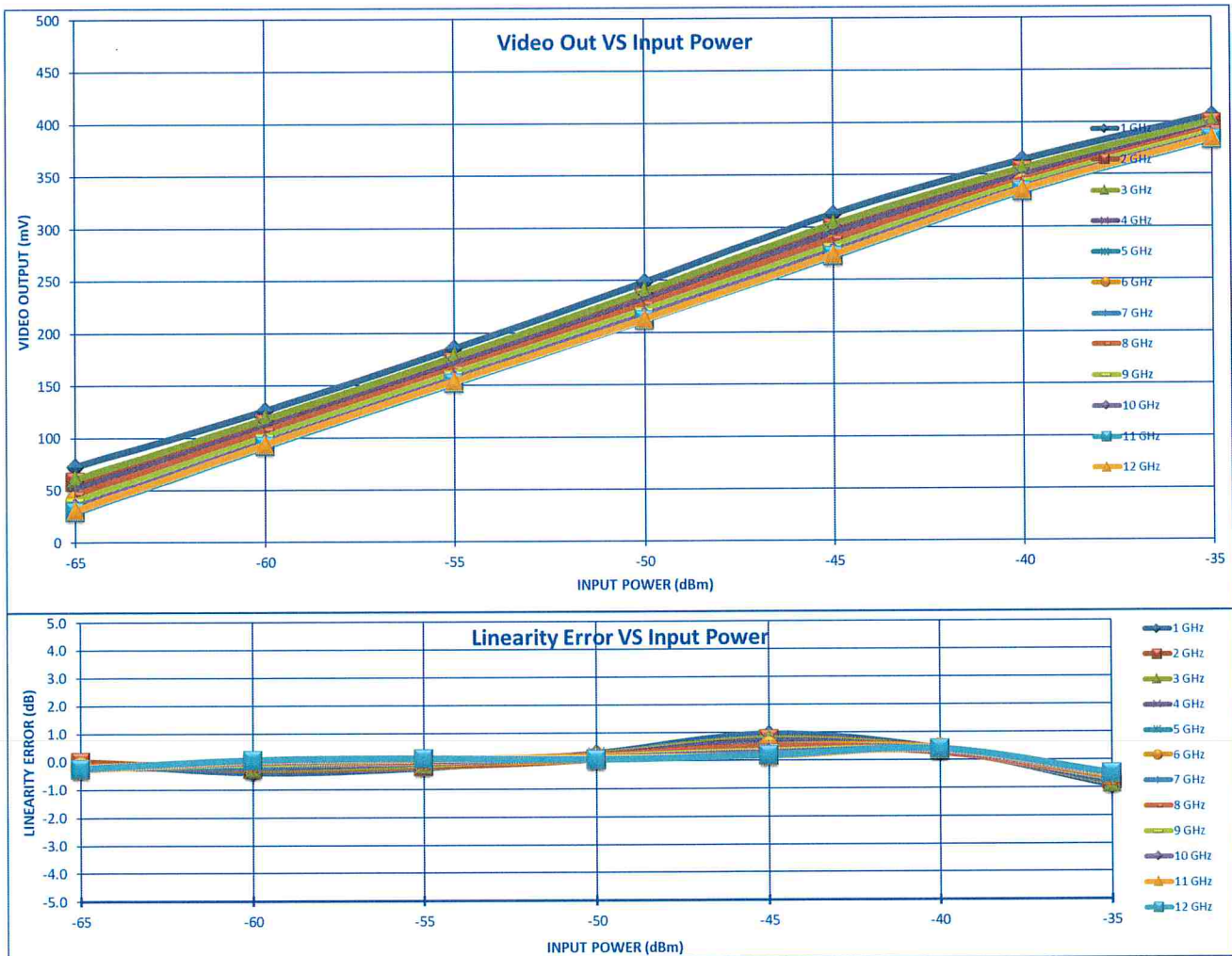
			-65	-60	-55	-50	-45	-40	-35	RF Input Power (dBm)	
1 GHz	INTERCEPT (mV)	818	73	126	185	248	313	364	406	Measured Value (mV)	
	SLOPE (mV/dB)	11.5	0	-5	-3	3	11	5	-11	Error (mV)	
			-0.02	-0.39	-0.24	0.26	0.94	0.39	-0.94	0.94	
2 GHz	INTERCEPT (mV)	813	58	113	172	233	299	353	398	Measured Value (mV)	
	SLOPE (mV/dB)	11.6	0	-3	-2	1	9	5	-9	Error (mV)	
			0.00	-0.26	-0.19	0.06	0.74	0.39	-0.74	0.74	
3 GHz	INTERCEPT (mV)	815	61	118	177	239	303	356	400	Measured Value (mV)	
	SLOPE (mV/dB)	11.6	-2	-3	-1	3	9	4	-10	Error (mV)	
			-0.16	-0.23	-0.13	0.23	0.77	0.35	-0.84	0.84	
4 GHz	INTERCEPT (mV)	811	52	110	170	231	295	349	394	Measured Value (mV)	
	SLOPE (mV/dB)	11.6	-2	-2	-1	2	8	4	-9	Error (mV)	
			-0.19	-0.20	-0.05	0.20	0.70	0.34	-0.79	0.79	
5 GHz	INTERCEPT (mV)	807	46	105	165	225	288	345	390	Measured Value (mV)	
	SLOPE (mV/dB)	11.7	-2	-2	0	2	6	5	-9	Error (mV)	
			-0.19	-0.14	0.00	0.13	0.53	0.41	-0.74	0.74	
6 GHz	INTERCEPT (mV)	807	40	100	159	219	283	341	387	Measured Value (mV)	
	SLOPE (mV/dB)	11.8	-2	-1	-1	1	6	5	-8	Error (mV)	
			-0.17	-0.07	-0.05	0.05	0.49	0.42	-0.67	0.67	
7 GHz	INTERCEPT (mV)	809	42	103	162	223	285	343	390	Measured Value (mV)	
	SLOPE (mV/dB)	11.8	-3	0	0	2	5	4	-8	Error (mV)	
			-0.23	-0.04	-0.03	0.16	0.43	0.36	-0.65	0.65	
8 GHz	INTERCEPT (mV)	810	46	107	166	227	289	345	393	Measured Value (mV)	
	SLOPE (mV/dB)	11.7	-3	-1	0	2	6	3	-7	Error (mV)	
			-0.26	-0.05	-0.01	0.20	0.49	0.27	-0.63	0.63	
9 GHz	INTERCEPT (mV)	808	40	101	161	221	282	341	389	Measured Value (mV)	
	SLOPE (mV/dB)	11.8	-3	-1	1	2	4	4	-7	Error (mV)	
			-0.23	-0.05	0.05	0.15	0.33	0.34	-0.58	0.58	
10 GHz	INTERCEPT (mV)	807	34	96	156	216	277	337	386	Measured Value (mV)	
	SLOPE (mV/dB)	11.9	-3	0	1	1	3	4	-6	Error (mV)	
			-0.24	-0.01	0.06	0.12	0.27	0.33	-0.53	0.53	
11 GHz	INTERCEPT (mV)	806	29	92	152	212	272	334	383	Measured Value (mV)	
	SLOPE (mV/dB)	11.9	-3	0	1	1	2	4	-6	Error (mV)	
			-0.26	0.04	0.08	0.12	0.16	0.37	-0.51	0.51	
12 GHz	INTERCEPT (mV)	807	31	94	154	213	274	336	385	Measured Value (mV)	
	SLOPE (mV/dB)	11.9	-3	1	1	1	2	5	-6	Error (mV)	
			-0.25	0.05	0.09	0.05	0.17	0.38	-0.50	0.50	
Average Slope											
Flatness ± dB			1.9	1.5	1.4	1.5	1.7	1.3	1		
Average Offset @-65dBm			29	92	152	212	272	334	383		
			73	126	185	248	313	364	406		



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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	25	17	14	0F
-60 dBm	40	35	33	2F
-55 dBm	5E	54	52	4E
-50 dBm	7E	72	70	6C
-45 dBm	9F	92	8F	8B
-40 dBm	B9	AF	AD	AB
-35 dBm	CF	C6	C6	C4
	Digital Code (HEX)	Digital Code (HEX)	Digital Code (HEX)	Digital Code (HEX)