



This system was tested at 2500-4000 MHz and 4 kW CW per customer requirement.  
The system itself designed to perform at 2000-4000 MHz and 5 kW.

Date	Job Number	Serial No.	SKU No.	Model	Rev.	Frequency	Output Power	Gain	Customer	PO
January 20, 2023	0	1001	2245-001	2245	14	2500-4000	4kW	68	0	0

Power Amplifier Final Test	Test	Verify	QA	Approve
	D.Wike			

**ELECTRICAL SPECIFICATIONS @ 208V<sub>AC</sub> 3-Phase(delta), 25°C ambient, 50Ω System**

Parameter	Specifications						Frequency (MHz)											P/F
	Symbol	Min	Typ	Max	Unit	Notes	2500	2650	2800	2950	3100	3250	3400	3550	3700	3850	4000	
Operating Frequency - BW	BW	2500		4000	MHz	Record	√	√	√	√	√	√	√	√	√	√	√	
P <sub>rated</sub> Output - CW (η)	P <sub>rated</sub>	66.02			dBm	Record	66.05	66.05	66.09	66.03	66.02	66.05	66.05	66.09	66.05	66.05	66.04	
Power Output- CCDF method (§)	P <sub>SAT</sub>		66.99		dBm	Record	68.67	68.97	69.47	69	68.68	67.98	69.78	68.77	69.98	69.95	69.25	
Power Output @ 1dB Gain Compression (§)	P <sub>1dB</sub>	65.5	66.9		dBm	Record	67.15	67.02	67.58	67.28	66.87	65.79	66.56	65.65	67.96	67.77	67.08	
Power Gain- CW (η)	G	68	74.5		dB	Record	76.82	77.02	77.51	77.62	75.52	74.52	74.27	70.17	73.48	73.37	70.62	
Sample Port @ 4kW	P <sub>sample</sub>		10		dBm	Record	10.2	10.1	9.51	9.75	9.5	9.5	8.9	9.3	9.3	9.6	9.5	
Min. P <sub>in</sub> for P <sub>OUT</sub> = 4kW (66.02) (η)	P <sub>in</sub>	0	9.5		dBm	Record	-10.8	-11	-11.49	-11.6	-9.5	-8.5	-8.25	-4.15	-7.46	-7.35	-4.6	
Small Signal Gain Flatness (P <sub>in</sub> = -30dBm)	ΔG			±3.5	dB	Plot 1	-	-	-	-	-	-	-	-	-	-	-	
Input Return Loss	S <sub>11</sub>			-10	dB	Plot 1	-	-	-	-	-	-	-	-	-	-	-	
Gain @ Shutdown Condition, P <sub>IN</sub> = 0dBm (†)	G <sub>SD</sub>			35	dB	Plot 3	-	-	-	-	-	-	-	-	-	-	-	
Gain Adjustment Range	VVA	20			dB	Plot 2	-	-	-	-	-	-	-	-	-	-	-	
Spurious Signals	Spur		-70	-60	dBc	Record	<-70	<-70	<-70	<-70	<-70	<-70	<-70	<-70	<-70	<-70	<-70	
Inter-modulation (Third Order Intercept Point) 2-Tones @ 60dBm/Tone, Δ=1MHz	IM3			-25	dBc	Record	-31.8	-30.8	-31.7	-33	-30.9	-28.3	-29.2	-27.2	-31.4	-29.6	-28	
Noise Figure @ Max Gain 2500-4000MHz	NF			20	dB	DVT	16	15.7	16	16	16.6	16.6	18	19	17.8	19	19.5	
Noise Power Output (NPO)	Enabled			-70	dBm/Hz	Record	-80											
	Disabled			-160	dBm/Hz	Record	-165											P (X)
Harmonics @ nominal Pout	2 <sup>nd</sup>		-40	-25	dBc	Record	-39.8	-62.9	-55	-54	-42.5	-51.7	-55	-58.5	-74	-58	-75	
	3 <sup>rd</sup>		-40	-25	dBc	Record	<-75	<-75	<-75	-69	-74	<-75	<-75	<-75	-75	<-75	<-75	
	4 <sup>th</sup>		-40	-25	dBc	Record	<-75	<-75	<-75	<-75	<-75	<-75	<-75	<-75	<-75	<-75	<-75	
	5 <sup>th</sup>		-40	-25	dBc	Record	<-75	<-75	<-75	<-75	<-75	<-75	<-75	<-75	<-75	<-75	<-75	<-75
Switching Time, 1KHz TTL, P <sub>IN</sub> = 0dBm	T <sub>ON</sub>			3	μSec	Record	1.1											
	T <sub>OFF</sub>			3	μSec	Record	0.36											

η CW measurement is performed in MGC Mode (Manual Gain Mode)  
 § P<sub>1dB</sub> measurement is performed using CCDF method (IS95 signal)  
 † Gain @ Cold Stand-By Condition ≤ 35dB (P<sub>IN</sub> = 0dBm)  
 X Spectrum Analyzer noise floor -169.7dBm/Hz, uses internal preamp

