

**ELECTRICAL SPECIFICATIONS @ 230VAC Single-phase, 25°C ambient, 200W System, MGC mode unless specified otherwise**

Parameter	Specifications					Frequency (MHz) & Test Results													
	Symbol	Min	Typ	Max	Unit	Notes	500	700	900	1100	1300	1500	1700	1900	2100	2300	2500	Pass/Fail	
Operating Frequency Range	BW	500		2500	MHz	Plot 1 (pg4)	x	x	x	x	x	x	x	x	x	x	x	Pass	
Input Frequency Hopping f1=2000MHz f2=6000MHz minimum dwell =20uS	F <sub>1-2</sub>	100			µSec	DVT Only	x	x	x	x	x	x	x	x	x	x	x	-	
Output Power CW @ 200W (into 2:1 VSWR)	P <sub>out</sub>	53			dBm	Record	53.08	53.05	53.04	53.04	53.05	53.07	53.06	53.08	53.05	53.03	53.05	Pass	
Power Reporting Accuracy	P <sub>FWD</sub>			±1.5	dB	Record (see pg3)	x	x	x	x	x	x	x	x	x	x	x	Pass	
	P <sub>REV</sub>			±1.5	dB		x	x	x	x	x	x	x	x	x	x	x	x	Pass
Sample Port @ P <sub>OUT</sub> = 53 dBm	P <sub>sample</sub>	-5	0	5	dBm	Record	0.5	0.4	0.4	0.3	0.4	0.7	0.5	0.2	0.1	0.2	0.3	Pass	
Input Power for rated P <sub>OUT</sub> = 200W /CW-MGC MODE minimum VVA attenuation)	P <sub>IN</sub>	-5		5	dBm	Record	-11.5	-9.5	-8.6	-11.5	-11	-9.6	-7.6	-7.2	-11.3	-8.1	-9.6	Pass	
MGC Gain Flatness, P <sub>N</sub> = -30dBm	ΔG			±2.5	dB	Plot 1 (pg4)	x	x	x	x	x	x	x	x	x	x	x	Pass	
Leveled ALC Flatness @ 53dBm	ΔALC			±1.5	dB	Plot 2 (pg4)	x	x	x	x	x	x	x	x	x	x	x	Pass	
Gain Adjustment Range	VVA	13			dB	Plot 3 (pg4)	x	x	x	x	x	x	x	x	x	x	x	Pass	
Wide Band Noise Level, beyond 3MHz from carrier, including phase noise	N <sub>OWIDE</sub>			-50	dBm/Hz	DVT Only	x	x	x	x	x	x	x	x	x	x	x	-	
RF Noise in transmission mode @ 53dB Gain @ 5MHz from carrier inc phase noise	NO			-75	dBm/Hz	DVT Only	x	x	x	x	x	x	x	x	x	x	x	-	
Input Return Loss	S <sub>11</sub>			-10	dB	Plot 4 (pg4)	x	x	x	x	x	x	x	x	x	x	x	Pass	
Inter-modulation (2nd Order) 2-Tones @ 47dBm/Tone	IMD <sub>2nd</sub> Δ = 10kHz			-12	dBc	Record	-32.18	-12.63	-13.03	-22.2	-22.51	-74.79	-83.87	-84.44	-84.39	-84.02	-85.15	Pass	
	IMD <sub>2nd</sub> Δ = 1MHz			-12	dBc	Record	-32.32	-12.57	-13	-22.18	-22.45	-74.78	-84.55	-84.99	-82.42	-84.5	-83.8	Pass	
Inter-modulation (3rd Order) 2-Tones @ 47dBm/Tone	IMD <sub>3rd</sub> Δ = 10kHz			-23	dBc	Record	-23.18	-28.42	-26.45	-26.08	-27.19	-27.19	-26.98	-27	-28.99	-28.09	-29.38	Pass	
	IMD <sub>3rd</sub> Δ = 1MHz			-23	dBc	Record	-24.23	-45.59	-34.16	-29.55	-29.84	-33.67	-33.43	-30.64	-32.46	-32.09	-33.05	Pass	
Out-of-Band IMD Distortion Level 2-Tones @ 47dBm/Tone Δ = 1MHz	>3000MHz			-50	dBc	Record	<-80	<-80	<-80	<-80	<-80	<-80	<-80	<-80	<-80	<-80	<-80	Pass	
In-Band Harmonics @ P <sub>out</sub> = 200W CW	2 <sup>nd</sup>	-15	-12		dBc	Record	-30.27	-14.75	-13.51	-22.33	-23.56	-79.95	-84.6	-87.39	-88.3	-90.03	-89.88	Pass	
	3 <sup>rd</sup>	-19	-13		dBc		-27.68	-37.37	-39.06	-92.54	-91.53	-84.13	-91.14	-86.88	-90.8	-91.36	-91.22	Pass	
Out-of-Band Harmonic Distortion Level @ P <sub>out</sub> = 200W	>3000MHz			-50	dBc	Record	-93.24	-89.85	-93.48	-92.54	-93.27	-77.03	-92.88	-86.88	-90.8	-91.36	-91.22	Pass	
Spurious Signals	Spur	-70	-60		dBc	Record	-76.4	x	x	x	x	-69.7	x	x	x	x	-62.1	Pass	
AM Modulation 85% depth FC = 1000MHz @ 56W average (~200W peak)	3kHz			-20	dBc	Record	-21.5												Pass
Switching Time, 1KHz TTL, PIN = 0dBm	T <sub>ON 90%</sub>			10	µSec	Plot 5 (pg5)	0.5												Pass
	T <sub>OFF 10%</sub>			10			Plot 6 (pg5)	0.8											
Operating Voltage (Single phase 50/60Hz)	V <sub>AC</sub>	207	230	253	Volt	Verify		√											
Power Consumption @ Cold Standby	I <sub>SD</sub>			850	VA	Record	205.17												Pass
Power Consumption @ Hot Standby	I <sub>SB</sub>			1200	VA	Record	518.13												Pass
Power Consumption @ P <sub>OUT</sub> = 200W	P <sub>D</sub>			1800	VA	Record	900	1161	1167	1205	1250	1504	1546	1523	1427	1637	1474	Pass	
Power Factor @ P <sub>OUT</sub> = 200W	PF	0.8				Record	0.938	0.960	0.961	0.963	0.963	0.970	0.972	0.972	0.969	0.973	0.971	Pass	
AC Power THD (voltage / current)	THD			5	%	Record	1.574	1.610	1.645	1.636	1.629	1.673	1.673	1.654	1.617	1.689	1.643	Pass	
NTE Test, Limiter = 53.5dBm (AGC mode)	P <sub>OOD</sub>			54.5	dBm	Record P <sub>OUT</sub>	53.6	x	x	x	x	54.5	x	x	x	x	53.4	Pass	
Input Overdrive - Shut down	P <sub>IOD</sub>			8	dBm	Verify	√												Pass
Thermal Overload @ device flange - Shut down	T <sub>SD</sub>			60	°C	DVT Only	√												-
Reflected Power Reduction Point (Approx. 3.5:1 VSWR trip point, max reduction -6dB)	VSWR			>3:1	VSWR	Verify	√												Pass

## Power Reporting Accuracy

Forward Power, 50 Ohm Load (ALC MODE)							
Frequency (MHz)	Measuremnt Method	PIN =0dBm	PIN =0dBm	PIN =0dBm	PIN =0dBm	Limits	Pass/Fail
500	External Test Equipment	52.26	49.27	46.31	44.26	±1.5 dB	Pass
	Ethernet Reporting	53	49.98	46.97	44.85		
	Pass/Fail						
1500	External Test Equipment	52.91	49.97	47.06	44.98	±1.5 dB	Pass
	Pass/Fail						
2500	External Test Equipment	52.37	49.41	46.47	44.42	±1.5 dB	Pass
	Pass/Fail	P	P	P	P		

Reverse Power, Open Load (AGC MODE)						
Frequency (MHz)	Measuremnt Method	PIN =-10dBm	PIN =-9dBm	PIN =-8dBm	PIN =-7dBm	
500	External Test Equipment FWD PWR	41.8	42.68	43.51	44.55	
	Ethernet Reporting FWD PWR	42.95	43.89	44.85	45.85	
	Ethernet Reporting REV PWR	42.01	42.94	43.67	44.73	
1500	External Test Equipment FWD PWR	42.45	43.36	44.22	45.25	
	Ethernet Reporting FWD PWR	42.99	44.01	44.79	45.72	
	Ethernet Reporting REV PWR	41.56	42.46	43.31	44.29	
2500	External Test Equipment FWD PWR	44.19	45.05	45.87	46.88	
	Ethernet Reporting FWD PWR	43.05	43.87	44.79	45.74	
	Ethernet Reporting REV PWR	41.68	42.68	43.4	44.47	

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PERFORMANCE PLOTS

