



Characterization and Data

Customer Address: Rental Unit

Certificate #: 2306291CC

Product: Solid State Amplifier

Manufacturer: The EMC Shop
 Model: SS1G-1250
 Serial #: 10001

Notes: Frequency Range: 80 MHz - 1 GHz
 CSV Files available upon request

Date of Characterization: 6/29/2023

Next Characterization: *

****The next characterization date is defined by the equipment user/owner.***

The above equipment was tested and found to be within the Manufacturer's specification. The results of the tests performed are held on file at TheEMCShop.com; see the comments below. The Characterization was carried out in accordance with the general requirements of IEC 61000-4-3 using laboratory standards which are traceable to the National Institute of Standards and Technology (NIST) except where none exist. Tests are carried out in environmental conditions controlled appropriately to the instrument's specification.

Calibration Equipment		
Model	Description	Due Date
8720ES	Network Analyzer	11/12/2023
ZV-Z21	Calibration Kit	1/26/2024

Ambient Conditions of Laboratory

Temperature (°C): 20.5
 Relative Humidity (%): 44

Technician: Caleb Crites

Technician Signature: Caleb B Crites



ELECTRICAL SPECIFICATIONS: -20C □, 25C □, 75C □

No.	PARAMETER	SPECIFICATION	TEST RESULTS (MHz)					NOTES	P/F
			80	187	471	799	1000		
1	Operating Frequency - Plot 3dB BW	80 - 1000 MHz	x	x	x	x	x	Plot 1,2	P
2	Output Power @ Rated Input	1300W Min	2000+	2000+	2000+	1352.1	1345.9	Plot 2 Record	P
3	Output Power @ 1dB G.C.P.	700W Min	2000+	2000+	1803.0	1185.8	724.4	Plot 1 Record	P
4	Power Gain	61dB Min	x	x	x	x	x	Plot 1	P
5	Small Signal Gain Flatness	Ref. Only(dB)	x	x	x	x	x	Plot 1	P
6	Input Power Flatness at Rated Pout	Ref. Only(dBm)	-4.9	-6.7	-8.2	-4.4	-1.3	Record	P
7	Power Gain Flatness @ rated input power	4dB p-p Max	63.0+	63.0+	63.0+	61.31	61.29	Plot 2	P
8	Input Return Loss	S11: 10dB Min	x	x	x	x	x	Plot 1,2	P
9	Inter-modulation Distortion (3rd Order Intercept) 2-tones @ 51dBm/Tone, Δ = 1MHz	IMD: -20dBc Typ	-24.60	-22.29	-25.09	-26.18	-19.73	Record	P
		IP3: +61dBm Typ	63.30	62.15	63.55	64.09	60.87	Calculated	P
10	Harmonics @ rated output power	2 nd : -30dBc Typ	-37.01	-45.10	-36.58	-53.63	-62.81	Record	P
11		3 rd : -20dBc Typ	-23.32	-39.89	-20.27	-67.07	-62.90		P
12	Spurious Signals (Non-harmonics)	-60dBc Max	x	x	x	x	x	Record	P
13	Noise Figure	Ref. Only(dB)	17.81	17.12	17.11	16.93	17.07	Record	P
14	Operating Voltage	120/208 VAC 10%, 60Hz, 3 Phase	Verified					Verify	P
15	Power Consumption @ Rated Power	10KW Max	5329.5	5102.9	5769.5	8558.0	7630.7	Record	P
16	Idle Power Consumption	Ref. Only(W)	1549.9					Record	P
17	Power Consumption @ Shutdown	Ref. Only(W)	895.4					Record	P
18	Gain Adjustment Range	30dB	x	x	x	x	x	Plot 3	P
19	Input Overdrive @ +5dBm Max	Pout W	x	x	x	x	x	Record	N/A
20		Pd W	x	x	x	x	x		
CONTROLLER FUNCTION									
21	Over Temperature Alarm	70 - 75°C	Verified					Verify	P
22	Module Operating mode Test	Built-In	Verified					Verify	P
23	Protection Against excess Output VSWR	Built-In	Shutdown @ 6:1					Verify	P
24	Protection Against RF input over drive	Built-In	Shutdown @ +3.0dBm					Verify	P
25	Protection Against Over Temperature	Built-In	Shutdown @ 75°C					Verify	P
26	Protection Against Over and under Voltage	Built-In	Shutdown @ +33.5V ± 2.0V					Verify	P
27	Protection Against Over Current	Built-In	Shutdown @ HPA [40A]					Verify	P
28	Protection Against Over Output Power	Built-In	Auto ALC @ 61.50dBm Over Forward Alarm @ 62.50dBm					Verify	P
29	Remote control via Serial, USB, LAN	Built-In	Verified					Verify	P
30	Fans Operation Test	Built-In	Shutdown @ +25.0V ± 2.0V					Record	P
31	Fault LED Indicator Operation Test	Built-In	Verified					Verify	P
32	LCD Display Operation Test	Display, Fault, Touch	Verified					Verify	P
33	RF Connectors In/Out	N-type Female / 7/16 Female	Verified					Verify	P
34	AC Power Connector	MS3106E 32-17	Verified					Verify	P



DATA PLOTS

