

Band Edge Emission Test Results for Restricted Bands

EUT Name	PROFESSIONAL SCAN TOOL	Model Name	MaxiDiag MD909 Pro
Temperature	20.9°C	Relative Humidity	50%
Pressure	960hPa	Test Voltage	DC 3.8V
Test Mode	Mode 7	Antenna Polarity	Vertical





Test Graph for Average Measurement



RESULT: Pass



Band Edge Emission Test Results for Restricted Bands

EUT Name	PROFESSIONAL SCAN TOOL	Model Name	MaxiDiag MD909 Pro
Temperature	20.9°C	Relative Humidity	50%
Pressure	960hPa	Test Voltage	DC 3.8V
Test Mode	Mode 9	Antenna Polarity	Horizontal

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass



Band Edge Emission Test Results for Restricted Bands

EUT Name	PROFESSIONAL SCAN TOOL	Model Name	MaxiDiag MD909 Pro
Temperature	20.9°C	Relative Humidity	50%
Pressure	960hPa	Test Voltage	DC 3.8V
Test Mode	Mode 9	Antenna Polarity	Vertical

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: Pass

Note: The factor had been edited in the "Input Correction" of the Spectrum Analyzer.



12. AC Power Line Conducted Emission

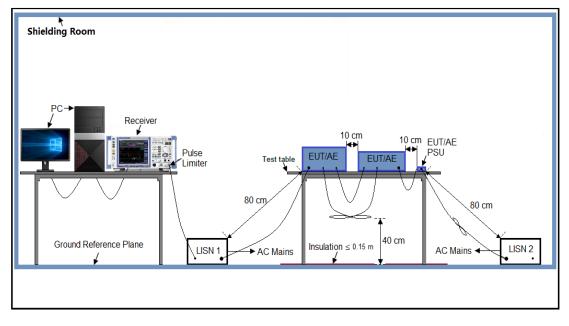
12.1 Measurement Limits

Frequency	Maximum RF Line Voltage		
Frequency	Q.P (dBµV)	Average (dBµV)	
150kHz~500kHz	66-56	56-46	
500kHz~5MHz	56	46	
5MHz~30MHz	60	50	

Note:

- 1. The lower limit shall apply at the transition frequency.
- 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

12.2 Block Diagram of Line Conducted Emission Test





12.3 Preliminary Procedure of Line Conducted Emission Test

- 1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. All support equipment received AC120V/60Hz power from a LISN, if any.
- 5. The EUT received DC 5V power from adapter which received AC120V/60Hz power from a LISN.
- 6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 Ohm load; the second scan had Line 1 connected to a 50 Ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8. During the above scans, the emissions were maximized by cable manipulation.
- 9. The test mode(s) were scanned during the preliminary test.

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

12.4 Final Procedure of Line Conducted Emission Test

- 1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less – 2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 3. The test data of the worst case was reported on the Summary Data page.

12.5 Test Result of Line Conducted Emission Test



t Mode	Mode 1				N Line	Hot Si	de
. mode							
Le	vel [dBµV]						
80 г							
70		-++-+		i			
60							
50		-++		<u> </u>	·		
40		-+	- -				
30	man man man	where where the	And the state of t	 		<u>i-</u> i-i	
20	- manual and a second	-+-+	- Contraction of the owner of the			E.E.	
10							
-10						1 - T - I	
	150k 300k 400k	600k 800k		M 3M	4M 5M 6M 8	M 10M	20M 30M
			Frequ	ency [Hz]			
+ + +	MES agc_fin						
10	EASUREMENT	PESIIT	: "agc	fin‼			
	SAS CREMENT	RESCHI	. ayc_				
20	24/12/24 23	:21					
	Frequency		Transd		-	Detector	Line
	MHz	dBµV	dB	dBµV	dB		
	0 554000	20 50	C 0	5.0	25 5	0.0	. 1
	0.554000 0.862000	20.50 21.20	6.2 6.2	56 56	35.5 34.8	QP QP	L1 L1
	0.978000	21.20	6.2	56	34.4		L1
	1.146000	21.90	6.2	56	34.1		L1
		22.00	6.2	56	34.0		L1
	1.286000						- 4
	1.286000	19.10	6.2	56	36.9	QP	L1
		19.10	6.2	56	36.9	QP	Ll
		19.10	6.2	56	36.9	QP	Ll
м					36.9	QP	Ll
	1.702000	RESULT			36.9	QP	LI
	1.702000 EASUREMENT	RESULT :21	: "agc_	fin2"		QP Detector	
	1.702000 EASUREMENT 024/12/24 23	RESULT :21	: " agc_ . Transd	fin2" Limit	Margin		
	1.702000 EASUREMENT 024/12/24 23 Frequency MHz	RESULT :21 Level dBµV	: "agc_ Transd dB	fin2" Limit dBµV	Margin dB	Detector	Line
	1.702000 EASUREMENT 024/12/24 23 Frequency MHz 0.358000	RESULT :21 Level dBμV 17.00	: "agc_ Transd dB 6.1	fin2" Limit dBµV 49	Margin dB 31.8	Detector	Line L1
	1.702000 EASUREMENT 024/12/24 23 Frequency MHz 0.358000 0.806000	RESULT :21 Level dBμV 17.00 16.00	: " agc_ Transd dB 6.1 6.2	fin2" Limit dBµV 49 46	Margin dB 31.8 30.0	Detector AV AV	Line L1 L1
	1.702000 EASUREMENT 024/12/24 23 Frequency MHz 0.358000 0.806000 1.342000	RESULT :21 Level dBμV 17.00 16.00 16.20	: " agc_ Transd dB 6.1 6.2 6.2	fin2" Limit dBµV 49 46 46	Margin dB 31.8 30.0 29.8	Detector AV AV AV	Line L1 L1 L1
	1.702000 EASUREMENT 024/12/24 23 Frequency MHz 0.358000 0.806000 1.342000 2.262000	RESULT :21 Level dBμV 17.00 16.00 16.20 11.20	: "agc_ Transd dB 6.1 6.2 6.2 6.3	fin2" Limit dBµV 49 46 46 46	Margin dB 31.8 30.0 29.8 34.8	Detector AV AV AV AV	Line L1 L1 L1 L1 L1
	1.702000 EASUREMENT 024/12/24 23 Frequency MHz 0.358000 0.806000 1.342000	RESULT :21 Level dBμV 17.00 16.00 16.20	: "agc_ Transd dB 6.1 6.2 6.2 6.3 6.3	fin2" Limit dBµV 49 46 46 46 50	Margin dB 31.8 30.0 29.8 34.8 32.2	Detector AV AV AV AV AV	Line L1 L1 L1

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		AC Power Line Con	ducted Emi	ission Test	
Test Mode	Mode 1		LIS	N Line	Neutral Side
	•				
Level	[dBµV]				
70		· · · · · · · · · · · · · · · · · · ·			
60		i i i i i -	i 		
50					
40		· -	 		
30 - v	Manual Manual Contractions	and the second and	المراجعة والالترجيع الألا		
20					
10					
-10					
150)k 300k 400k (M 3M 4 ency [Hz]	4M 5M 6M 8M 10M	20M 30M
1 1 1 1	° ago fin	riequ	oney [n2]		
+ + + ME	S agc_fin				
MEX	ASUREMENT R	ESULT: "agc	fin"		
		_	•		
	4/12/24 23:1		T dend to	Manufa Dat	
	Frequency MHz	Level Transd dBµV dB	dBµV	dB	ector Line
	MUZ	անաստություններություններություններություններություններություններություններություններություններություններություն	uoμv	ub	
	0.546000	20.90 6.2	56	35.1 QP	N
	0.774000	26.70 6.2	56	29.3 QP	N
	0.938000	22.10 6.2	56	33.9 QP	N
	1.366000	21.50 6.2	56	34.5 QP	N
		20.80 6.2	56	35.2 QP	N
	2.094000	19.80 6.2	56	36.2 QP	N
MEZ	ASUREMENT R	ESULT: "agc_	fin2"		
202	4/12/24 23:1	8			
		.º Level Transd	Limit	Margin Det	ector Line
	MHz	dBµV dB	dBuV	dB	
		17.80 6.1	49	31.6 AV	N
		21.00 6.2	46	25.0 AV	N
		16.50 6.2	46		N
		13.60 6.3			N
		17.00 6.7			N
	13.750000	20.10 6.8	50	29.9 AV	N

RESULT: Pass



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Appendix I: Photographs of Test Setup

Refer to the Report No.: AGC16740241205AP02

Appendix II: Photographs of Test EUT

Refer to the Report No.: AGC16740241205AP03

-----End of Report-----



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