

UNO

SONY VERTICAL FET

CLASS A

HIGH LEVEL PREAMPLIFIER

MINIMALIST DESIGN

PRECISION DUAL MONO

AGUSTIN SEIJAS LAB. COM

UNO

TECHNICAL DATA

FREQUENCY RESPONSE: 5HZ TO 200KHZ - 3 dB

T.H.D.: 0.1% (REF.: 3 VOLTS R.M.S. / 1 KHZ.)

I.M.D.: 0.25% MAX. (REF.: 3 VOLTS R.M.S.) SMPTE

D.I.M. (I.M.D.): 0.03% MAX. (REF.: 3 VOLTS R.M.S.)

MAXIMUM OUTPUT: 10 VOLTS (R.M.S. / 100K LOAD)

RISE TIME: 1 μ S MAX. (REF.: 3 VOLTS / 10KHZ)

GAIN: 12.75 dB (+/- 0.25 dB)

PHASE SHIFT: ZERO (+/- 5 DEGREE)

PHASE: ABSOLUTE

INPUT IMPEDANCE: 9,000 OHM (1KHZ REF.)

OUTPUT IMPEDANCE: 900 OHM (1KHZ REF.)

OUTPUT NOISE: 100 μ V (MAX.)

AUDIO ACTIVE DEVICES: SONY K173 (VERTICAL-FET)

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UNO

TECHNICAL REPORT

FREQUENCY RESPONSE

T.H.D.

I.M.D.

PHASE

GAIN

OUTPUT NOISE (22HZ TO 22KHZ)

OUTPUT NOISE (400HZ TO 22KHZ)

MEASUREMENT INSTRUMENTS:

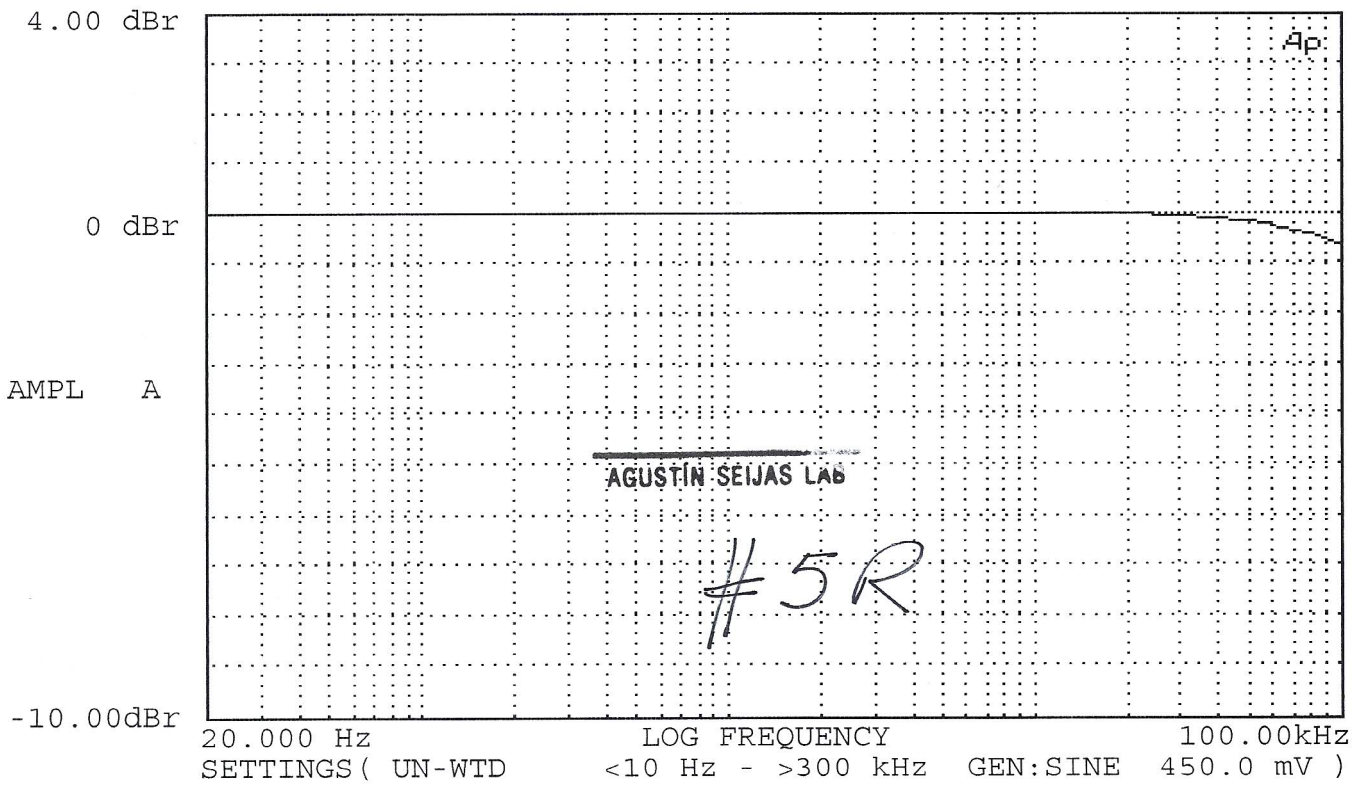
AUDIO PRECISION SYSTEM ONE PLUS

LECROY WAVERUNNER 500 MHZ / 10 GS DSO

STANFORD RESEARCH SR770 FFT ANALYZER

AGUSTIN SEIJAS LAB. COM

0 dBr=2.004 V

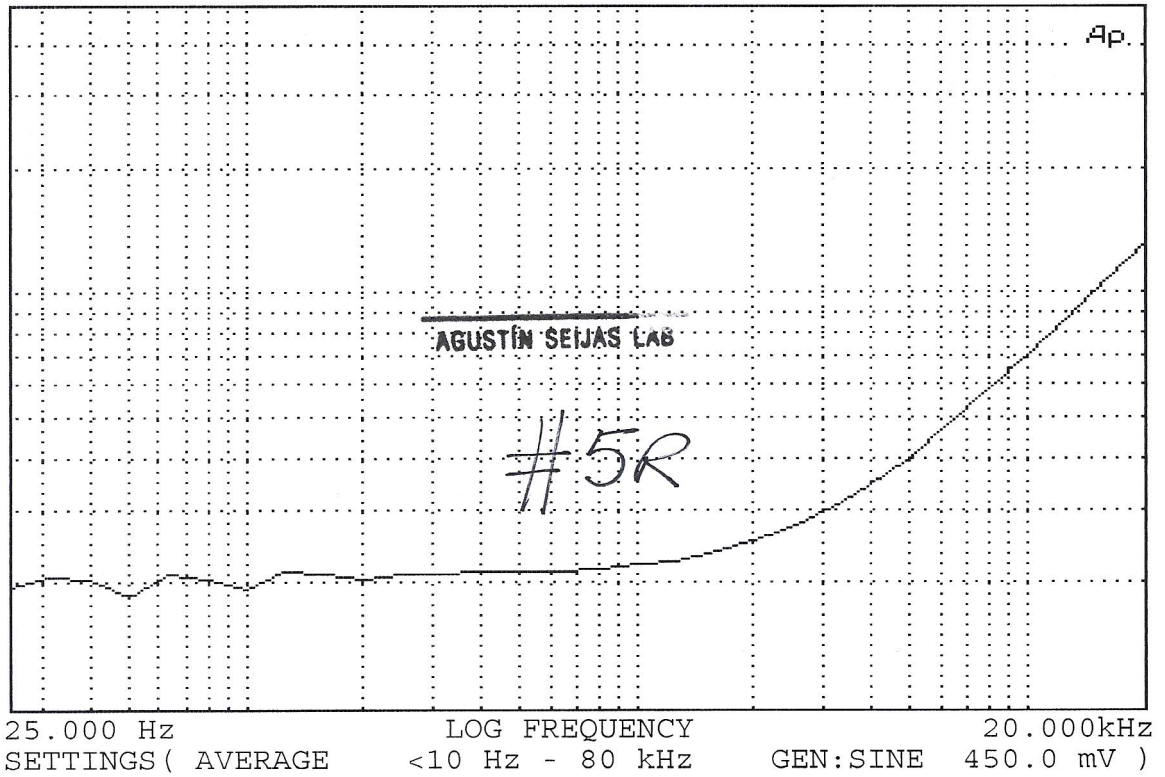


GEN	FREQ	AMPL	A	GEN	FREQ	AMPL	A	GEN	FREQ	AMPL	A	Ap
20.00	Hz	-0.01	dBr	382.9	Hz	0.00	dBr	7.330	kHz	0.00	dBr	
22.40	Hz	-0.01	dBr	428.9	Hz	0.00	dBr	8.212	kHz	-0.01	dBr	
25.09	Hz	-0.01	dBr	480.5	Hz	0.00	dBr	9.199	kHz	-0.01	dBr	
28.11	Hz	-0.01	dBr	538.2	Hz	0.00	dBr	10.305	kHz	-0.01	dBr	
31.49	Hz	-0.01	dBr	603.0	Hz	0.00	dBr	11.544	kHz	-0.01	dBr	
35.28	Hz	0.00	dBr	675.5	Hz	0.00	dBr	12.933	kHz	-0.01	dBr	
39.52	Hz	0.00	dBr	756.7	Hz	0.00	dBr	14.488	kHz	-0.01	dBr	
44.27	Hz	0.00	dBr	847.7	Hz	0.00	dBr	16.230	kHz	-0.01	dBr	
49.60	Hz	0.00	dBr	949.6	Hz	0.00	dBr	18.181	kHz	-0.02	dBr	
55.56	Hz	0.00	dBr	1.063	kHz	0.00	dBr	20.367	kHz	-0.02	dBr	
62.24	Hz	0.00	dBr	1.191	kHz	0.00	dBr	22.816	kHz	-0.03	dBr	
69.73	Hz	0.00	dBr	1.335	kHz	0.00	dBr	25.559	kHz	-0.04	dBr	
78.11	Hz	0.00	dBr	1.495	kHz	0.00	dBr	28.633	kHz	-0.06	dBr	
87.51	Hz	0.00	dBr	1.675	kHz	0.00	dBr	32.076	kHz	-0.07	dBr	
98.03	Hz	0.00	dBr	1.876	kHz	0.00	dBr	35.932	kHz	-0.09	dBr	
109.8	Hz	0.00	dBr	2.102	kHz	0.00	dBr	40.253	kHz	-0.11	dBr	
123.0	Hz	0.00	dBr	2.355	kHz	0.00	dBr	45.093	kHz	-0.15	dBr	
137.8	Hz	0.00	dBr	2.638	kHz	0.00	dBr	50.515	kHz	-0.19	dBr	
154.3	Hz	0.00	dBr	2.955	kHz	0.00	dBr	56.588	kHz	-0.23	dBr	
172.9	Hz	0.00	dBr	3.311	kHz	0.00	dBr	63.392	kHz	-0.29	dBr	
193.7	Hz	0.00	dBr	3.709	kHz	0.00	dBr	71.015	kHz	-0.36	dBr	
217.0	Hz	0.00	dBr	4.155	kHz	0.00	dBr	79.553	kHz	-0.44	dBr	
243.1	Hz	0.00	dBr	4.654	kHz	0.00	dBr	89.118	kHz	-0.54	dBr	
272.3	Hz	0.00	dBr	5.214	kHz	0.00	dBr	100.00	kHz	-0.65	dBr	
305.1	Hz	0.00	dBr	5.841	kHz	0.00	dBr					
341.8	Hz	0.00	dBr	6.543	kHz	0.00	dBr					

0.500 %

LOG
THD+N A

0.0100%



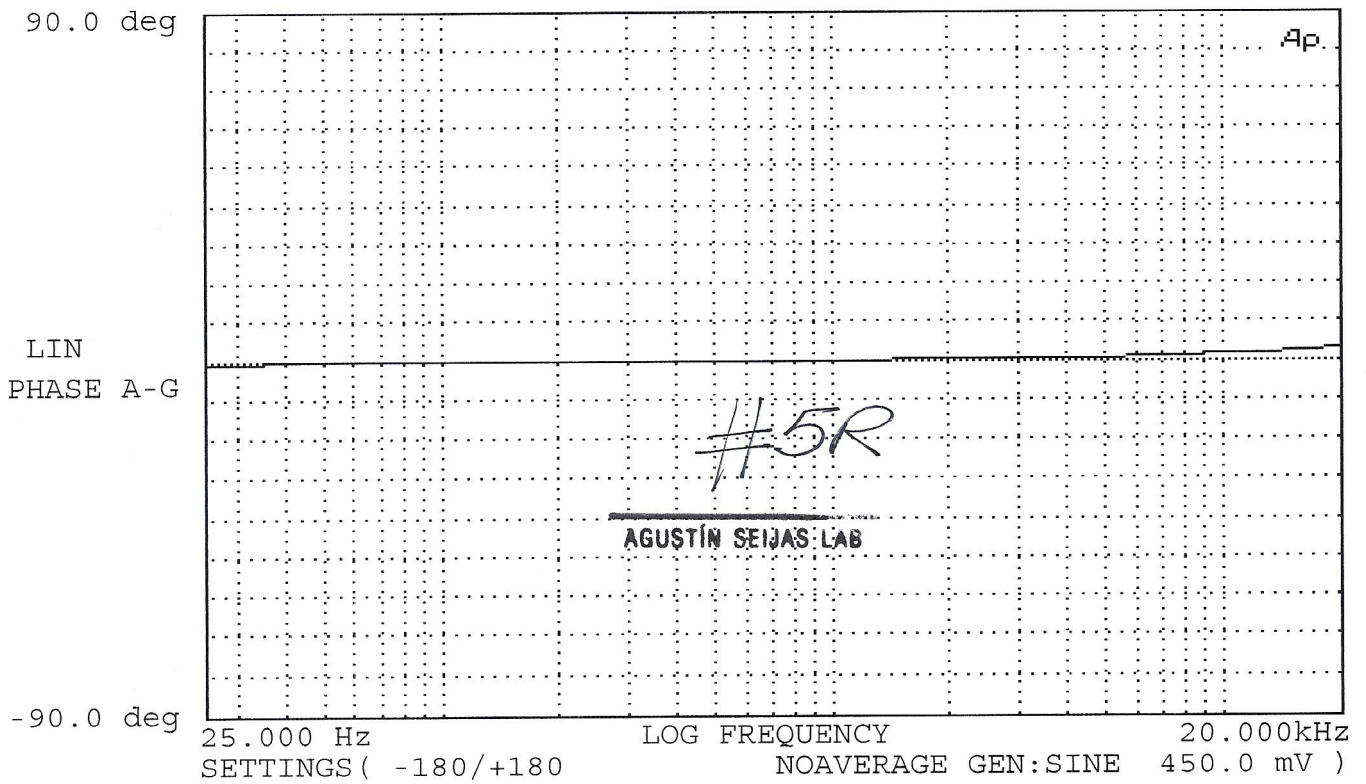
25.000 Hz LOG FREQUENCY 20.000kHz
SETTINGS (AVERAGE <10 Hz - 80 kHz GEN: SINE 450.0 mV)

GEN	FREQ	THD+N	A	GEN	FREQ	THD+N	A	GEN	FREQ	THD+N	A	Ap
25.00	Hz	0.0195%		315.0	Hz	0.0209%		4.000	kHz	0.0344%		Ap
31.50	Hz	0.0207%		400.0	Hz	0.0213%		5.000	kHz	0.0399%		
40.00	Hz	0.0204%		500.0	Hz	0.0212%		6.300	kHz	0.0478%		
50.00	Hz	0.0185%		630.0	Hz	0.0213%		8.000	kHz	0.0584%		
63.00	Hz	0.0209%		800.0	Hz	0.0216%		10.000	kHz	0.0707%		
80.00	Hz	0.0204%		1.000	kHz	0.0221%		12.500	kHz	0.0864%		
100.0	Hz	0.0192%		1.250	kHz	0.0225%		16.000	kHz	0.108 %		
125.0	Hz	0.0211%		1.600	kHz	0.0236%		20.000	kHz	0.132 %		
160.0	Hz	0.0208%		2.000	kHz	0.0252%						
200.0	Hz	0.0204%		2.500	kHz	0.0271%						
250.0	Hz	0.0208%		3.150	kHz	0.0302%						

IMD A LEVEL A
0.0698% 6.57 dBu

GEN: IMD 450.0 mV 70Hz/7kHz

Ap



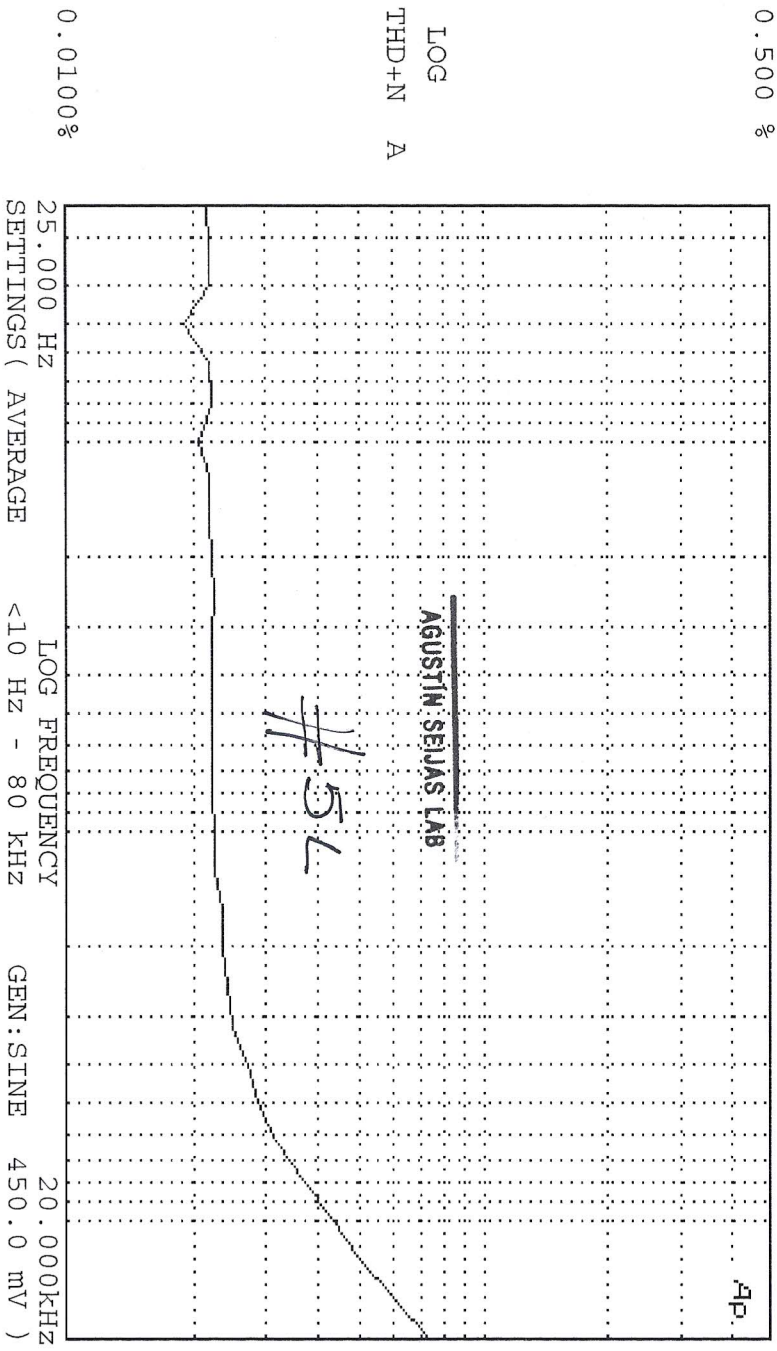
GEN FREQ	PHASE A-G	GEN FREQ	PHASE A-G	GEN FREQ	PHASE A-G	Ap
25.00 Hz	-0.6 deg	315.0 Hz	0.0 deg	4.000 kHz	0.5 deg	
31.50 Hz	-0.5 deg	400.0 Hz	0.0 deg	5.000 kHz	0.7 deg	
40.00 Hz	-0.4 deg	500.0 Hz	0.0 deg	6.300 kHz	0.9 deg	
50.00 Hz	-0.4 deg	630.0 Hz	0.0 deg	8.000 kHz	1.2 deg	
63.00 Hz	-0.3 deg	800.0 Hz	0.0 deg	10.000kHz	1.4 deg	
80.00 Hz	-0.2 deg	1.000 kHz	0.0 deg	12.500kHz	1.8 deg	
100.0 Hz	-0.2 deg	1.250 kHz	0.1 deg	16.000kHz	2.4 deg	
125.0 Hz	-0.1 deg	1.600 kHz	0.1 deg	20.000kHz	3.0 deg	
160.0 Hz	-0.1 deg	2.000 kHz	0.2 deg			
200.0 Hz	0.0 deg	2.500 kHz	0.3 deg			
250.0 Hz	0.0 deg	3.150 kHz	0.4 deg			

RATIO A/G	FREQ	GA	GEN:SINE	450.0 mV	1.000 kHz	Ap
13.02dB	997.45 Hz					
NOISE A			UN-WTD	22 Hz - 22 kHz		Ap
84.26 uV			GEN:SINE	450.0 mV 1.000 kHz		
NOISE A			UN-WTD	400 Hz - 22 kHz		Ap
19.30 uV			GEN:SINE	450.0 mV 1.000 kHz		

0.500 %

Ap

LOG
THD+N A



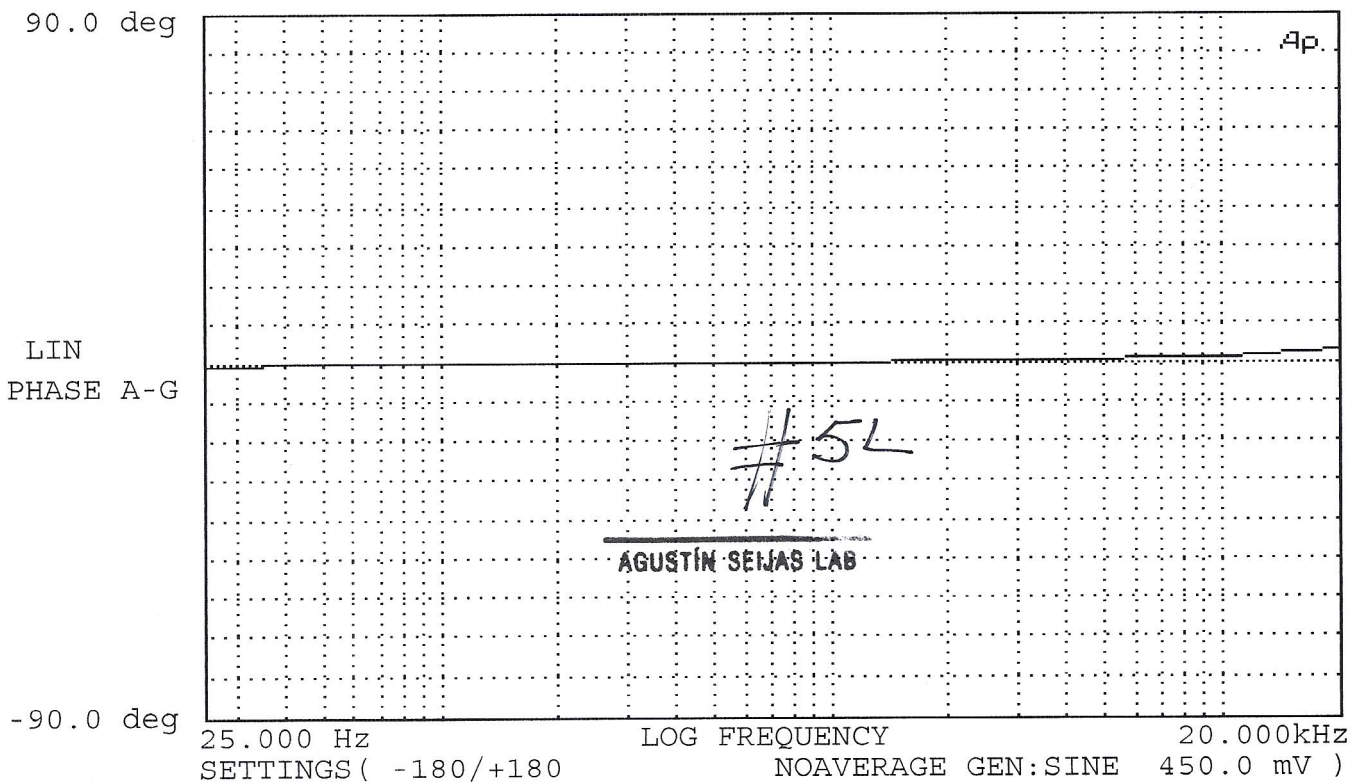
GEN FREQ	THD+N	GEN FREQ	THD+N	GEN FREQ	THD+N
25.00 Hz	0.0215%	315.0 Hz	0.0223%	4.000 kHz	0.0272%
31.50 Hz	0.0218%	400.0 Hz	0.0220%	5.000 kHz	0.0287%
40.00 Hz	0.0218%	500.0 Hz	0.0223%	6.300 kHz	0.0317%
50.00 Hz	0.0190%	630.0 Hz	0.0223%	8.000 kHz	0.0368%
63.00 Hz	0.0220%	800.0 Hz	0.0222%	10.000kHz	0.0430%
80.00 Hz	0.0221%	1.000 kHz	0.0223%	12.500kHz	0.0502%
100.0 Hz	0.0208%	1.250 kHz	0.0224%	16.000kHz	0.0613%
125.0 Hz	0.0219%	1.600 kHz	0.0236%	20.000kHz	0.0733%
160.0 Hz	0.0220%	2.000 kHz	0.0234%		
200.0 Hz	0.0221%	2.500 kHz	0.0240%		
250.0 Hz	0.0224%	3.150 kHz	0.0249%		

IMD A LEVEL A
0.0747% 6.56 dBu

GEN:IMD

450.0 mV 70Hz/7kHz

Ap



GEN FREQ	PHASE A-G	GEN FREQ	PHASE A-G	GEN FREQ	PHASE A-G	Ap
25.00 Hz	-0.6 deg	315.0 Hz	0.0 deg	4.000 kHz	0.5 deg	
31.50 Hz	-0.5 deg	400.0 Hz	0.0 deg	5.000 kHz	0.6 deg	
40.00 Hz	-0.4 deg	500.0 Hz	0.0 deg	6.300 kHz	0.8 deg	
50.00 Hz	-0.4 deg	630.0 Hz	0.0 deg	8.000 kHz	1.0 deg	
63.00 Hz	-0.2 deg	800.0 Hz	0.0 deg	10.000kHz	1.3 deg	
80.00 Hz	-0.2 deg	1.000 kHz	0.0 deg	12.500kHz	1.7 deg	
100.0 Hz	-0.2 deg	1.250 kHz	0.1 deg	16.000kHz	2.2 deg	
125.0 Hz	-0.1 deg	1.600 kHz	0.1 deg	20.000kHz	2.8 deg	
160.0 Hz	-0.1 deg	2.000 kHz	0.2 deg			
200.0 Hz	0.0 deg	2.500 kHz	0.2 deg			
250.0 Hz	0.0 deg	3.150 kHz	0.3 deg			

RATIO A/G 13.00dB FREQ GA 997.46 Hz GEN:SINE 450.0 mV 1.000 kHz Ap

NOISE A 81.57 uV UN-WTD 22 Hz - 22 kHz Ap

NOISE A 18.70 uV GEN:SINE 450.0 mV 1.000 kHz

UN-WTD 400 Hz - 22 kHz Ap

GEN:SINE 450.0 mV 1.000 kHz

GUARANTEE:

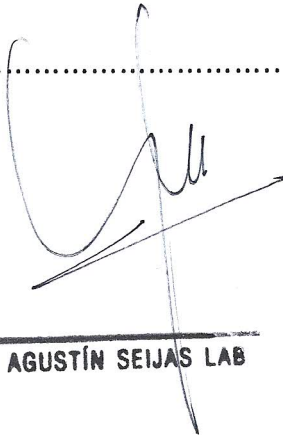
THIS EQUIPMENT IS GUARANTEED AGAINST ANY DEFECT
IN MATERIAL OR WORKMANSHIP FOR A PERIOD OF FIVE
(5) YEARS FROM DATE OF PURCHASE.

ELECTRON TUBES: ONE (1) YEAR OF GUARANTEE.

SPARE PARTS AVAILABILITY: TEN (10) YEARS.

NUMBER: Uno # 5

DATE:



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