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# TERMINAL EQUIPMENT CONFORMANCE TEST REPORT

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**Report No.: 60.860.6.106.01**

**ACCORDING TO:** TBR 10. Digital Enhanced Cordless Telecommunications (DECT);  
General terminal attachment requirements;  
Telephony applications

**REFERENCE NORMATIVE:** TBR 10 (July 1999)

**PRODUCT:** DECT Phone (FP+PP)

**MODEL:** H315-S1 / HS315-S1

**REQUESTED BY:** Aztech Systems Ltd.

**TEST RESULTS:** COMPLIED.

This test report includes 5 annexes and therefore the total number of pages is 59.

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Date: Jun 14, 06	Test operator Date: 14 June, 2006	Supervisor Date: 30 Jun 06	
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## 1. IDENTIFICATION SUMMARY

### 1.1. TESTING LABORATORY

**Name:** TÜV SÜD Hong Kong Ltd.  
**Address:** Unit 601, InnoCentre, 72 Tat Chee Avenue, Kowloon Tong, Hong Kong.  
**Telephone:** (852) 2776 1323  
**Fax:** (852) 2776 1372

### 1.2. IMPLEMENTATION UNDER TEST

**Product:** DECT Phone (FP +PP)  
**Model:** H315-S1 / HS315-S1  
**Serial Number(s):** --  
**Date of receipt:** 4-May-2006  
**Software Version:** -  
**Hardware Version:** -  
**Additional Information:** -  
**Standard:** TBR 10 (July 1999)  
**ICS:** See Annex A  
**Previous TCTRs:** -

### 1.3. CLIENT

**Name:** Aztech Systems Ltd.  
**Contact person:** Mr. Terence Kwong  
**Address:** 31 Ubi Road1, Aztech Building, Singapore 408694  
**Telephone:** +852 2655-8991  
**Fax:** +852 2753-0578

#### 1.4. MANUFACTURER

**Name:** --  
**Contact person:** --  
**Address:** --  
**Telephone:** --  
**Fax:** --

#### 1.5. TESTING ENVIRONMENT

**IXIT:** See Annex B  
**Conformance Testing Standard:** TBR 10 (July 1999)  
**Abstract Test Method:** -  
**Means of testing Identification:** ESP-Teleckom-Electronik- GmbH  
 Analogue Telecom Testsystem  
**Date (or period) of Testing:** 4-May-2006 to 7-Jun-2006  
**Test conditions**

Ambient Temperature:	+ 15° C to + 30° C	YES
Relative Humidity:	5% to 85%	YES
Air Pressure:	86 kPa to 106 kPa	YES
Local Power Characteristics:	± 5 % of the rated voltage, ± 4% of the rated frequency	

**Conformance Log reference:** -  
**Retention Period of Log Reference(s):** 10 years

## **1.6. LIMITS AND RESERVATIONS**

The test result presented in this test report apply only to the items of terminal equipment tested, identified as the particular IUT declared in Section 1.2 of this TCTR, for the functionality described in the relevant Implementation Conformance Statement (ICS) as presented for test on date(s) declared in Section 1.2, and configured as declared in the relevant Implementation Extra Information for Testing (IXIT). No part of this report may be reproduced or quoted out of the context and shall not be reproduced except in full without the written approval of the Test Laboratory.

## **1.7. COMMENTS**

## **2. IUT CONFORMANCE STATUS**

This TE has been shown by conformance assessment conform to the specified standard.

## **3. STATIC CONFORMANCE SUMMARY**

The ICS for the IUT is consistent with the static conformance requirements in the specified standard.



#### 4. DYNAMIC CONFORMANCE SUMMARY

This is tested under DECT Phone System as according to 7.1.5 of TBR10.  
The test campaign did not reveal errors in the IUT.

A summary of the test results is shown in the following table.

Item	Reference	TBR 10 requirement	Status *	Support [Y/N]	Result [Pass/Fail/Comments]
R.1	7.6	Speech coding scheme	M	N	N/A
R.2	7.7	PP sending frequency response	M	Y	PASS
R.3	7.8	PP receiving frequency response	M	Y	PASS
R.4	7.9	PP loudness rating	M	Y	PASS
R.5	7.10	User controlled volume control in the PP	M	Y	PASS
R.6	7.11	PP talker sidetone masking rating	M	Y	PASS
R.7	7.12	Listener sidetone (LST)	M	N	N/A
R.8	7.13	Terminal coupling loss (TCLw) of a PP	M	Y	PASS
R.9	7.14	FP echo control functions with a 4-wire interface	M	N	N/A
R.10	7.15	Stability loss –fixed geometry	M	Y	PASS
R.11	7.16	Stability loss variable geometry	M	Y	N/A
R.12	7.17	Sending distortion	M	Y	PASS
R.13	7.18	Receiving distortion	M	Y	PASS
R.14	7.19	Side tone distortion	M	Y	PASS
R.15	7.20	Out of band (sending)	M	Y	PASS
R.16	7.21	Out of band (receiving)	M	Y	PASS
R.17	7.22	Sending noise	M	Y	PASS
R.18	7.23	Sending noise (narrow band)	M	Y	PASS

Item	Reference	TBR 10 requirement	Status *	Support [Y/N]	Result [Pass/Fail/Comments]
R.19	7.24	Receiving noise	M	Y	PASS
R.20	7.25	Sampling Frequency level (receiving)	M	Y	PASS
R.21	7.26	Acoustic shock	O	Y	PASS
R.22	7.27	DECT network delay	M	Y	PASS
R.23	7.28	PP delay	M	N	N/A
R.24	7.29	FP delay	M	N	N/A
R.25	7.30	Echo control at the network side	O	Y	PASS
	7.30.2.1	4-wire interface	O	Y	N/A
	7.30.2.2	Analogue 2-wire interface	O	Y	PASS
R.26	7.31	Variation of gain with input level-sending	M	Y	PASS
R.27	7.32	Variation of gain with input level-receiving	M	Y	PASS
R.28	7.33	Additional requirements for DECT Systems Test	M	Y	PASS

**Remark\***

- **M: Mandatory, shall be implemented if applicable.**
- **O: Optional, may not be provided, but if provided shall be implemented in accordance with the requirements.**

## **5. STATIC CONFORMANCE REVIEW REPORT**

There were no errors in the static conformance test.

## **6. TEST CAMPAIGN REPORT**

This section records for each test purpose/test case referenced by the test specification for this requirement, the outcome of test campaign. This information is recorded in tables. The key to the information stated in the tables is as follows: (Please refer to Chapter 4)



## 7. OBSERVATIONS

## 8. TEST ACCURACY

The values for expanded measurement uncertainty are in accordance with Guidance Notes on Measurement Uncertainty, Reference.

### Accuracy of Measurements

Unless specified otherwise, the accuracy of measurements made by test equipment was equal to or better than:

Item	Accuracy
Electrical signal level	$\pm 0.2$ dB for levels $\geq -50$ dBV $\pm 0.4$ dB for levels $< -50$ dBV
Sound pressure	$\pm 0,7$ dB
Frequency	$\pm 0.2$ %

### Accuracy of Signals

Unless specified otherwise, the accuracy of the signals generated by the test equipment shall be better than:

Quantity	Accuracy
Sound pressure level at Mouth Reference Point (MRP)	$\pm 3$ dB for frequencies from 100 Hz to 200 Hz $\pm 1$ dB for frequencies from 200 Hz to 4000 Hz $\pm 3$ dB for frequencies from 4000 Hz to 8000 Hz
Electrical excitation levels	$\pm 0.4$ dB across the whole frequency range.
Frequency generation	$\pm 2$ %
Specified component values	$\pm 1$ %

## **ANNEX A**

# **IMPLEMENTATION CONFORMANCE STATEMENT (ICS)**

Item	Information	Yes/No	Comments
1	Kind of EUT		
1.1	System analogue	<b>YES</b>	
1.2	System Digital		
1.3	Portable Part		
1.4	Fix part analog		
1.5	Fix ISDN		

## **ANNEX B**

# **IMPLEMENTATION EXTRA INFORMATION FOR TESTING (IXIT)**

### Option Table

Item	Information	Yes/No	Comments
2	Does the EUT utilise a 4-wire fix part?		
3	Does the EUT have a user-controlled receiving volume control?	<b>YES</b>	



## **ANNEX C**

### **TEST RESULTS**

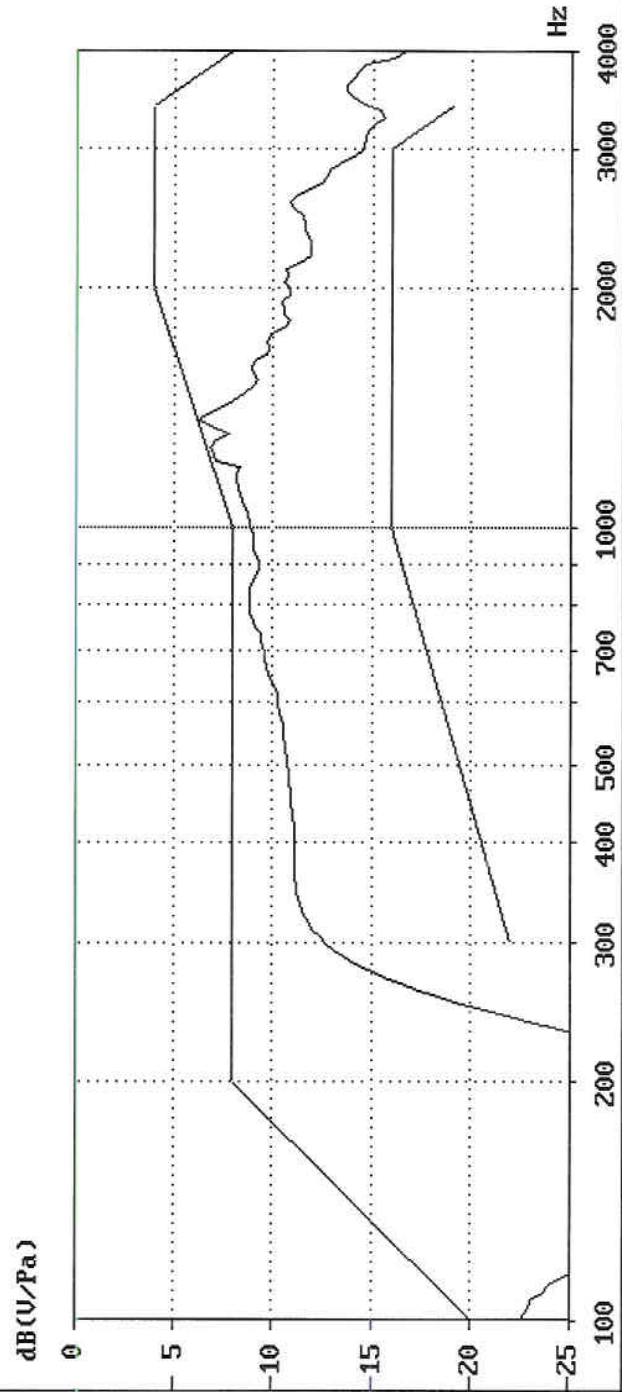
**SLR**

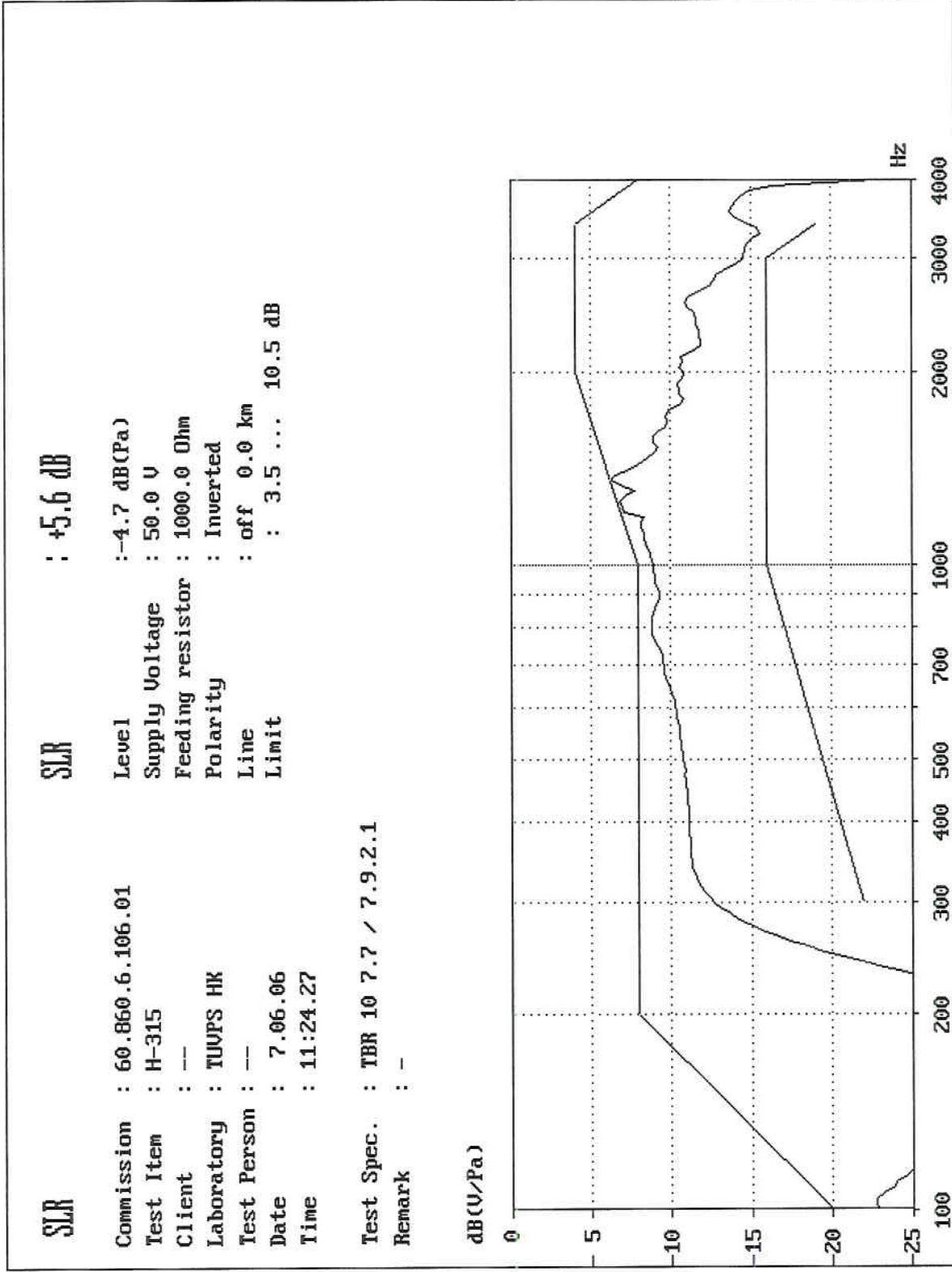
**SLR : +5.5 dB**

Commission : 60.860.6.106.01  
 Test Item : H-315  
 Client : --  
 Laboratory : TÜVPS HK  
 Test Person : --  
 Date : 7.06.06  
 Time : 11:23.36

Level : -4.7 dB(Pa)  
 Supply Voltage : 50.0 V  
 Feeding resistor : 1000.0 Ohm  
 Polarity : Normal  
 Line : off 0.0 km  
 Limit : 3.5 ... 10.5 dB

Test Spec. : TBR 10 7.7 / 7.9.2.1  
 Remark : -





RLR

RLR : -6.9 dB

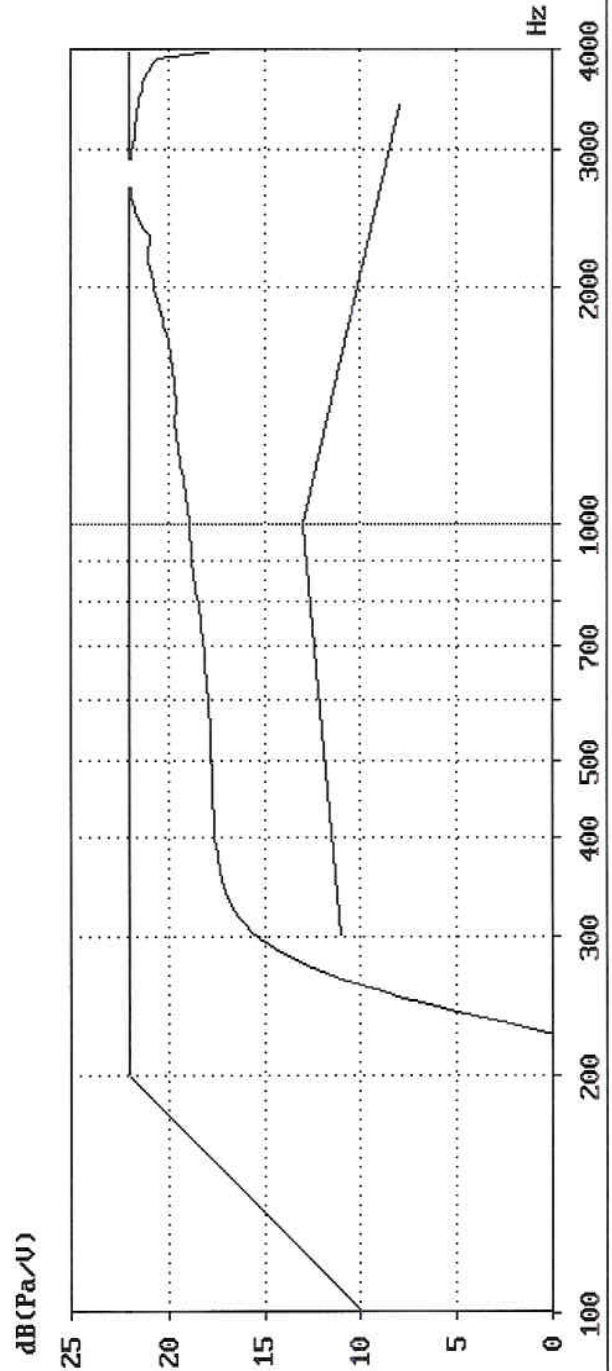
Commission : 60.860.6.106.01  
 Test Item : H-315  
 Client : --  
 Laboratory : TUUPS HK  
 Test Person : --  
 Date : 7.06.06  
 Time : 11:25.18

Level : +0.0 dB(LR)  
 Supply Voltage : 50.0 V  
 Feeding resistor : 1000.0 Ohm  
 Line : 0.4 mm 0.0 km  
 Limit : -12.0 ... -1.0 dB

Zr TBR21 symmet  
 Polarity : Normal

Test Spec. : TBR 10 7.8 / 7.9.2.2 / 7.33.2.2

Remark : -



RLR : -6.9 dB

RLR

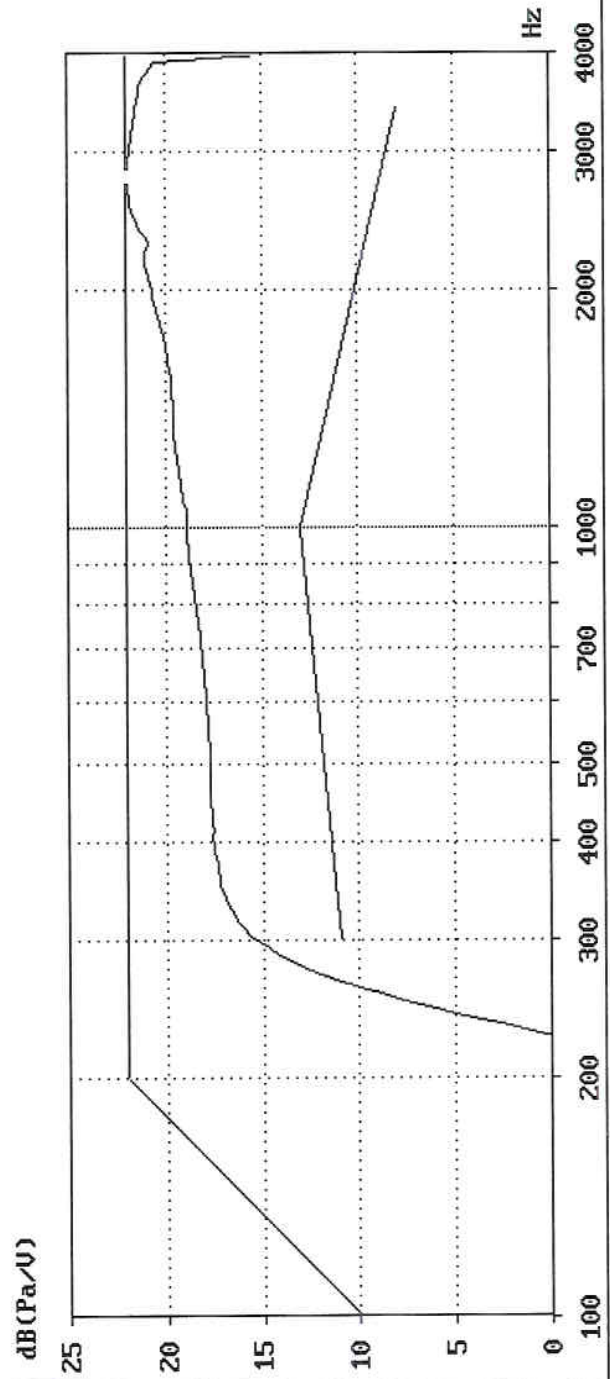
Commission : 60.860.6.106.01  
 Test Item : H-315  
 Client : --  
 Laboratory : TUUPS HK  
 Test Person : --  
 Date : 7.06.06  
 Time : 11:26.04

Level : +0.0 dB(LR)  
 Supply Voltage : 50.0 V  
 Feeding resistor : 1000.0 Ohm  
 Line : 0.4 mm 0.0 km  
 Limit : -12.0 ... -1.0 dB

Zg : Zr TBR21 symmet  
 Polarity : Inverted

Test Spec. : TBR 10 7.8 / 7.9.2.2 / 7.33.2.2

Remark : -

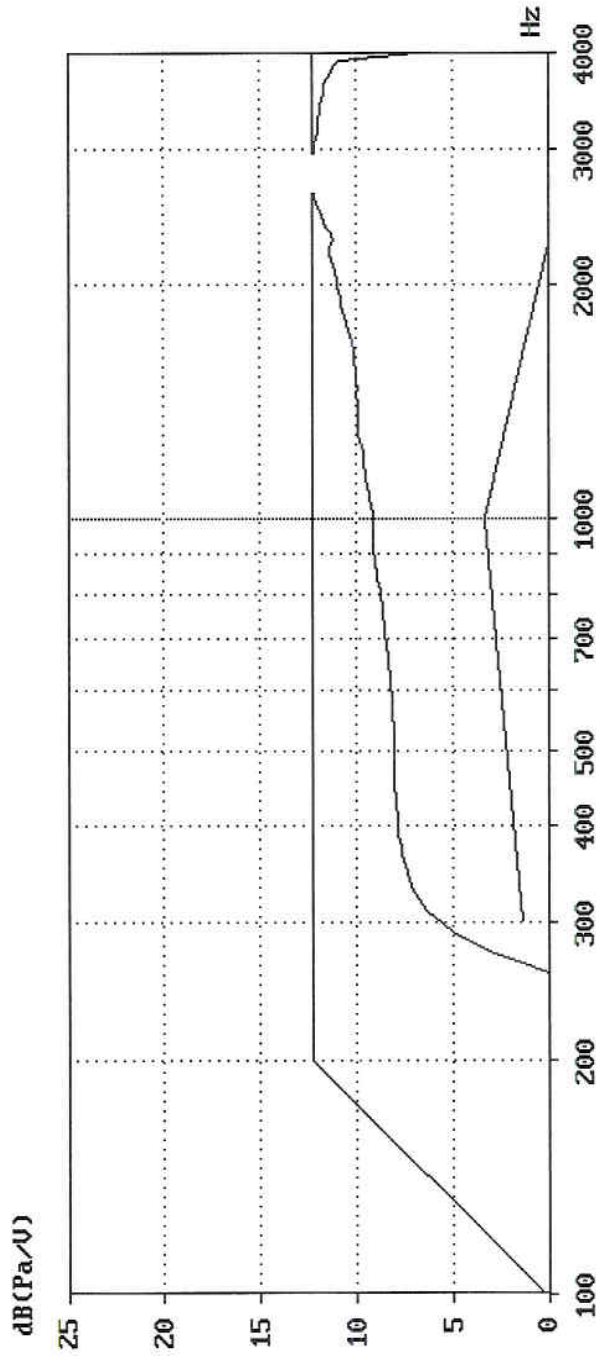




**TBR10 7.10.1 User Controlled volume control in the PP RLR : +2.8 dB**

Commission : 60.860.6.106.01 Level : +0.0 dB(LR) Zg : Zr TBR21 symme  
 Test Item : H-315 Supply Voltage : 50.0 V Polarity : Normal  
 Client : -- Feeding resistor : 1000.0 Ohm  
 Laboratory : TUWPS HK Line : 0.4 mm 0.0 km  
 Test Person : --  
 Date : 7.06.06  
 Time : 11:49.15

Test Spec. : TBR 10 7.8 / 7.9.2.2  
 Remark : Min Volume

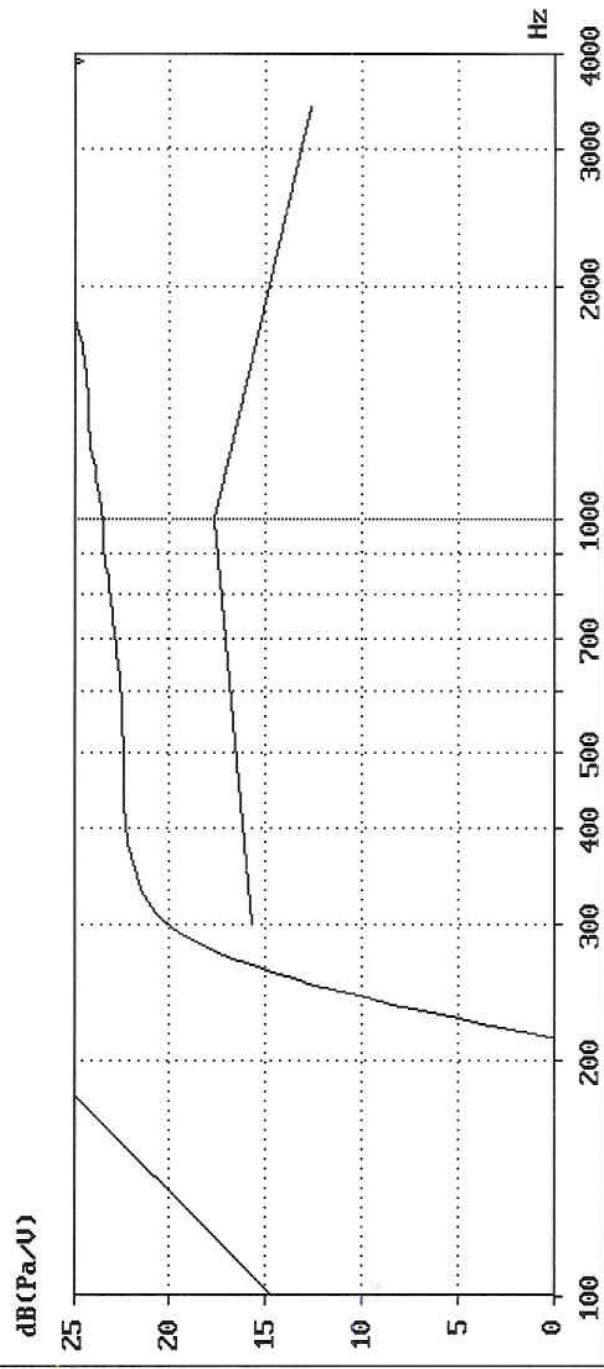


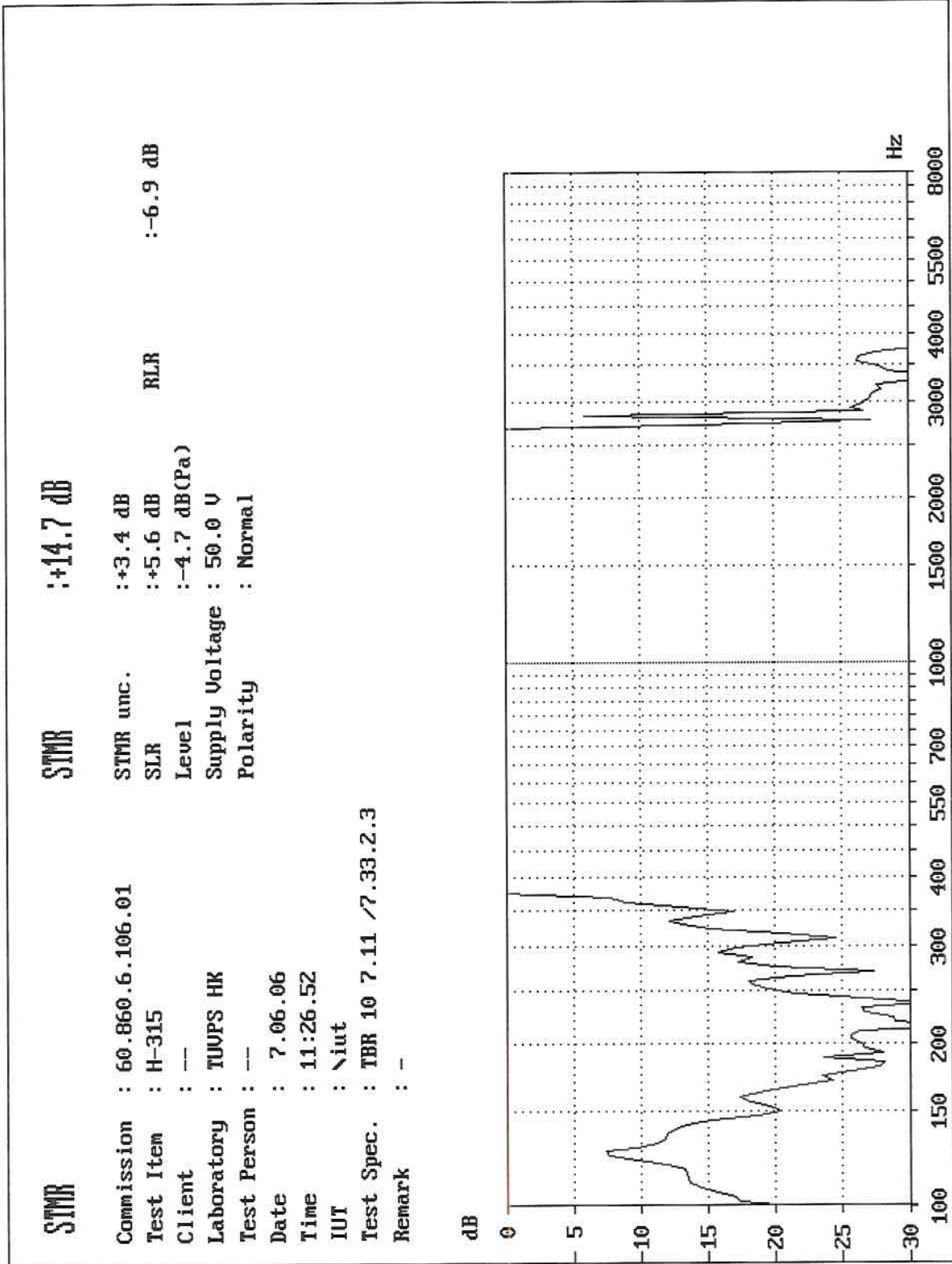
**TBR10 7.10.1 User Controlled volume control in the PP** RLR : -11.6 d

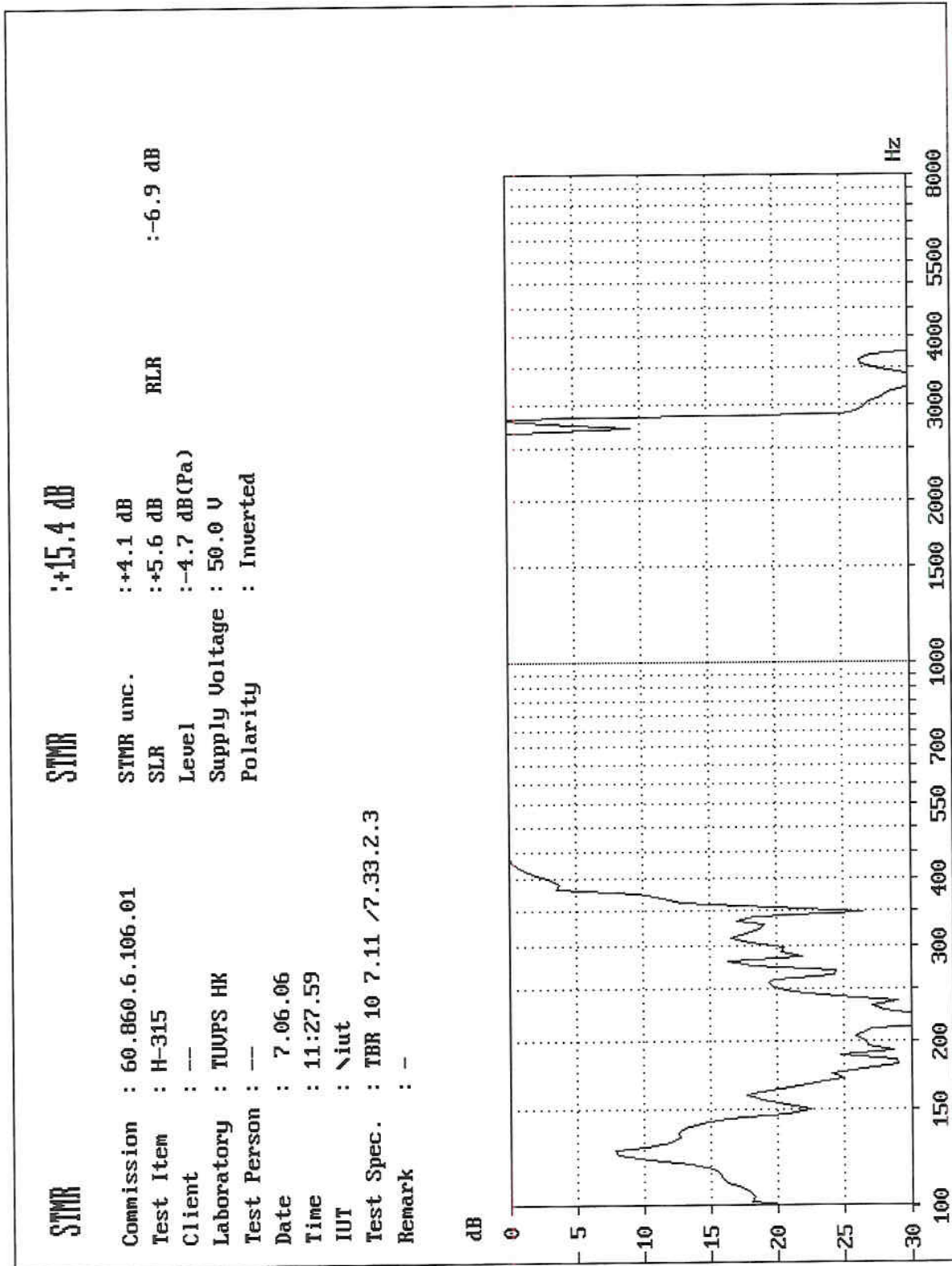
Commission : 60.860.6.106.01 Level : +0.0 dB(LR) Zg : Zr TBR21 symme  
 Test Item : H-315 Supply Voltage : 50.0 V Polarity : Normal  
 Client : -- Feeding resistor : 1000.0 Ohm  
 Laboratory : TUWPS HK Line : 0.4 mm 0.0 km  
 Test Person : --

Date : 7.06.06  
 Time : 11:50.19

Test Spec. : TBR 10 7.8 / 7.9.2.2  
 Remark : Max Volume



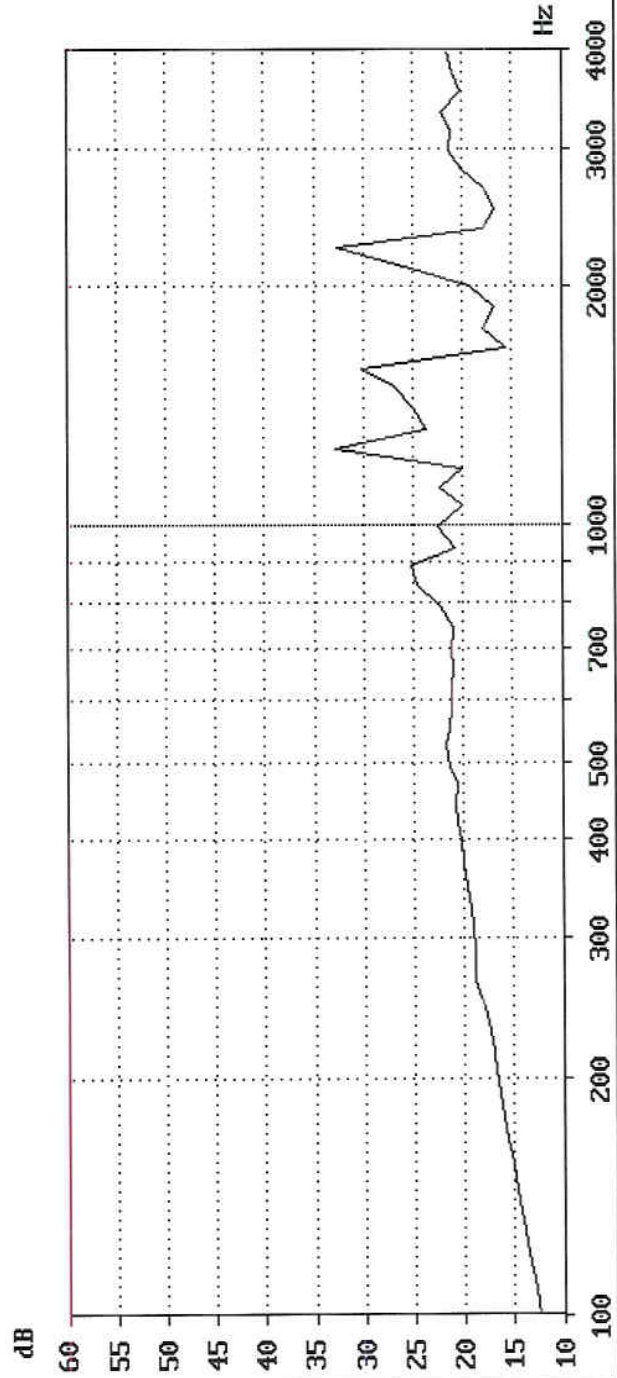






**TCL<sub>W</sub> (Return loss)**

Commission : 60.860.6.106.01      TCL<sub>W</sub> : 31.8 dB  
 Test Item : H-315                      SLR : +5.6 dB  
 Client : --                              Range : 300... 3400 Hz      RLR : -6.9 dB  
 Laboratory : TUUPS HK                  Supply Voltage : 50.0 V      Level : -10.0 dB(0.775 V)  
 Test Person : --                          Feeding resistor: 1000.0 Ohm      Polarity : Normal  
 Date : 7.06.06                              Zn : Zr TBR21  
 Time : 11:41.44  
 IUT : Niut  
 Test Spec. : TBR 10 7.13 / 7.33.2.8  
 Remark : -

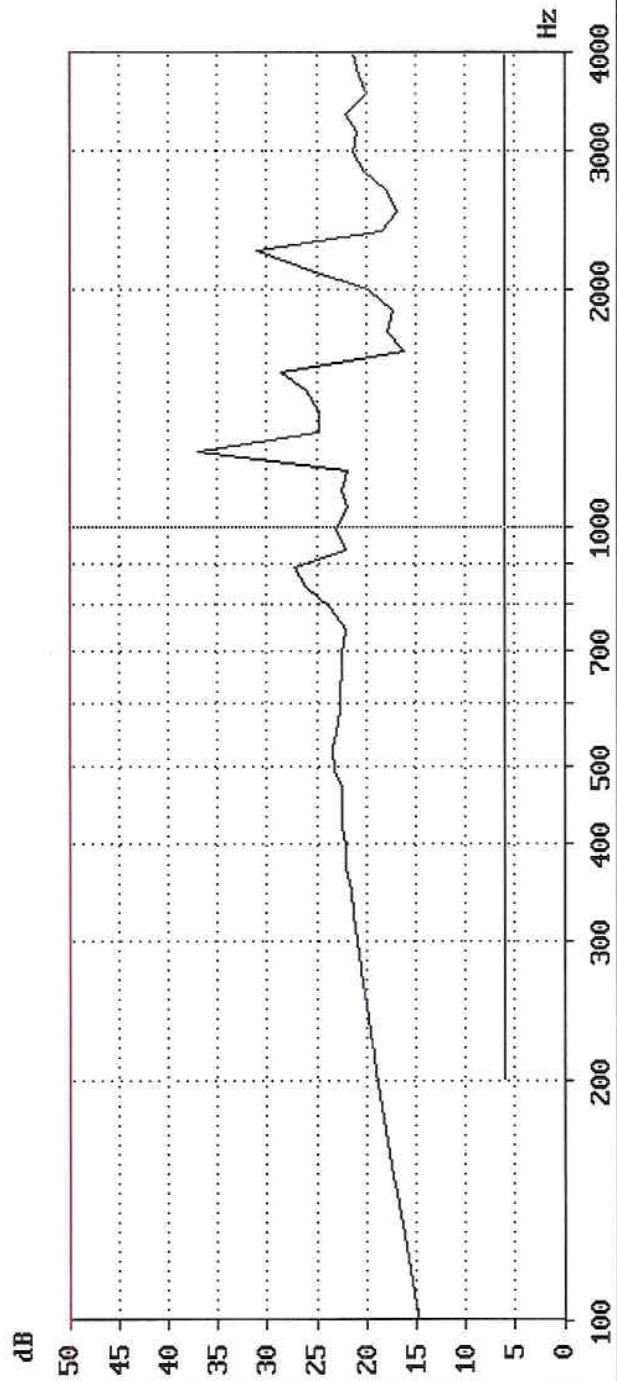




### Stability Loss

Commission : 60.860.6.106.01  
 Test Item : H-315  
 Client : --  
 Laboratory : TÜVPS HK  
 Test Person : --  
 Date : 7.06.06  
 Time : 11:42.56  
 IUT : \iut  
 Test Spec. : TBR 10 7.15 /7.33.2.7  
 Remark : --

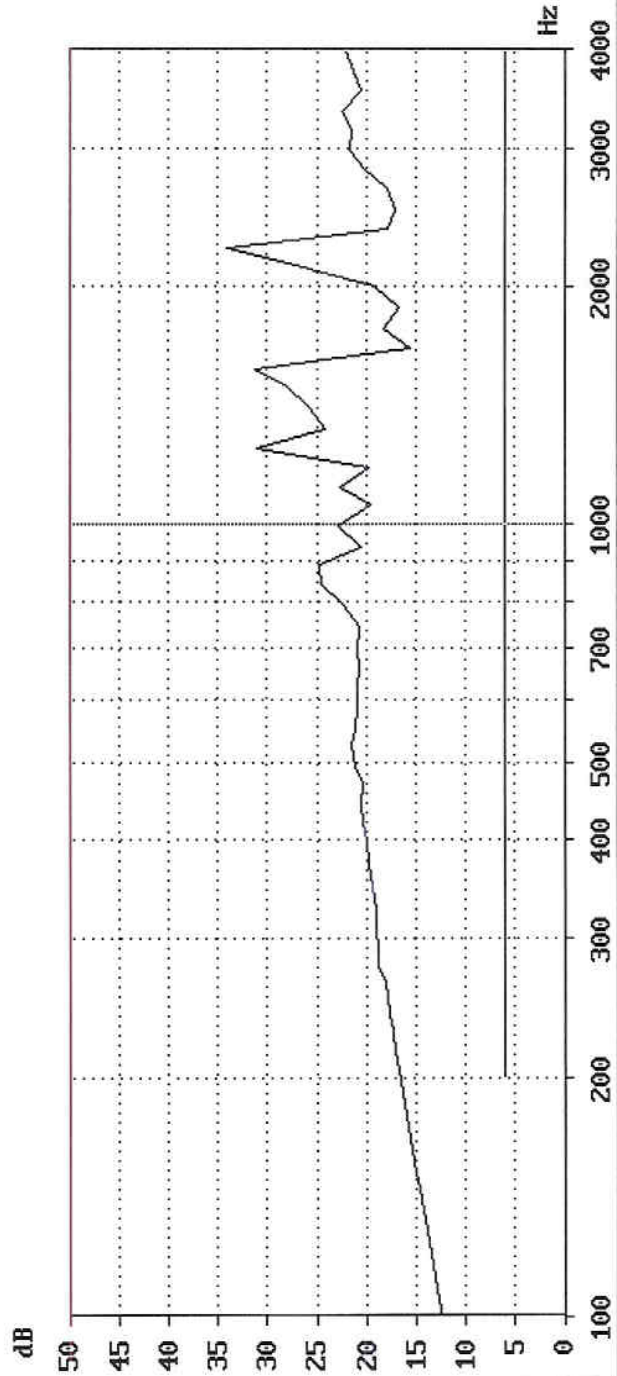
Level : -10.0 dB(0.775 V)  
 Supply Voltage : 50.0 V Feeding resistor : 2800.0 Ohm  
 Polarity : Normal Zn



### Stability Loss

Commission : 60.860.6.106.01  
 Test Item : H-315  
 Client : --  
 Laboratory : TÜVPS HK  
 Test Person : --  
 Date : 7.06.06  
 Time : 11:44.30  
 IUT : \iut  
 Test Spec. : TBR 10 7.15 /7.33.2.7  
 Remark : -

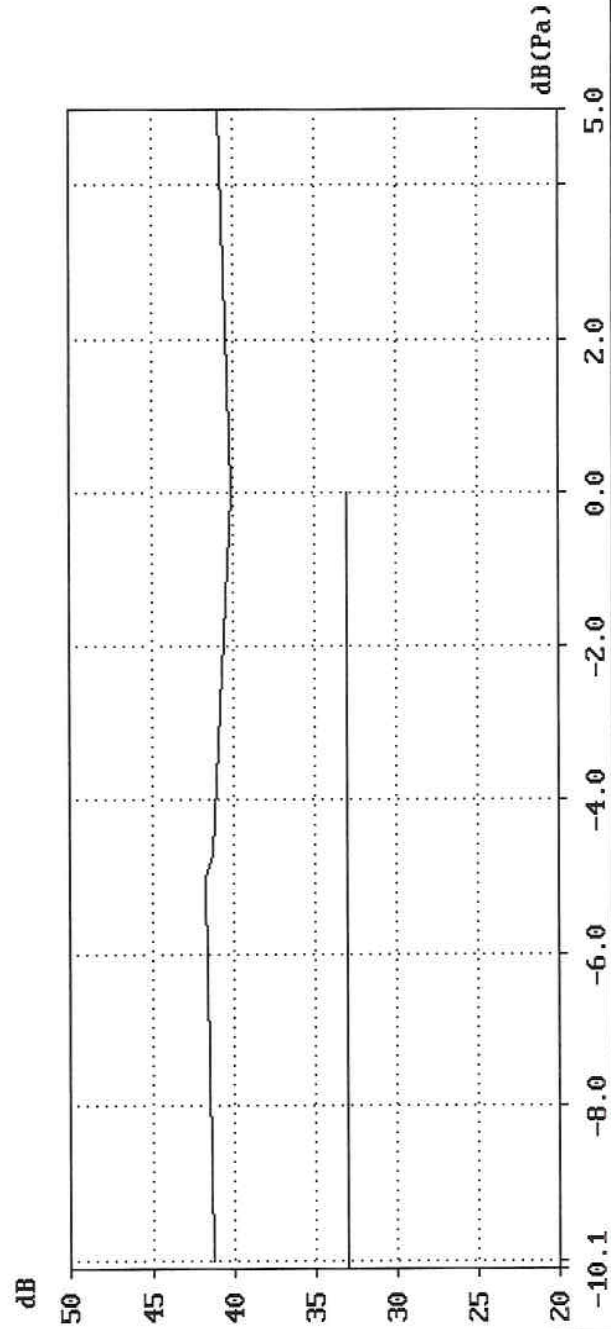
Level : -10.0 dB(0.775 U)  
 Supply Voltage : 50.0 V Feeding resistor : 500.0 Ohm  
 Polarity : Inverted Zn



### Sending Distortion

Commission : 60.860.6.106.01  
 Test Item : H-315  
 Client : --  
 Laboratory : TUUPS HK  
 Test Person : --  
 Date : 7.06.06  
 Time : 11:28.56  
 IUT : \iut  
 Test Spec. : TBR 10 7.17  
 Remark : -

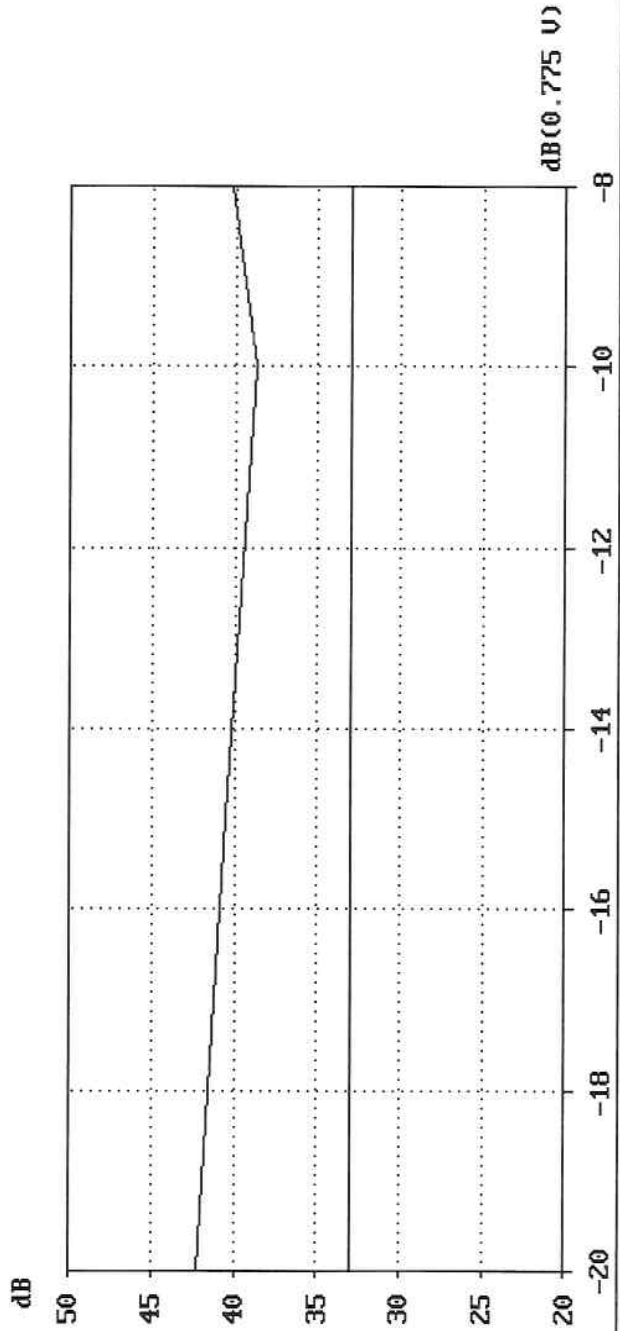
Frequency : 1010.0 Hz  
 Supply Voltage : 50.0 V  
 Feeding resistor : 1000.0 Ohm  
 Polarity : Normal  
 Meas. Impedance : Zr TBR21



### Receiving Distortion

Commission : 60.860.6.106.01  
 Test Item : H-315  
 Client : --  
 Laboratory : TUUPS HK  
 Test Person : --  
 Date : 7.06.06  
 Time : 11:29.26  
 IUT : \iut  
 Test Spec. : TBR 10 7.18  
 Remark : -

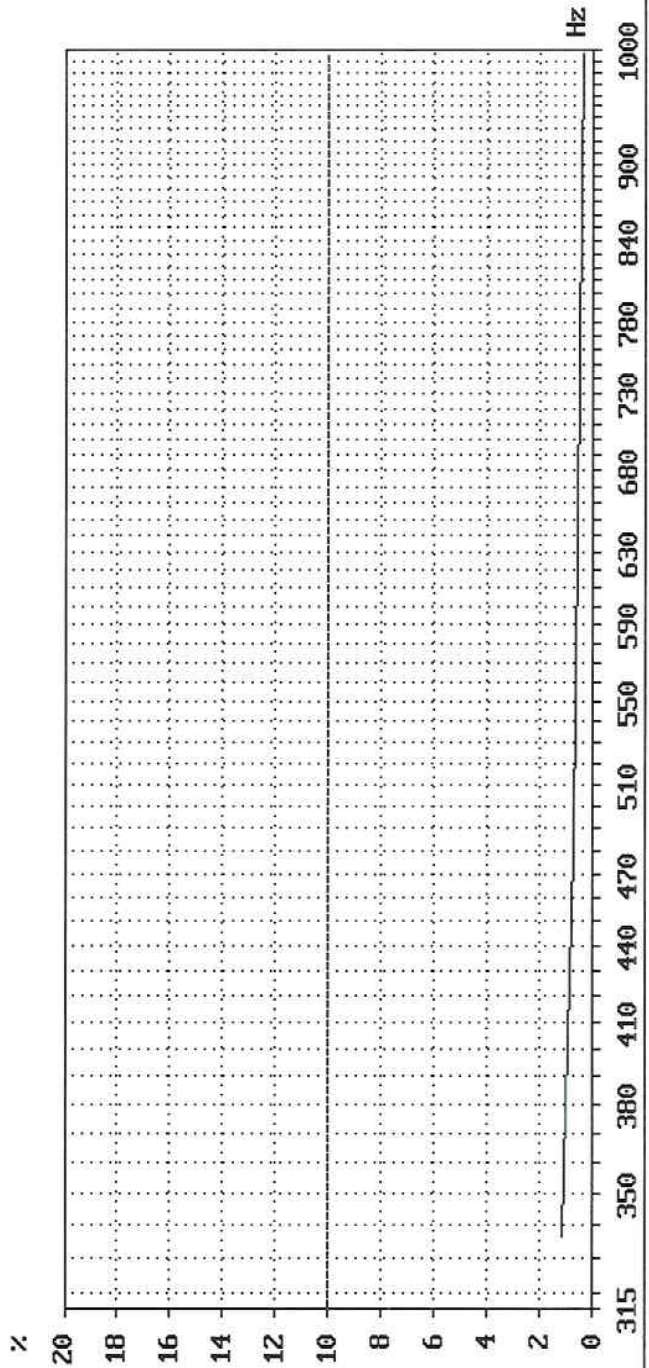
Frequency : 1009.6 Hz  
 Supply Voltage : 50.0 V  
 Feeding resistor : 1000.0 Ohm  
 Zg : Zr TBR21 symmetric  
 Polarity : Normal



### Sidetone Distortion

Commission : 60.860.6.106.01  
 Test Item : H-315  
 Client : --  
 Laboratory : TUVPS HK  
 Test Person : --  
 Date : 7.06.06  
 Time : 11:29.53  
 IUT : \iut  
 Test Spec. : TBR 10 7.19  
 Remark : -

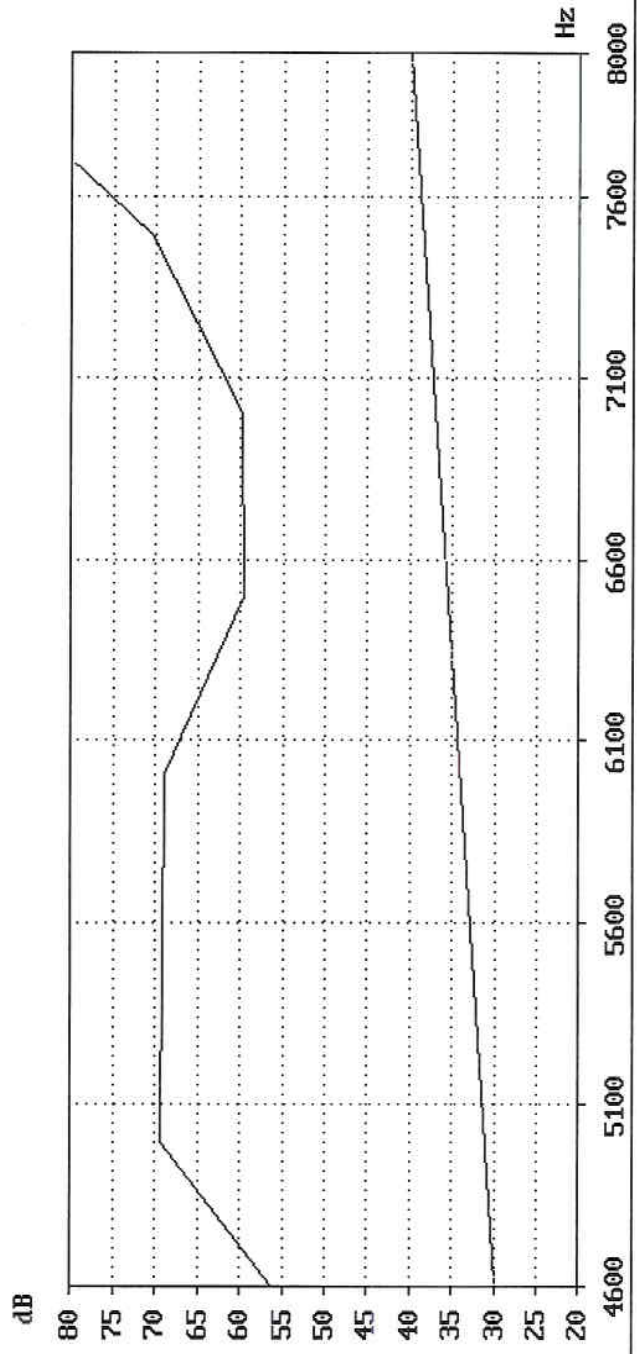
Level : -4.7 dB(Pa)  
 Supply Voltage : 50.0 V  
 Feeding resistor : 1000.0 Ohm  
 Polarity : Normal  
 Termination : Zr TBR21





Out of band (sending)

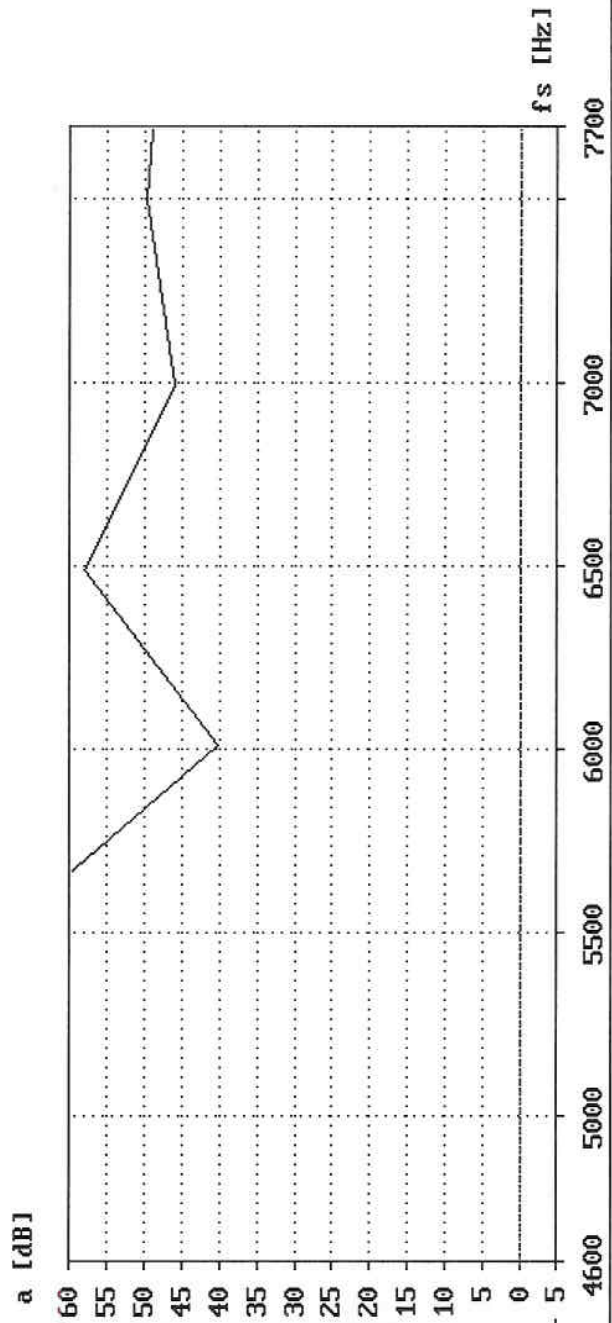
Commission	: 60.860.6.106.01	Level	: -4.7 dB(Pa)
Test Item	: H-315	Calibration Freq.	: 1000.0 Hz
Client	: --	Supply Voltage	: 50.0 V
Laboratory	: TUUPS HK	Feeding resistor	: 1000.0 Ohm
Test Person	: --	Polarity	: Normal
Date	: 7.06.06	Meas. Impedance	: Zr TBR21
Time	: 11:30.23		
IUT	: \iut		
Test Spec.	: TBR 10 7.20		
Remark	: -		





### Out of band receiving

Commission	: 60.860.6.106.01	Level	: -10.0 dB(0.775 V)
Test Item	: H-315	Calibration Freq.	: 1000.0 Hz
Client	: --	Supply Voltage	: 50.0 V
Laboratory	: TUWPS HK	Feeding resistor	: 1000.0 Ohm
Test Person	: --	Polarity	: Normal
Date	: 7.06.06	Zg	: Zr TBR21 symmetrical
Time	: 11:30.59		
IUT	: Niut		
Test Spec.	: TBR 10 7.21		
Remark	: -		



## Protocol for Sending Noise Sa

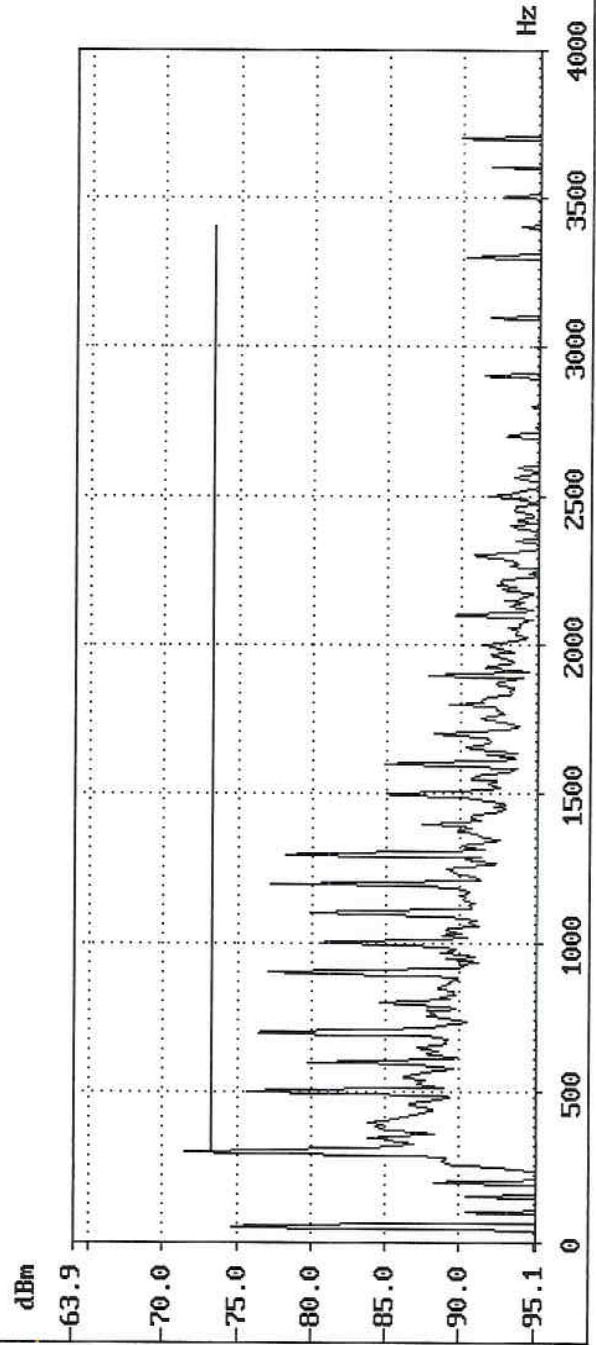
Commission	: 60.860.6.106.01	Supply Voltage	: 50.0 V
Test Item	: H-315	Feeding resistor	: 1000.0 Ohm
Client	: --	Polarity	: Normal
Laboratory	: TUVPS HK	Meas. Impedance	: 600 Ohm
Test Person	: --		
Date	: 7.06.06		
Time	: 11:20.39		
IUT	: \iut		
Test Spec.	: TBR 10 7.22		
Remark	: -		
Limit	: -64.0 dBm		

Noise  
dBm

- 66.0

**Sending Noise (narrow band)**

Commission	: 60.860.6.106.01	Supply Voltage	: 50.0 V
Test Item	: H-315	Feeding resistor	: 1000.0 Ohm
Client	: --	Polarity	: Normal
Laboratory	: TUUPS HK		
Test Person	: --		
Date	: 7.06.06		
Time	: 11:21.05		
Limit	: =<-73dBm		
Test Spec.	: TBR 10 7.23		
Remark	: --		



## Protocol for Receiving Noise Sa

Commission	: 60.860.6.106.01	Supply Voltage	: 50.0 V
Test Item	: H-315	Feeding resistor	: 1000.0 Ohm
Client	: --	Polarity	: Normal
Laboratory	: TUVPS HK	Termination	: 600 Ohm
Test Person	: --		
Date	: 7.06.06		
Time	: 11:22.23		
IUT	: \iut		
Test Spec.	: TBR 10 7.24		
Remark	: -		
Limit	: -54.0 dB(Pa) (A)		

Noise  
dB (Pa) (A)

- 58.5

## Protocol for Sampling Frequency Level (receive) Sa

Commission	: 60.860.6.106.01	Supply Voltage	: 50.0 V
Test Item	: H-315	Feeding resistor	: 1000.0 Ohm
Client	: --	Polarity	: Normal
Laboratory	: TUVPS HK	Termination	: Zr TBR21
Test Person	: --		
Date	: 7.06.06		
Time	: 11:31.46		
IUT	: \iut		
Test Spec.	: TBR 10 7.25		
Remark	: -		
Limit	: -54.0 dB(Pa)	Ambient Noise	: 26.4 dB(A)

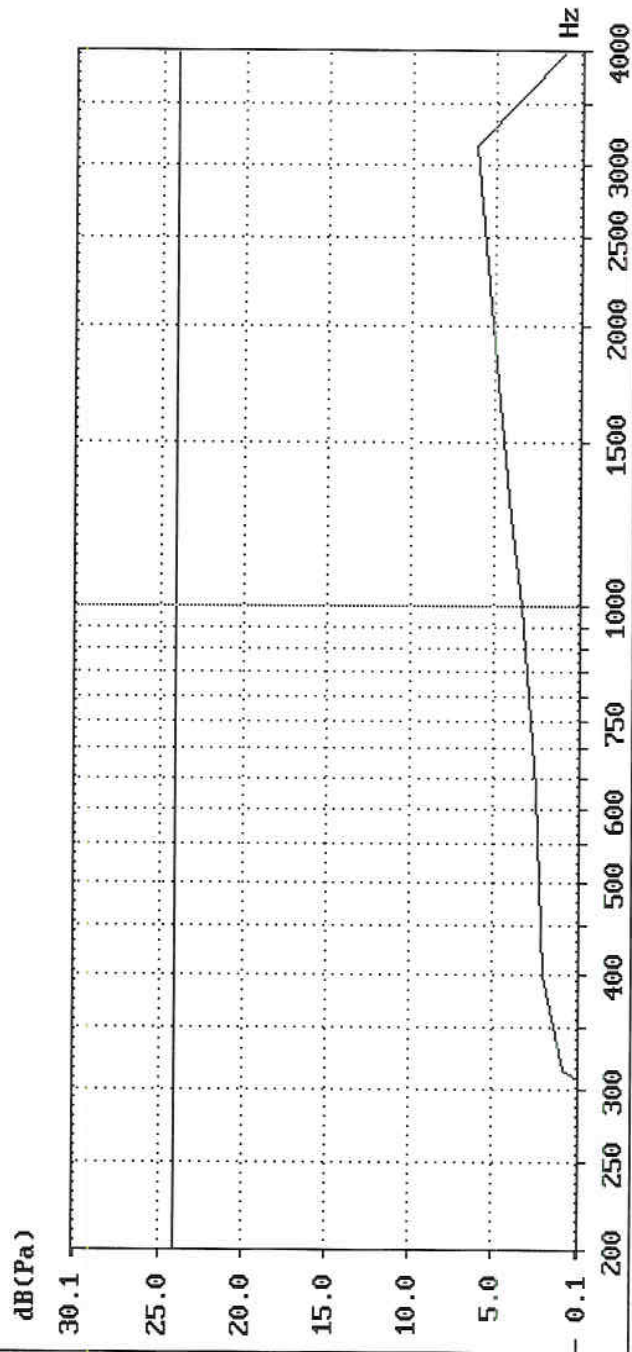
Level of sampling frequency  
dB(Pa)

<- 82

### Acoustic Shock

Commission : 60.860.6.106.01  
 Test Item : H-315  
 Client : --  
 Laboratory : TÜVPS HK  
 Test Person : --  
 Date : 7.06.06  
 Time : 11:32.08  
 IUT : \iut  
 Test Spec. : TBR 10 7.26  
 Remark : -

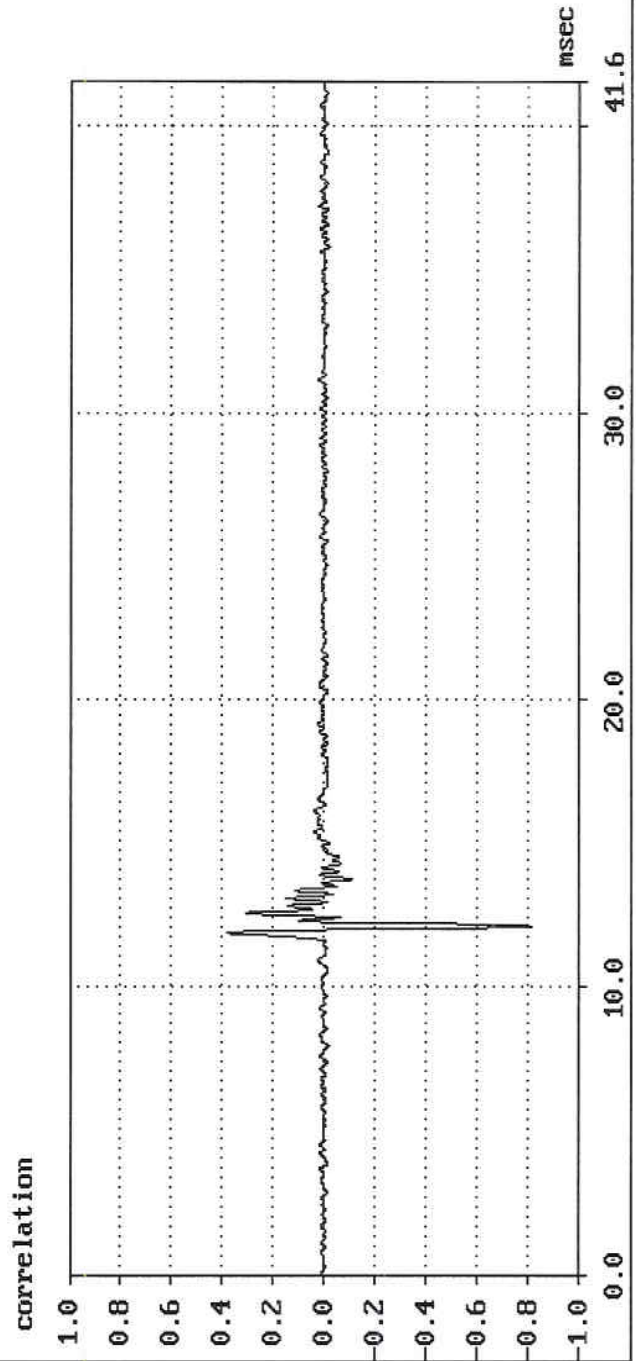
Level : +10.0 dB(LR)  
 Dropping resistor : 1000.0 Ohm  
 Supply Voltage : 50.0 V  
 Current Limit. : 100.0 mA  
 Polarity : Normal





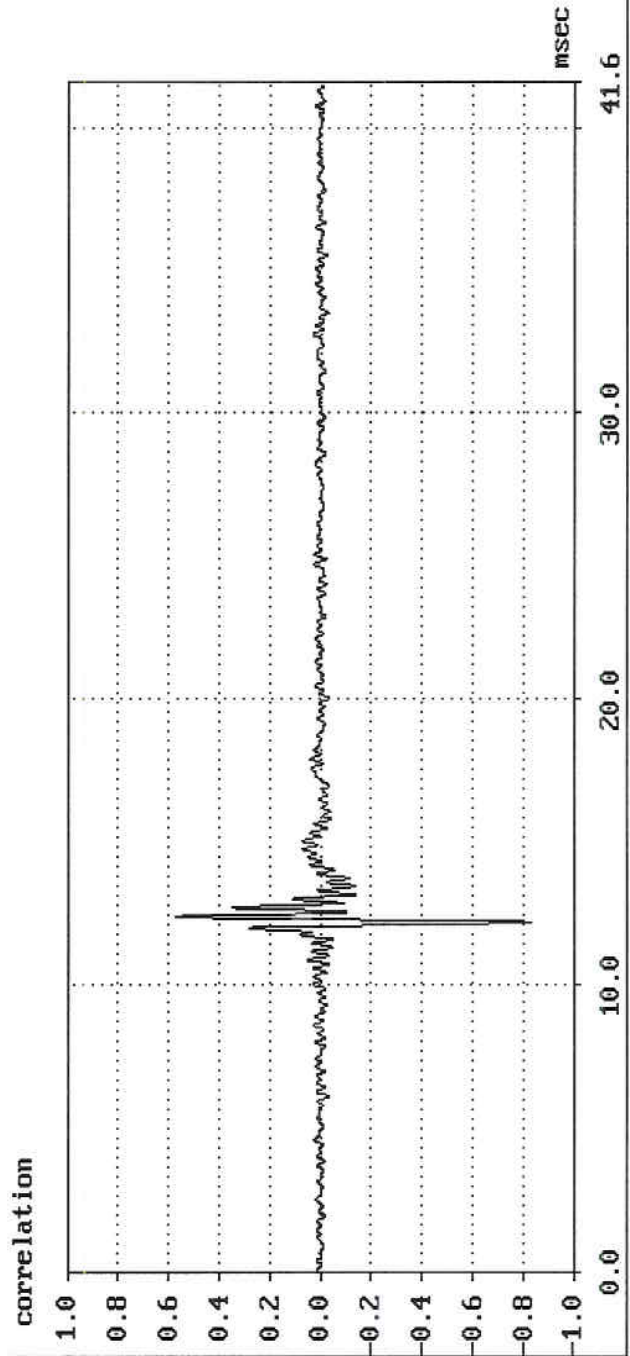
### Sending Delay

Commission : 60.860.6.106.01      Delay : 12.1 msec  
 Test Item : H-315                      Supply Voltage : 50.0 V  
 Client : --                              Feeding resistor : 1000.0 Ohm  
 Laboratory : TÜVPS HK                  Polarity : Normal  
 Test Person : --                        Meas. Impedance : Zr TBR21  
 Date : 7.06.06  
 Time : 11:32.57  
 IUT : Niut  
 Test Spec. : TBR 10 7.27  
 Remark : -



### Receiving Delay

Commission	: 60.860.6.106.01	Delay (total)	: 24.3 msec
Test Item	: H-315	Delay (receiving)	: 12.2 msec
Client	: --	Delay (sending)	: 12.1 msec
Laboratory	: TUVPS HK	Supply Voltage	: 50.0 V
Test Person	: --	Feeding resistor	: 1000.0 Ohm
Date	: 7.06.06	Polarity	: Normal
Time	: 11:33.33	Zg	: Zr TBR21 symmetrical
IUT	: \iut		
Test Spec.	: TBR 10 7.27		
Remark	: -		



Protocol for Echo Control Requirement 1 Sa

Commission	: 60.860.6.106.01	Supply Voltage	: 50.0 V
Test Item	: H-315	Feeding resistor	: 1000.0 Ohm
Client	: --	Termination	: Zr TBR21
Laboratory	: TUVPS HK	Line	: 0.4 mm 0.0 km
Test Person	: --	Evaluation	: 15 ms ...30 ms
Date	: 7.06.06		
Time	: 11:35.36		
Test Spec.	: TBR 10 7.30		
Remark	: -		
Limit	: > 24 dB		

rel. Level dB	TELR dB
-10	52.4
-20	44.8
-25	40.7

Protocol for Echo Control Requirement 1 Sa

Commission	: 60.860.6.106.01	Supply Voltage	: 50.0 V
Test Item	: H-315	Feeding resistor	: 1000.0 Ohm
Client	: --	Termination	: Zr TBR 38 a)
Laboratory	: TUVPS HK	Line	: 0.4 mm 0.0 km
Test Person	: --	Evaluation	: 15 ms ...30 ms
Date	: 7.06.06		
Time	: 11:37.01		
Test Spec.	: TBR 10 7.30		
Remark	: -		
Limit	: > 24 dB		

rel. Level dB	TELR dB
-10	52.5
-20	44.3
-25	40.7

Protocol for Echo Control Requirement 1 Sa

Commission	: 60.860.6.106.01	Supply Voltage	: 50.0 V
Test Item	: H-315	Feeding resistor	: 1000.0 Ohm
Client	: --	Termination	: Zr TBR 38 c)
Laboratory	: TUVPS HK	Line	: 0.4 mm 0.0 km
Test Person	: --	Evaluation	: 15 ms ...30 ms
Date	: 7.06.06		
Time	: 11:38.27		
Test Spec.	: TBR 10 7.30		
Remark	: -		
Limit	: > 24 dB		

rel. Level dB	TELR dB
-10	51.8
-20	44.2
-25	40.2

Protocol for Echo Control Requirement 2 Sa

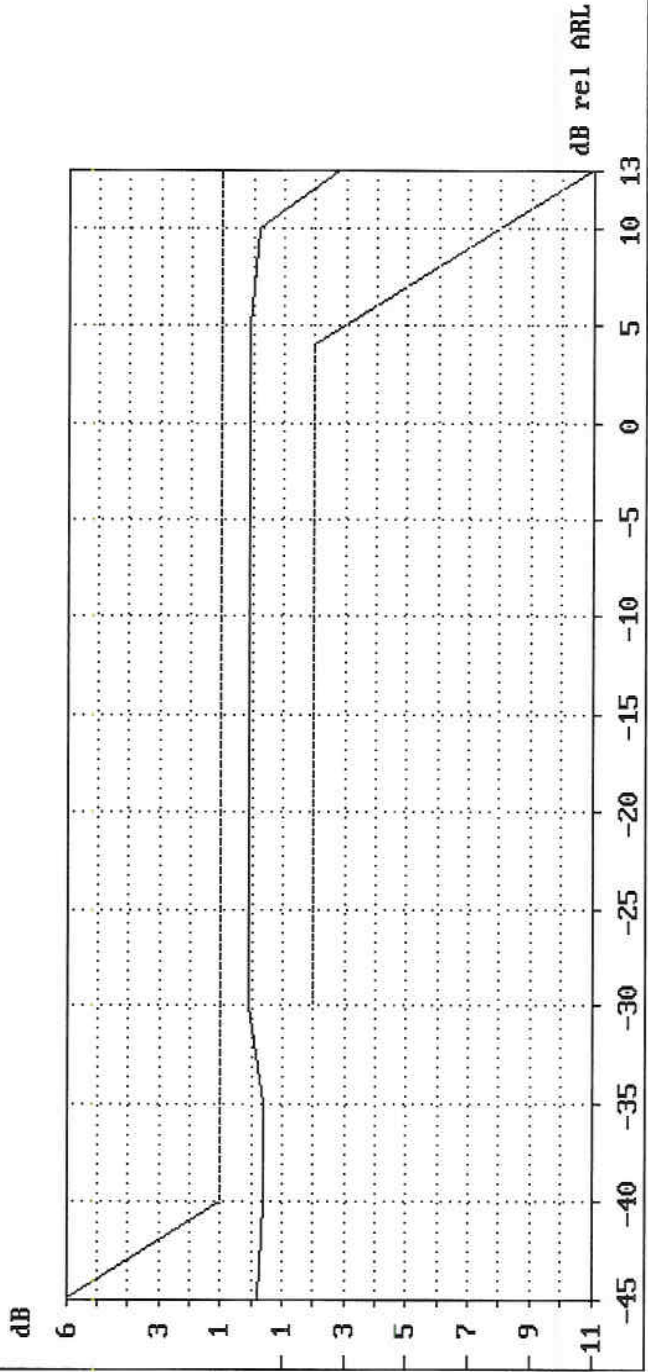
Commission	: 60.860.6.106.01	Supply Voltage	: 50.0 V
Test Item	: H-315	Feeding resistor	: 1000.0 Ohm
Client	: --	Zn	: Zr TBR21
Laboratory	: TUVPS HK	Delayline	: 60.0 msec
Test Person	: --	Attenuation	: 20.0 dB
Date	: 7.06.06		
Time	: 11:39.50		
IUT	: \iut		
Test Spec.	: TBR 10 7.30.2.2.2		
Remark	: -		
Limit	: 34.0 .. 100.0 dB		

rel. Level dB	TELR dB
-10	46
-20	45
-25	44



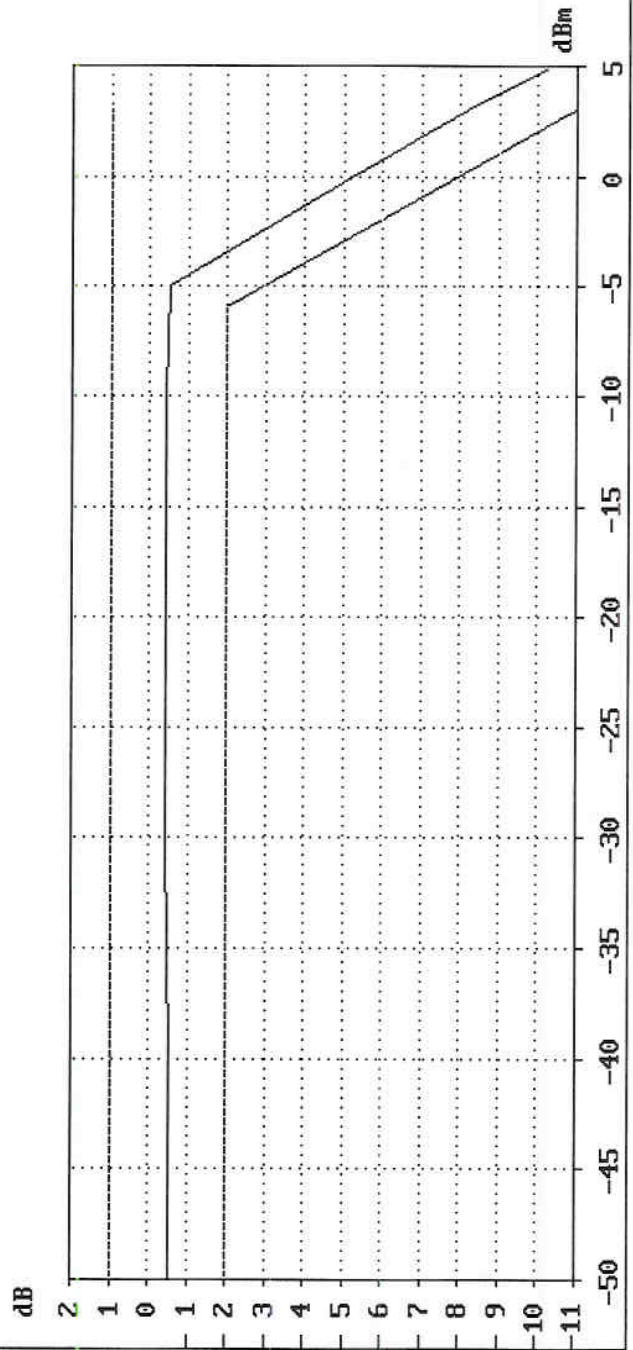
### Variation Of Gain (sending)

Commission	: 60.860.6.106.01	Frequency	: 1009.6 Hz
Test Item	: H-315	Supply Voltage	: 50.0 V
Client	: --	Feeding resistor	: 1000.0 Ohm
Laboratory	: TUWPS HK	Polarity	: Normal
Test Person	: --		
Date	: 7.06.06		
Time	: 11:34.06		
IUT	: \iut		
Test Spec.	: TBR 10 7.31		
Remark	: -		



### Variation Of Gain (receiving)

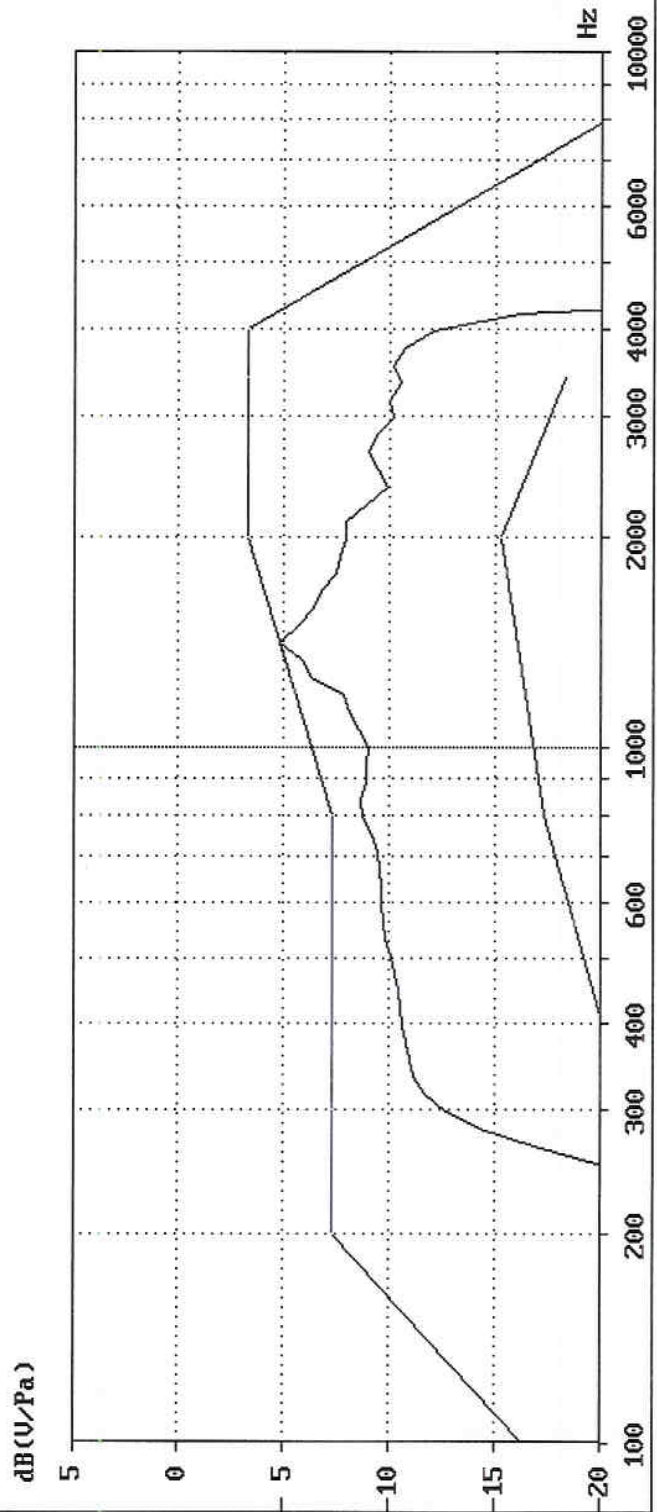
Commission : 60.860.6.106.01      Frequency : 1009.6 Hz  
 Test Item : H-315                      Supply Voltage : 50.0 V  
 Client : --                                Feeding resistor : 1000.0 Ohm  
 Laboratory : TUVPS HK                Polarity : Normal  
 Test Person : --  
 Date : 7.06.06  
 Time : 11:34.41  
 IUT : Niut  
 Test Spec. : TBR 10 7.32  
 Remark : -



# Sending sensitivity/SLR

Commission : 60.860.6.106.01      Gen. Level : -4.7 dB(Pa)  
 TEUT : H-315                              Meas Impedance : 600 Ohm  
 Manufacturer: --                          Feeding Resistor : 1000.0 Ohm  
 Operator : --                                Feeding Voltage : 50.0 V  
 Date : 7.06.06                              Feeding bridge : tbr38  
 Time : 16:34.02                            Current limit : 60.0 mA  
 Reference : TBR 38 4.2.1.1/4.2.2.1 / TBR10 7.33.2.1  
 Remark : -                                    Polarity : Normal

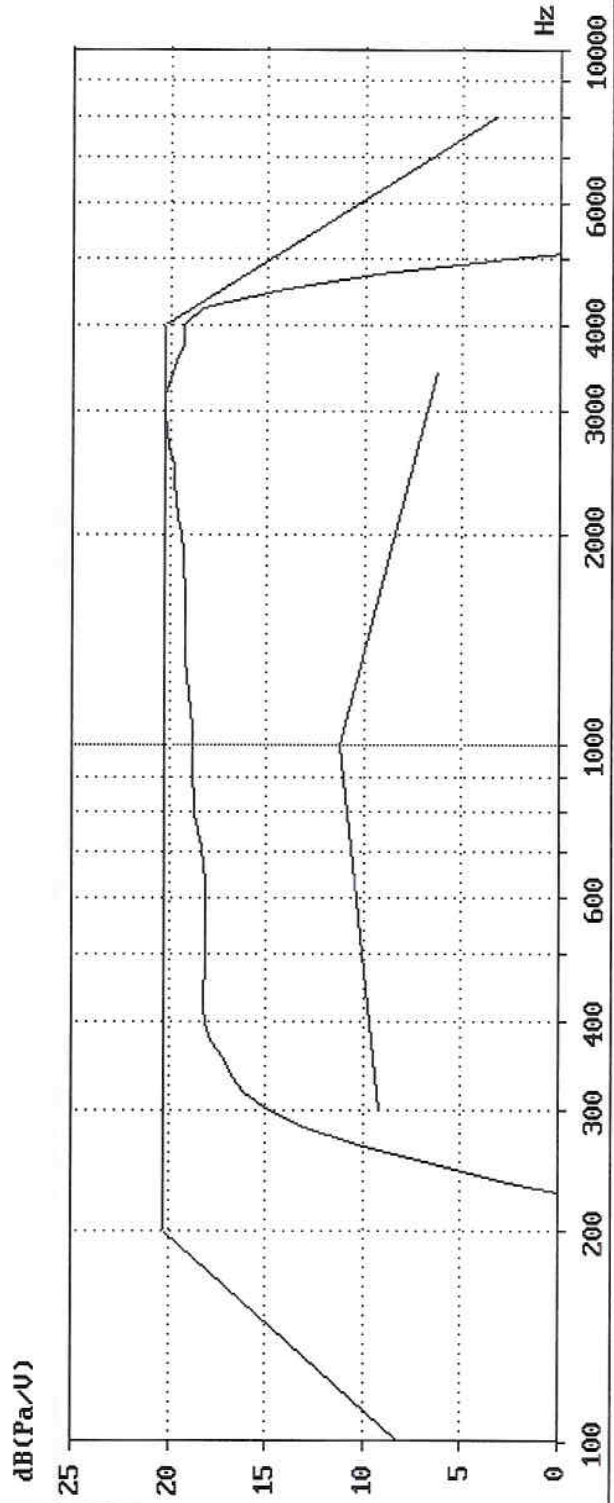
**Tol. mask violations: 0**



# Receiving sensitivity/RLR

Commission : 60.860.6.106.01      Gen. Level : -12.0 dBV  
 TEUT : H-315      Generator impedance: 600 Ohm symmetrical  
 Manufacturer: --      Feeding resistor : 1000.0 Ohm  
 Operator : --      Feeding voltage : 50.0 V  
 Date : 7.06.06      Feeding Bridge : tbr38      Coupler: IEC 318  
 Time : 16:34.46      Current limitation : 60.0 mA  
 Reference : TBR 38 4.2.1.2/4.2.2.2 Polarity : Normal  
               TBR10 7.33.2.1  
 Remark : -

Tol. mask violations: 0



Protocol for Sending loudness rating Auto

Sending loudness rating Auto

Date	: 7.06.06	Current limitation	: 100.0 mA
Time	: 16:35.15	Feeding voltage	: 50.0 V
Operator	: --	Feeding bridge	: tbr38
Commission	: 60.860.6.106.01	Receiver impedance	: 600 Ohm
TEUT	: H-315	Measurement points	: 81
Manufacturer:	--	Artificial line	: off 0.00
Reference	: TBR 38 4.2.2.1 / TBR10 7.33.2.2		
Remark	: -		

SLR [dB (V/Pa)]	Limit [dB]	Rf [Ω]	p0 [dB (Pa)]	Polarity
+5.1	-1.0 .. 10.0	2800	-4.7	Normal
+5.1	-1.0 .. 10.0	2800	-4.7	Inverted
+4.9	-1.0 .. 10.0	1000	-4.7	Normal
+4.9	-1.0 .. 10.0	1000	-4.7	Inverted
+4.9	-1.0 .. 10.0	500	-4.7	Normal
+4.9	-1.0 .. 10.0	500	-4.7	Inverted



Protocol for Receiving loudness rating Auto					
Receiving loudness rating Auto					
Date	: 7.06.06	Feeding voltage	: 50.0 V		
Time	: 16:36.58	Current limitation	: 100.0 mA		
Operator	: --	Feeding bridge	: tbr38		
Commission	: 60.860.6.106.01	Generator impedance	: 600 Ohm symmetrical		
TEUT	: H-315	Measurement points	: 81		
Manufacturer	: --	Coupler	: IEC 318		
Reference	: TBR 38 4.2./TBR10 7.33.2.2	Artificial line	: off 0.00		
Remark	: -				
RLR [dB (Pa/V)]	Limits [dB]	Rf [Ω]	pJ [dBV]	Polarity	
-6.8	-12.0 .. -1.0	2800	-12.0	Normal	
-6.7	-12.0 .. -1.0	2800	-12.0	Inverted	
-6.6	-12.0 .. -1.0	1000	-12.0	Normal	
-6.6	-12.0 .. -1.0	1000	-12.0	Inverted	
-6.6	-12.0 .. -1.0	500	-12.0	Normal	
-6.6	-12.0 .. -1.0	500	-12.0	Inverted	



Protocol for Sidetone masking rating Auto

Sidetone masking rating Auto

Date	: 7.06.06	Current limitation	: 60.0 mA
Time	: 16:38.06	Feeding voltage	: 50.0 V
Operator	: --	Feeding bridge	: tbr38
Commission	: 60.860.6.106.01	Measurement points	: 81
TEUT	: H-315	Coupler	: IEC 318
Manufacturer:	--	cSLR	: -
Reference	: TBR 38 4.2.3 / TBR10 7.33.2.3	cRLR	: -

Remark : -

cSTMR [dB]	Limit [dB]	STMR [dB]	Rf [Ω]	p0 [dB(Pa)]	Polarity	Termination
19.0	≈ 7.0	19.0	2800	-4.7	Normal	TBR 38 c)
19.5	≈ 7.0	19.5	2800	-4.7	Inverted	TBR 38 c)
29.7	≈ 10.0	29.7	1000	-4.7	Normal	TBR 21
29.9	≈ 10.0	29.9	1000	-4.7	Inverted	TBR 21
19.3	≈ 5.0	19.3	500	-4.7	Normal	TBR 38 a)
19.6	≈ 5.0	19.6	500	-4.7	Inverted	TBR 38 a)

Protocol for Harmonic distortion sending Auto

Harmonic distortion sending Auto

Date	: 7.06.06	Feed current/limit	: 100.0 mA
Time	: 16:39.52	Feeding Voltage	: 50.0 V
Operator	: --	Feeding bridge	: tbr38
Commission	: 60.860.6.106.01	Limit	: ≤ 7.00 %
TEUT	: H-315	Harmonics	: 5
Manufacturer:	--	Meas impedance	: 600 Ohm
Reference	: TBR 38 4.2.4.1		
	: TBR10 7.33.2.4		
Remark	: -		

kmJ [%]	Fundamental [dBV]	Frequency [Hz]	pm [dB (Pa)]	Rf [Ω]	Polarity
0.49	-16.1	336	-4.7	2800	Normal
0.39	-15.2	480	-4.7	2800	Normal
0.31	-13.8	1009	-4.7	2800	Normal
0.36	-16.2	336	-4.7	2800	Inverted
0.49	-15.2	480	-4.7	2800	Inverted
0.74	-13.8	1009	-4.7	2800	Inverted
0.39	-16.0	336	-4.7	500	Normal
0.37	-15.1	480	-4.7	500	Normal
0.43	-13.7	1009	-4.7	500	Normal
0.31	-16.1	336	-4.7	500	Inverted
0.52	-15.1	480	-4.7	500	Inverted
0.23	-13.7	1009	-4.7	500	Inverted

Protocol for Harmonic distortion sending Auto

Harmonic distortion sending Auto

Date	: 7.06.06	Feed current/limit	: 100.0 mA
Time	: 16:41.07	Feeding Voltage	: 50.0 V
Operator	: --	Feeding bridge	: tbr38
Commission	: 60.860.6.106.01	Limit	: ≤ 10.00 %
TEUT	: H-315	Harmonics	: 5
Manufacturer:	--	Meas impedance	: 600 Ohm
Reference	: TBR 38 4.2.4.1		
	: TBR10 7.33.2.4		
Remark	: -		

kmJ [%]	Fundamental [dBV]	Frequency [Hz]	pm [dB (Pa)]	Rf [Ω]	Polarity
1.11	-4.0	1009	+5.0	2800	Normal
0.50	-4.1	1009	+5.0	2800	Inverted
0.69	-4.0	1009	+5.0	500	Normal
0.61	-3.9	1009	+5.0	500	Inverted

Protocol for Harmonic distortion receiving Auto

Harmonic distortion receiving Auto

Date	: 7.06.06	Feed current/limit	: 100.0 mA
Time	: 16:41.50	Feeding Voltage	: 50.0 V
Operator	: --	Feeding bridge	: tbr38
Commission	: 60.860.6.106.01	Limit	: ≤ 7.00 %
TEUT	: H-315	Harmonics	: 5
Manufacturer:	--	Sender impedance	: 600 Ohm symmetrical
Reference	: TBR 38 4.2.4.2		
	: TBR10 7.33.2.4		
Remark	: -		

kJe [%]	Fundamental [dB (Pa)]	Frequency [Hz]	pJ [dBV]	Rf [Ω]	Polarity
0.18	-0.9	336	-12.0	2800	Normal
0.21	+0.1	480	-12.0	2800	Normal
0.37	+0.8	1009	-12.0	2800	Normal
0.21	-1.2	336	-12.0	2800	Inverted
0.15	+0.0	480	-12.0	2800	Inverted
0.21	+0.8	1009	-12.0	2800	Inverted
0.14	-1.3	336	-12.0	500	Normal
0.17	-0.1	480	-12.0	500	Normal
0.38	+0.7	1009	-12.0	500	Normal
0.17	-1.3	336	-12.0	500	Inverted
0.12	-0.1	480	-12.0	500	Inverted
0.38	+0.7	1009	-12.0	500	Inverted



Protocol for RLR: Linearity/Var. of gain/DC feed var.

RLR: Linearity/Var. of gain/DC feed var.

Date	: 7.06.06	Feeding voltage	: 50.0 V
Time	: 16:44.27	Current limitation	: 100.0 mA
Operator	: --	Feeding bridge	: tbr38
Commission	: 60.860.6.106.01	Generator impedance	: 600 Ohm symmetrical
TEUT	: H-315	Measurement points	: 81
Manufacturer	: --	Coupler	: IEC 318
Reference	: TBR 38 4.2.5.2/ TBR10 7.33.2.5	Artificial line	: off 0.00

Remark : -

No.	RLR [dB (Pa/V)]	D RLR [dB]	Limits [dB]	ref.meas [No.]	Rf [Ω]	pJ [dBV]	Polarity
1	-6.7		-12.0 .. -1.0		1000	-12.0	Normal
2	-6.6		-12.0 .. -1.0		1000	-12.0	Inverted
3	-6.4	+0.3	-2.0 .. 2.0	1	1000	-32.0	Normal
4	-6.4	+0.2	-2.0 .. 2.0	2	1000	-32.0	Inverted



Protocol for Noise level sending

Noise level sending

Date	: 7.06.06	Current Limitation	: 100.0 mA
Time	: 16:45.29	Feeding Voltage	: 50.0 V
Operator	: --	Feeding Bridge	: tbr38
Commission	: 60.860.6.106.01	Meas Impedance	: 600 Ohm
TEUT	: H-315	Filter	: Psophometric
Manufacturer:	--	Limit	: $\leq -60.0$ dBV
Reference	: TBR10 7.33.2.6	Weighting	: $\tau = 200$ msec

Remark : -

ps [dBV]	Rf [ $\Omega$ ]	Polarity
-68.0	2800	Normal
-68.2	2800	Inverted
-68.0	1000	Normal
-68.0	1000	Inverted
-69.0	500	Normal
-68.0	500	Inverted

Protocol for Noise level receiving			
Noise level receiving			
Date	: 7.06.06	Current Limitation	: 100.0 mA
Time	: 16:46.37	Feeding Voltage	: 50.0 V
Operator	: --	Feeding Bridge	: tbr38
Commission	: 60.860.6.106.01	Weighting	: $\tau = 200$ msec
TEUT	: H-315	Filter	: A-Filter
Manufacturer:	--	Limit	: $\leq -49.0$ dBPa (A)
Reference	: TBR 38 4.2.6.2	Termination	: 600 Ohm
	TBR10 7.33.2.6		
Remark	: -		
pe [dBPa (A)]	Rf [ $\Omega$ ]	Polarity	
-59.0	2800	Normal	
-59.5	2800	Inverted	
-59.4	500	Normal	
-59.8	500	Inverted	

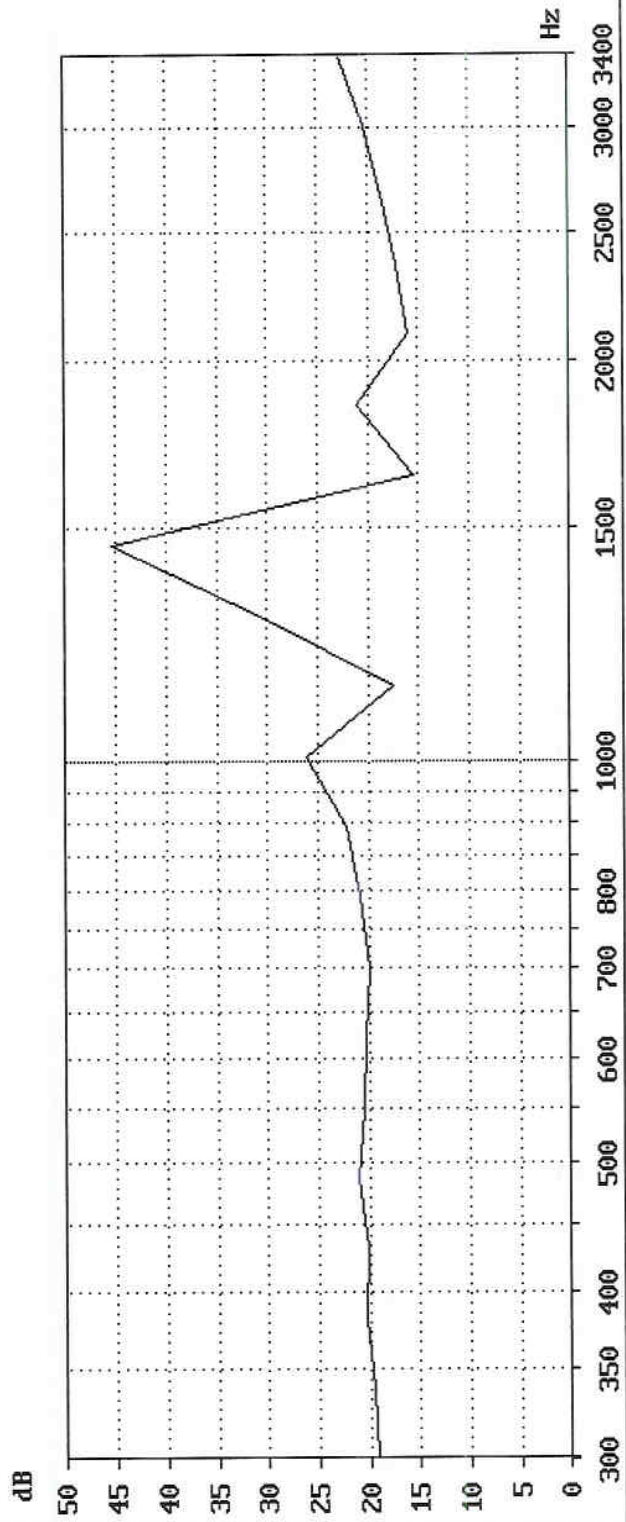
# Echo return loss (Sinus)

Commission : 60.860.6.106.01  
 TEUT : H-315  
 Manufacturer : --  
 Operator : --  
 Date : 7.06.06  
 Time : 16:49.41  
 Reference : TBR 38 4.2.8  
 TBR10 7.33.2.8

Level ps : -18.0 dBV  
 Feeding resistor : 500.0 Ohm  
 Feeding Voltage : 50.0 V  
 Current Limitation : 60.0 mA  
 Feeding Bridge : tbr38  
 Polarity : Normal  
 Bridge impedance Zn: TBR 21

ERL : 19.7 dB  
 Limit : ≥ 14.0 dB  
 cSLR : --  
 cRLR : --

Remark : --



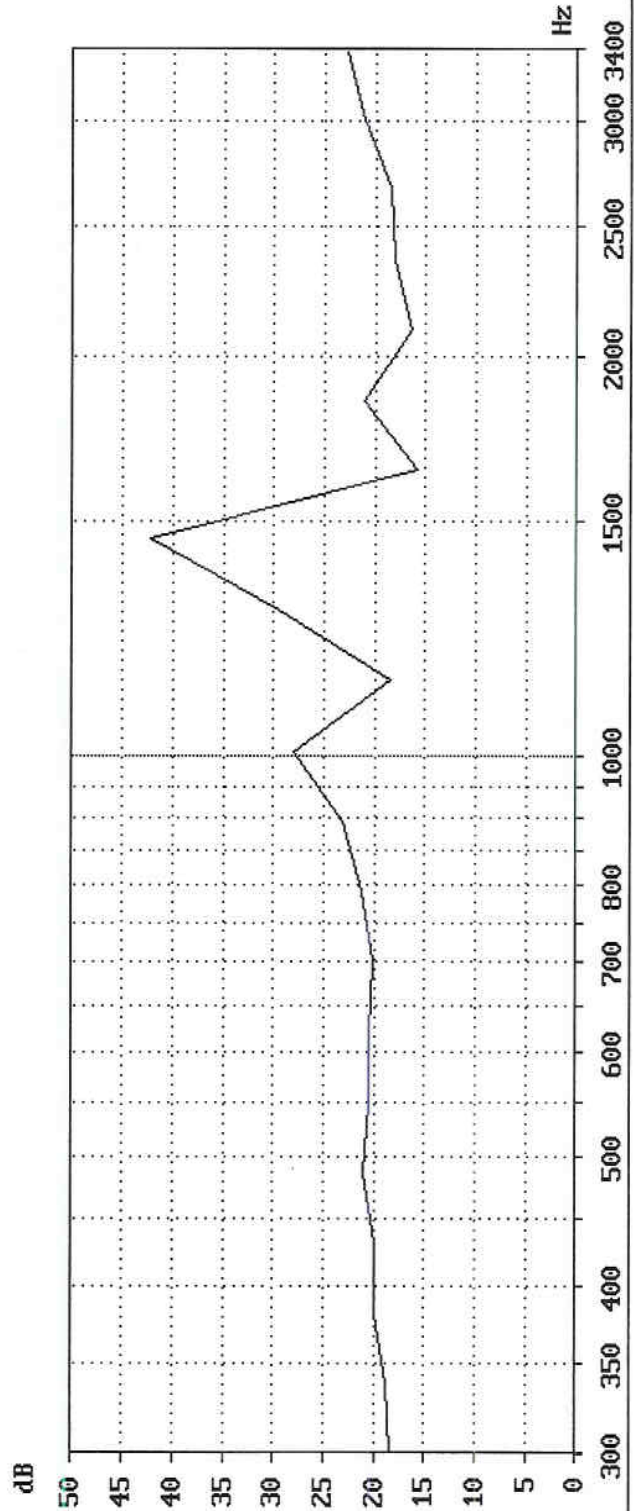
# Echo return loss (Sinus)

Commission : 60.860.6.106.01  
 TEUT : H-315  
 Manufacturer: --  
 Operator : --  
 Date : 7.06.06  
 Time : 16:50.41  
 Reference : TBR 38 4.2.8  
 TBR10 7.33.2.8

Level ps : -18.0 dBV  
 Feeding resistor : 2800.0 Ohm  
 Feeding Voltage : 50.0 V  
 Current Limitation : 60.0 mA  
 Feeding Bridge : tbr38  
 Polarity : Inverted  
 Bridge impedance Zn: TBR 21

ERL : 19.9 dB  
 Limit : > 14.0 dB  
 cSLR : -  
 CRLR : -

Remark : -



## **ANNEX D**

### **CONSTRUCTION DATA FORM**

**(PLEASE REFER TO [ETSI ES 203 021-1,2,3](#))**

### **TEST REPORT)**

**ANNEX E**

**TE PHOTOGRAPH**

**(PLEASE REFER TO [ETSI ES 203 021-1,2,3](#)**

**TEST REPORT)**