



# **Loudspeaker HPFS Ø28 mm with rear pad**

## **WD11903Y8HI**

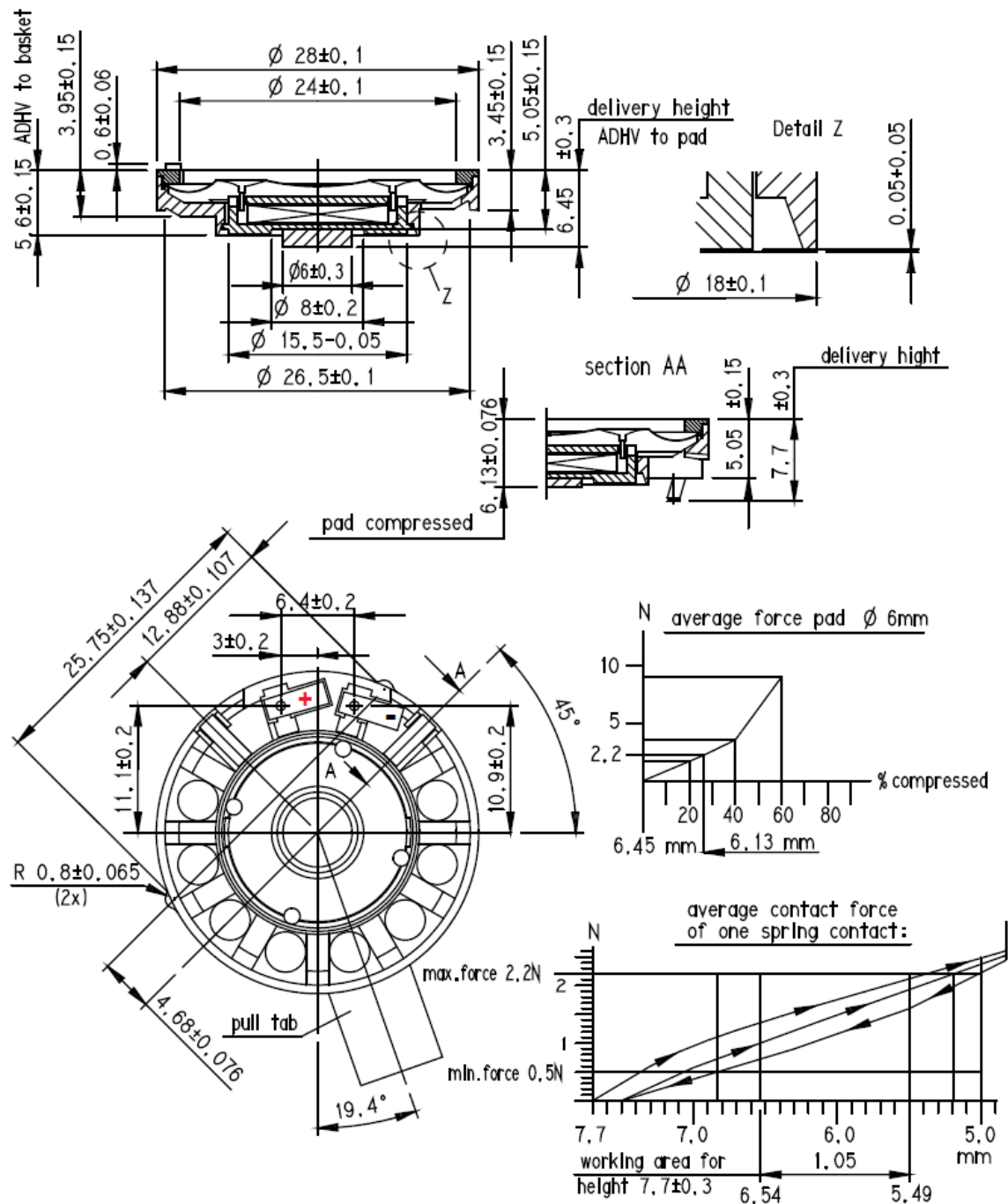
### **Revision**

<b>Date</b>	<b>Version</b>	<b>Status</b>	<b>Changes</b>	<b>Approver</b>
2015/02/09	A	Released	First release	NH
2016/12/28	B	Released	Update temperature & packing	LC
2017/08/31	C	Released	Correct drawing with pad + New logo	LC/LD
2018/03/28	D	Released	Update pad thickness	LC
2020/02/19	E	Released	New diaphragm + new damper	GDC

# 1. Mechanical Characteristics

## 1.1. Mechanical Drawing

Drawing not to scale I  
Loudspeaker 28 mm



## 1.2. Part Marking/Labeling

The units have a serial number on bottom (pot) side

Example 13002I 1342 1121 UA :

**13002I** – digits of the core speaker

I = PEI membrane

1 – last digit of year

34 – week

2 – day

11 – hour

21 – minute

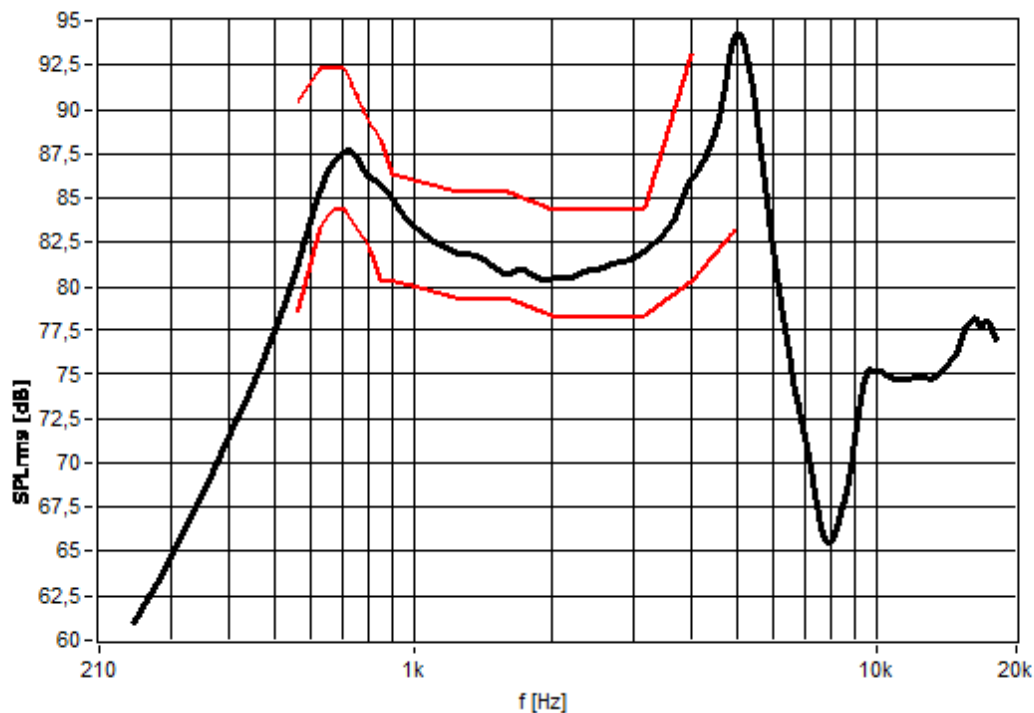
UA – Ukraine

## 1.3. Material List

Basket	Polycarbonate (PC)
Spring contacts	Copper alloy, selective gold plating and selective tin plating over nickel underplating
Membrane	Polyetherimide (PEI)
Voice coil wire	Copper alloy
Magnet	Nd Fe B
Pot and pole plate	Soft magnetic iron
Damper foil	PC Compound
Gasket	PC ring with adhesive VP 6899
Pad	Poron 4701 - 30-25 PFC / Ø6mm
Connection	Spring contact, parallel to PCB
Mass of speaker (g)	4,9

## 2. Electrical and Acoustic Specifications

### 2.1. Frequency response



Typical frequency response on IEC baffle measured at 500 mW / 1 m

Tolerance window (floating limits)		
f [Hz]	lower limit [dB]	upper limit [dB]
560	71	83
630	76	85
670	77	85
710	77	85
800	75	82
850	73	81
900	73	79
1250	72	78
1600	72	78
2000	71	77
2500	71	77
3150	71	77
4000	73	86
5000	76	-

## 2.2. Electro-Acoustic Parameters acc. IEC268-5

### 2.2.1. Loudspeaker unmounted

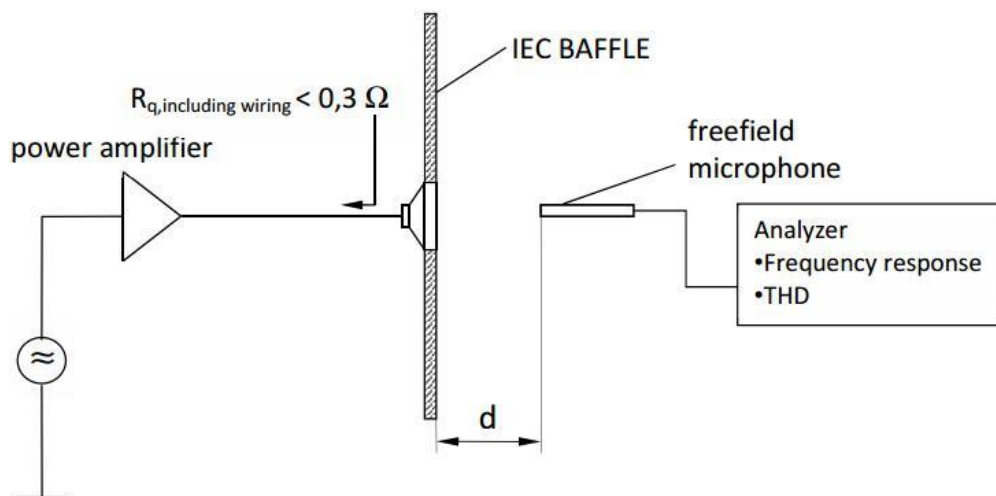
1. RATED IMPEDANCE	Z:	8 $\Omega$
2. VOICE COIL RESISTENCE	R:	7.3 $\Omega^{+10\% -4\%}$
3. RESONANCE FREQUENCY	f <sub>0</sub> :	700Hz $\pm 15\%$

### 2.2.2. Loudspeaker mounted in baffle

1. CHARACT. SENSITIVY	83.5 $\pm 2$ dB
AT 500mW IN DISTANCE d=1m	
IN THE FREQUENCY RANGE	500Hz – 2 kHz
2. THD	$\leq 15\%$ (500mW; 700Hz-3kHz)
3. MAX. SHORT TERM POWER	1 W (IEC)
4. MAX. NOISE POWER(PHC)	0.5W (IEC)
(CONTINUOUS)	

Frequency range in telecom application: 300Hz - 3.4 kHz

## 2.3. Measurement Setup



### 3. Environmental conditions

Generally the function is guaranteed in a temperature range of -40°C to +85°C.

Transportation and storage in this same range does not cause remaining changes on the transducer.

### 4. Packaging

Transducers per <b>tray</b>	48
Transducers per box	768
Box size (in cm)	61 x 41 x 25
Max. boxes per pallet	16
Transducer mass	4.9g
Net weight / box	4kg
Gross weight / box	7kg