

	DATE	2015.10.15	SPECIFICATION	OLE WOLFF INTERNATIONAL
	PAGE	1/14		http://www.owolff.com
	CN	MODEL NAME: OWR-081525L-32B		Rev.2

8x15x2.5 (HAC) Receiver Unit (RoHS & Halogen Free Compliant)

CUSTOMER No.	
MODEL NAME	OWR-081525L-32B
NOTE	

	DRAWN	CHECKED	APPROVED
CUSTOMER SIGN			
OLE WOLFF SIGN			

REVISION NOTES:

DATE	DESCRIPTION OF REVISION	Rev. No.
2015.01.13	Initial version	Rev.0
2015.03.02	Change the SPL from 91dB to 92.5 dB	Rev.1
2015.09.16	Change the YOKE&PCB layout	Rev.2

OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 6046 Cornerstone Ct. West Suite 105 San Diego, CA 92121 USA TEL: +1 858 45 00 555 FAX: +1 858 45 00 508	OLE WOLFF ELEKTRONIK GmbH Schnackenburgallee 14 D-22525 Hamburg GERMANY TEL: +49 (0) 407669070 FAX: +49 (0) 40772929	OLE WOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26A,3F P.O. Box 257 FIN-40101 Jyväskylä FINLAND TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit 1-5, 10/F., Peninsula Tower, 538 Castle Peak Road, Lai Chi Kok, Kowloon HONG KONG TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF ELECTRONICS (M) SDN. BHD. 7, Persiaran Bukit Kecil 1, Taman Sri Nibong, 11900 Bayan Lepas, Penang MALAYSIA TEL: +604 646 9573 FAX: +604 643 0981
---	--	--	---	---	---	---

	DATE	2015.10.15	SPECIFICATION	OLE WOLFF INTERNATIONAL
	PAGE	2/14		http://www.owolff.com
	CN	MODEL NAME: OWR-081525L-32B		Rev.2

1. SCOPE

This wideband with high sensitivity receiver is special designed for mobile phone or other high quality sound needed applications.

2. TEST CONDITIONS

TEMPERATURE : 18°C ~ 22°C

HUMIDITY : 65±5% (R.H.)

ATMOSPHERE : 860 ~ 1060 hPa

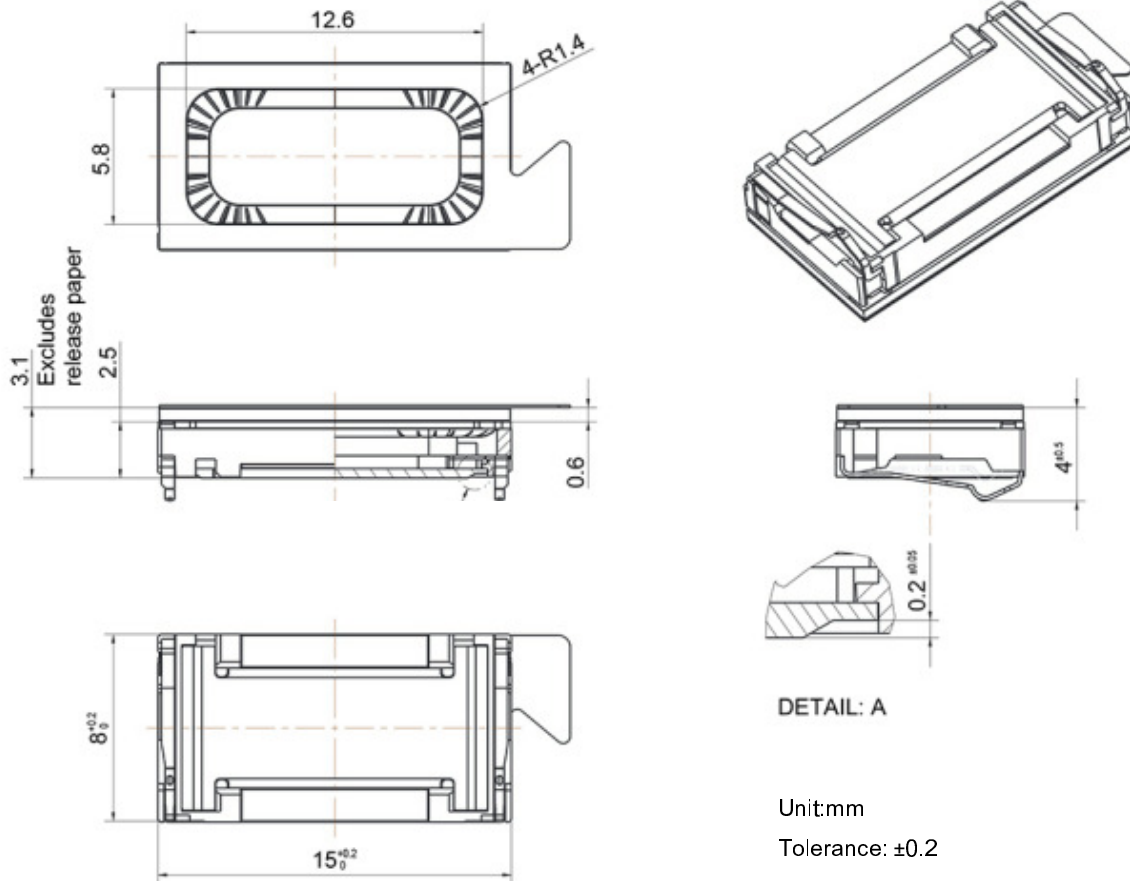
3. GENERAL REQUIREMENTS

OPERATING TEMPERATURE RANGE : -20°C ~ 60° C

STORAGE TEMPERATUR RANGE : -30°C ~ 70° C

4. MECANICAL LAYOUT & DIMENSIONS

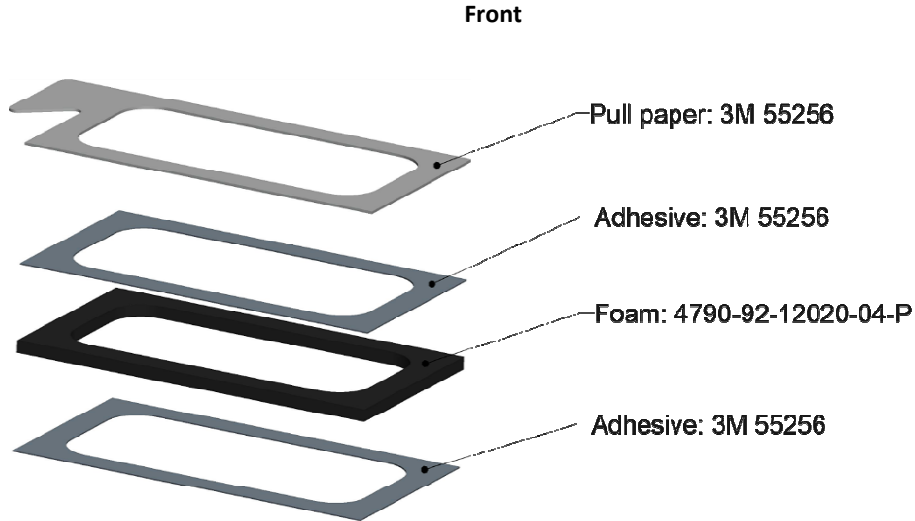
4.1 MAIN DIMENSIONS



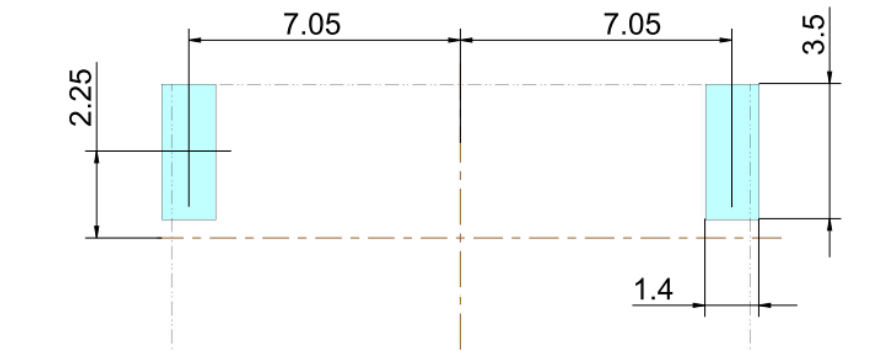
OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 6046 Cornerstone Ct.West Suite 105 San Diego, CA 92121 USA TEL: +1 858 45 00 555 FAX: +1 858 45 00 508	OLE WOLFF ELEKTRONIK GmbH Schnackenburgallee 14 D-22525 Hamburg GERMANY TEL: +49 (0) 407669070 FAX: +49 (0) 40772929	OLE WOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26A,3F P.O. Box 257 FIN-40101 Jyväskylä FINLAND TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit 1-5, 10/F., Peninsula Tower, 538 Castle Peak Road, Lai Chi Kok, Kowloon HONG KONG TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF ELECTRONICS (M) SDN. BHD. 7, Persiaran Bukit Kecil 1, Taman Sri Nibong, 11900 Bayan Lepas, Penang MALAYSIA TEL: +604 646 9573 FAX: +604 643 0981
---	---	--	---	---	---	---

	DATE	2015.10.15	SPECIFICATION	OLE WOLFF INTERNATIONAL
	PAGE	3/14		http://www.owolff.com
	CN	MODEL NAME: OWR-081525L-32B		Rev.2

4.2 FOAM MATERIAL LIST



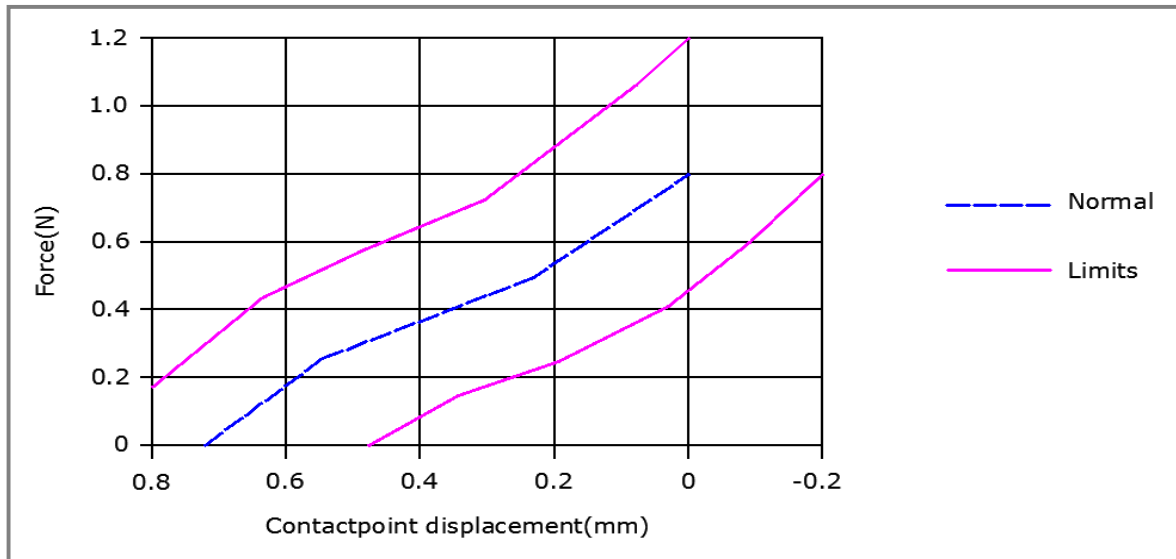
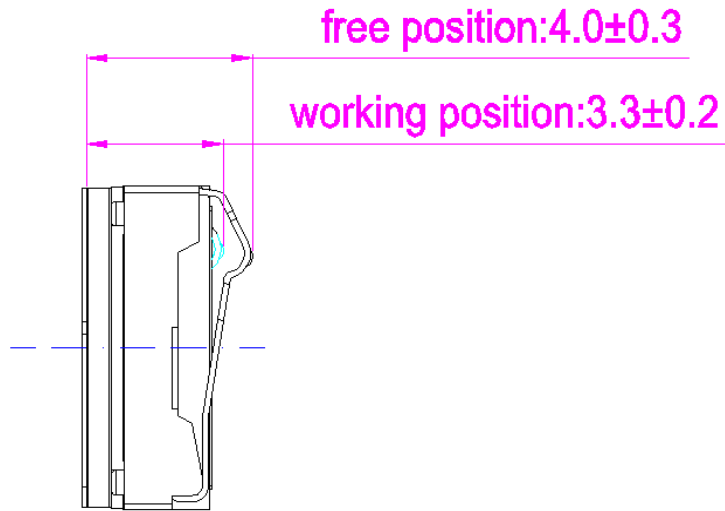
4.3 PCB LAYOUT



OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 6046 Cornerstone Ct. West Suite 105 San Diego, CA 92121 USA TEL: +1 858 45 00 555 FAX: +1 858 45 00 508	OLE WOLFF ELEKTRONIK GmbH Schnackenburgallee 14 D-22525 Hamburg GERMANY TEL: +49 (0) 407669070 FAX: +49 (0) 40772929	OLE WOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26A,3F P.O. Box 257 FIN-40101 Jyväskylä FINLAND TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit 1-5, 10/F., Peninsula Tower, 538 Castle Peak Road, Lai Chi Kok, Kowloon HONG KONG TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF ELECTRONICS (M) SDN. BHD. 7, Persiaran Bukit Kecil 1, Taman Sri Nibong, 11900 Bayan Lepas, Penang MALAYSIA TEL: +604 646 9573 FAX: +604 643 0981
---	--	--	---	---	---	---

	DATE	2015.10.15	SPECIFICATION	OLE WOLFF INTERNATIONAL
	PAGE	4/14		http://www.owolff.com
	CN	MODEL NAME: OWR-081525L-32B		Rev.2

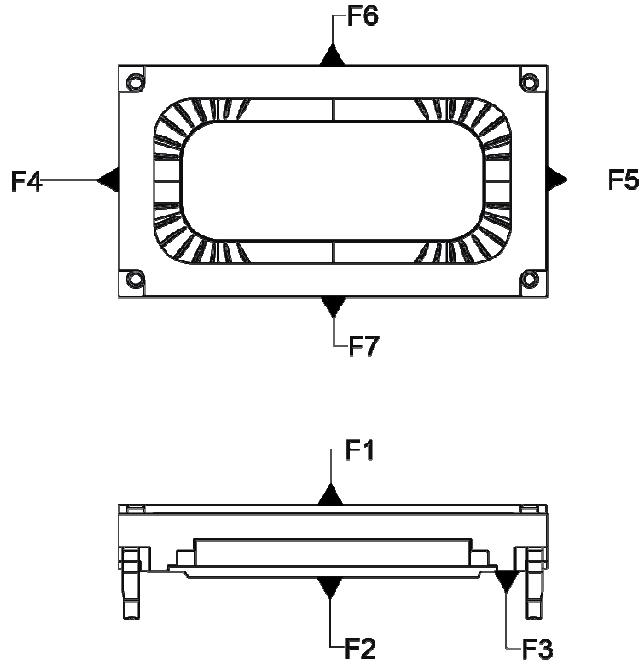
4.4 LEAF SPRING FORCE



OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 6046 Cornerstone Ct. West Suite 105 San Diego, CA 92121 USA TEL: +1 858 45 00 555 FAX: +1 858 45 00 508	OLE WOLFF ELEKTRONIK GmbH Schnackenburgallee 14 D-22525 Hamburg GERMANY TEL: +49 (0) 407669070 FAX: +49 (0) 40772929	OLE WOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26A,3F P.O. Box 257 FIN-40101 Jyväskylä FINLAND TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit 1-5, 10/F., Peninsula Tower, 538 Castle Peak Road, Lai Chi Kok, Kowloon HONG KONG TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF ELECTRONICS (M) SDN. BHD. 7, Persiaran Bukit Kecil 1, Taman Sri Nibong, 11900 Bayan Lepas, Penang MALAYSIA TEL: +604 646 9573 FAX: +604 643 0981
---	--	--	---	---	---	---

	DATE	2015.10.15	SPECIFICATION	OLE WOLFF INTERNATIONAL
	PAGE	5/14		http://www.owolff.com
	CN	MODEL NAME: OWR-081525L-32B		Rev.2

4.5 PERMITTED FORCE ON SPEAKER



Max. Permitted forces			
No	From	To	Force
1	F1	F2	10N
2	F1	F3	10N
3	F4	F5	5N
4	F6	F7	2N
5	Force on diaphragm		0N
6	Pullout force on contactors		0N

4.6 WEIGHT

0.8±0.2g

OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 6046 Cornerstone Ct. West Suite 105 San Diego, CA 92121 USA TEL: +1 858 45 00 555 FAX: +1 858 45 00 508	OLE WOLFF ELEKTRONIK GmbH Schnackenburgallee 14 D-22525 Hamburg GERMANY TEL: +49 (0) 407669070 FAX: +49 (0) 40772929	OLE WOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26A,3F P.O. Box 257 FIN-40101 Jyväskylä FINLAND TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit 1-5, 10/F., Peninsula Tower, 538 Castle Peak Road, Lai Chi Kok, Kowloon HONG KONG TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF ELECTRONICS (M) SDN. BHD. 7, Persiaran Bukit Kecil 1, Taman Sri Nibong, 11900 Bayan Lepas, Penang MALAYSIA TEL: +604 646 9573 FAX: +604 643 0981
---	--	--	---	---	---	---

	DATE	2015.10.15	SPECIFICATION	OLE WOLFF INTERNATIONAL
	PAGE	6/14		http://www.owolff.com
	CN	MODEL NAME: OWR-081525L-32B		Rev.2

5. ELECTRICAL AND ACOUSTICAL CHARACTERISTICS

1	DC RESISTANCE	28.8ohm±15%
2	SOUND PRESSURE LEVEL	92.5dB±3dB (at 1kHz, 0.693Vrms in baffle, 10mm from the top of receiver to MIC)
3	FREQUENCY RESPONSE	F0 ~ 20KHz.AS FIGURE.4;The test BOX shown in FIG.3
4	RESONANCE FREQUENCY	320Hz ± 20% (0.693Vrms input)
5	Total Harmonic Distortion (THD)	As shown figure.4
6	RUBB AND BUZZ	Input 0.693Vrms,have no audible noise At: 100-10kHz
7	HAC	12.5±2dBA/m/W (15mm from top of receiver to the centre of A-100 probe) 3.5dBA/m/W (R-100 probe) as shown in figure .5
8	INPUT POWER	Nom./Max.: 15mW/20mW ;

OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 6046 Cornerstone Ct.West Suite 105 San Diego, CA 92121 USA TEL: +1 858 45 00 555 FAX: +1 858 45 00 508	OLE WOLFF ELEKTRONIK GmbH Schnackenburgallee 14 D-22525 Hamburg GERMANY TEL: +49 (0) 407669070 FAX: +49 (0) 40772929	OLE WOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26A,3F P.O. Box 257 FIN-40101 Jyväskylä FINLAND TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit 1-5, 10/F., Peninsula Tower, 538 Castle Peak Road, Lai Chi Kok, Kowloon HONG KONG TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF ELECTRONICS (M) SDN. BHD. 7, Persiaran Bukit Kecil 1, Taman Sri Nibong, 11900 Bayan Lepas, Penang MALAYSIA TEL: +604 646 9573 FAX: +604 643 0981
---	---	--	---	---	---	---

	DATE	2015.10.15	SPECIFICATION	OLE WOLFF INTERNATIONAL
	PAGE	7/14		http://www.owolff.com
	CN	MODEL NAME: OWR-081525L-32B		Rev.2

6. QUALIFICATION TESTS

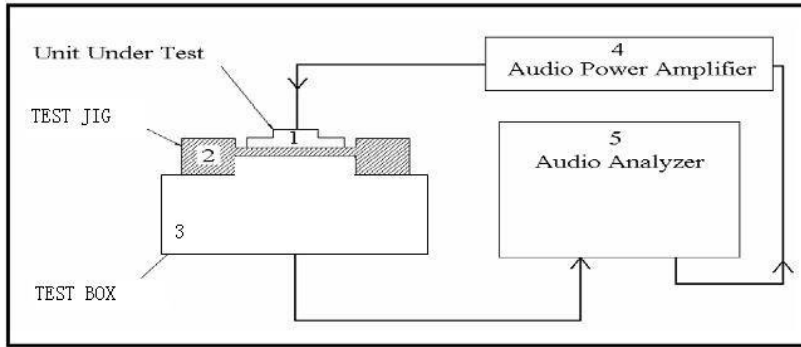
Sensitivity difference at 1kHz shall be within $\pm 3\text{dB}$ from initial value after test. The measurement shall be done after 2 hours of conditioning at 20°C			
No.	ITEMS	TEST CONDITION	
1	HITH TEMPERATURE TEST Storage	Temperature	$65 \pm 3^{\circ}\text{C}$
		Duration	96hrs
2	LOW TEMPERATURE TEST storage	Temperature	$-35 \pm 3^{\circ}\text{C}$
		Duration	96hours
3	HIGH TEMPERATURE HUMIDITY TEST	Temperature	$40 \pm 3^{\circ}\text{C}$
		Humidity	90%~95%(RH)
		Duration	96hrs
4	DROP TEST	Height	1.5m
		Total times	The speaker mounts in a 100g fixture, three times in each direction, total 18 times
		Drop face	Concrete floor
5	TEMPERATURE CYCLE TEST	Temperature	$-35 \pm 3^{\circ}\text{C} \leftrightarrow 25^{\circ}\text{C} \leftrightarrow 65 \pm 3^{\circ}\text{C}$
		Total times	1hours \leftrightarrow 10min \leftrightarrow 1hours (5 Cycles)
6	RATED POWER TEST	Test signal and Temperature	Pink Noise / 25°C
		Test input power	15mW (0.693Vrms input)
		Duration	96hrs
7	MAX. SHORT TERM POWER TEST	Test signal and Temperature	Sine wave / 25°C
		Test input power	20mW (0.8Vrms)
		Cycles	1min ON, 2min OFF, 60cycles

OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 6046 Cornerstone Ct. West Suite 105 San Diego, CA 92121 USA TEL: +1 858 45 00 555 FAX: +1 858 45 00 508	OLE WOLFF ELEKTRONIK GmbH Schnackenburgallee 14 D-22525 Hamburg GERMANY TEL: +49 (0) 407669070 FAX: +49 (0) 40772929	OLE WOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26A,3F P.O. Box 257 FIN-40101 Jyväskylä FINLAND TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit 1-5, 10/F., Peninsula Tower, 538 Castle Peak Road, Lai Chi Kok, Kowloon HONG KONG TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF ELECTRONICS (M) SDN. BHD. 7, Persiaran Bukit Kecil 1, Taman Sri Nibong, 11900 Bayan Lepas, Penang MALAYSIA TEL: +604 646 9573 FAX: +604 643 0981
---	--	--	---	---	---	---

	DATE	2015.10.15	SPECIFICATION	OLE WOLFF INTERNATIONAL
	PAGE	8/14		http://www.owolff.com
	CN	MODEL NAME: OWR-081525L-32B		Rev.2

7. ELECTRICAL CHARACTERISTICS MEASUREMENT (FIGURE .1)

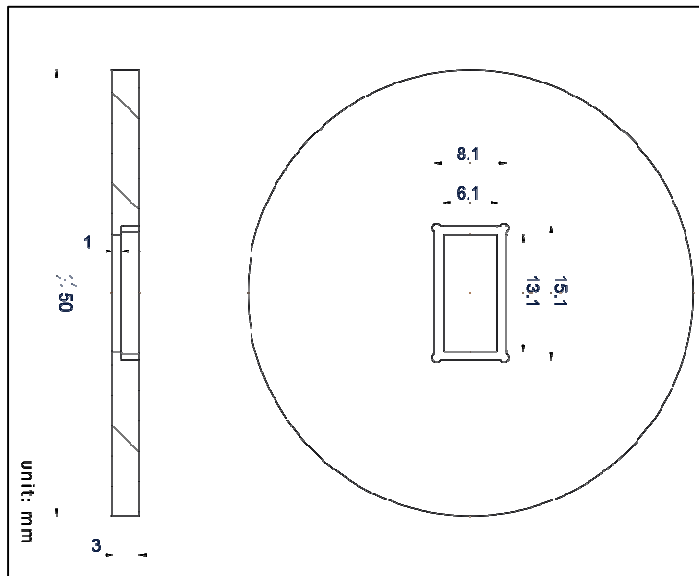
MEASUREMENT CIRCUIT FOR DYNAMIC SPEAKER



MEASURING EQUIPMENT

NO	EQUIPMENT	REMARKS
1	UNIT UNDER TEST	SPEAKER
2	TEST JIG	SHOWN IN FIGURE 1
3	TEST BOX	OLW WOLFF STANDARD BOX
4	AUDIO POWER AMPLIFIER	CRATE AUDIO SPA300
5	ANALYZER	LISTEN SOUNDCHECK

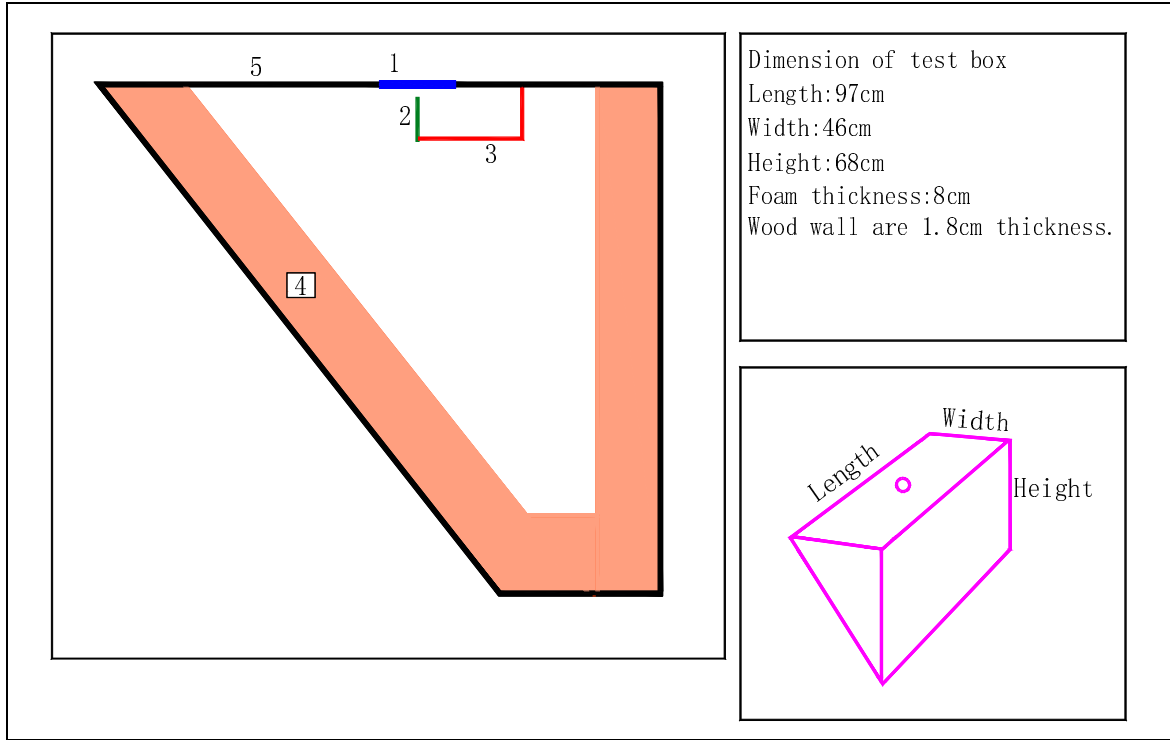
8. TEST JIG (EAR PIECE) :(FIGURE .2)



OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 6046 Cornerstone Ct. West Suite 105 San Diego, CA 92121 USA TEL: +1 858 45 00 555 FAX: +1 858 45 00 508	OLE WOLFF ELEKTRONIK GmbH Schnackenburgallee 14 D-22525 Hamburg GERMANY TEL: +49 (0) 407669070 FAX: +49 (0) 40772929	OLE WOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26A,3F P.O. Box 257 FIN-40101 Jyväskylä FINLAND TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit 1-5, 10/F., Peninsula Tower, 538 Castle Peak Road, Lai Chi Kok, Kowloon HONG KONG TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF ELECTRONICS (M) SDN. BHD. 7, Persiaran Bukit Kecil 1, Taman Sri Nibong, 11900 Bayan Lepas, Penang MALAYSIA TEL: +604 646 9573 FAX: +604 643 0981
---	--	--	---	---	---	---

	DATE	2015.10.15	SPECIFICATION	OLE WOLFF INTERNATIONAL
	PAGE	9/14		http://www.owolff.com
	CN	MODEL NAME: OWR-081525L-32B		Rev.2

9. TEST BOX (FIG.3)



NO.	EQUIPMENT	REMARKS
1	TEST JIG	FIG.2
2	MICROPHONE	1/2 INCH MICROPHONE
3	MICROPHONE HOLDER	
4	DAMPING MATERIAL	FOAM RUBBER
5	BOX	WOOD
6	TEST DISTANCE MEASURED FROM FRONT OF RECEIVER TO FRONT OF TEST MICROPHONE	10mm

OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 6046 Cornerstone Ct.West Suite 105 San Diego, CA 92121 USA TEL: +1 858 45 00 555 FAX: +1 858 45 00 508	OLE WOLFF ELEKTRONIK GmbH Schnackenburgallee 14 D-22525 Hamburg GERMANY TEL: +49 (0) 407669070 FAX: +49 (0) 40772929	OLE WOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26A,3F P.O. Box 257 FIN-40101 Jyväskylä FINLAND TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit 1-5, 10/F., Peninsula Tower, 538 Castle Peak Road, Lai Chi Kok, Kowloon HONG KONG TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF ELECTRONICS (M) SDN. BHD. 7, Persiaran Bukit Kecil 1, Taman Sri Nibong, 11900 Bayan Lepas, Penang MALAYSIA TEL: +604 646 9573 FAX: +604 643 0981
---	---	--	---	---	---	---

	DATE	2015.10.15	<h1>SPECIFICATION</h1>	OLE WOLFF INTERNATIONAL
	PAGE	10/14		http://www.owolff.com
	CN	MODEL NAME: OWR-081525L-32B		Rev.2

10. STANDARD FREQUENCY RESPONSE CURVE & THD CURVE (FIGURE.4).
 (Test distance: 10mm/15Mw in free air)



Frequency (Hz)	Upper limit (dB)
200	91
315	95
400	96.5
1600	94.5
4000	94.5
6300	94.5
7100	100
10000	100

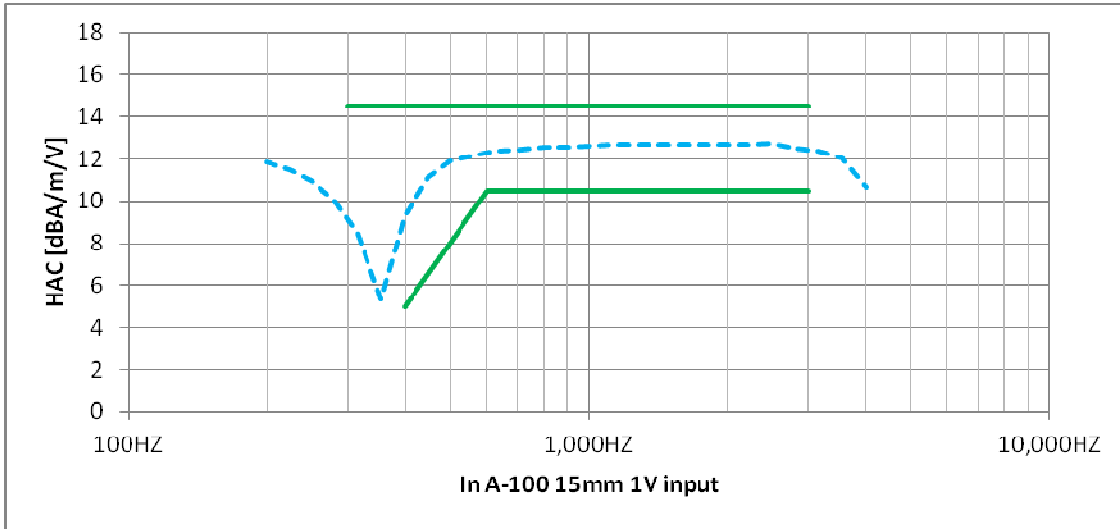
Frequency (Hz)	Lower limit (dB)
315	83
450	88.5
1000	87
2000	85
3150	85
5600	86
7100	85
8000	79
10000	79

Frequency (Hz)	THD limit (%)
200	40
400	9
500	8
800	2.5
6000	2.5

OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 6046 Cornerstone Ct. West Suite 105 San Diego, CA 92121 USA TEL: +1 858 45 00 555 FAX: +1 858 45 00 508	OLE WOLFF ELEKTRONIK GmbH Schnackenburgallee 14 D-22525 Hamburg GERMANY TEL: +49 (0) 407669070 FAX: +49 (0) 40772929	OLE WOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26A,3F P.O. Box 257 FIN-40101 Jyväskylä FINLAND TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit 1-5, 10/F., Peninsula Tower, 538 Castle Peak Road, Lai Chi Kok, Kowloon HONG KONG TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF ELECTRONICS (M) SDN. BHD. 7, Persiaran Bukit Kecil 1, Taman Sri Nibong, 11900 Bayan Lepas, Penang MALAYSIA TEL: +604 646 9573 FAX: +604 643 0981
---	--	--	---	---	---	---

	DATE	2015.10.15	SPECIFICATION	OLE WOLFF INTERNATIONAL
	PAGE	11/14		http://www.owolff.com
	CN	MODEL NAME: OWR-081525L-32B		Rev.2

11. STANDARD HAC CURVE (FIGURE.5)



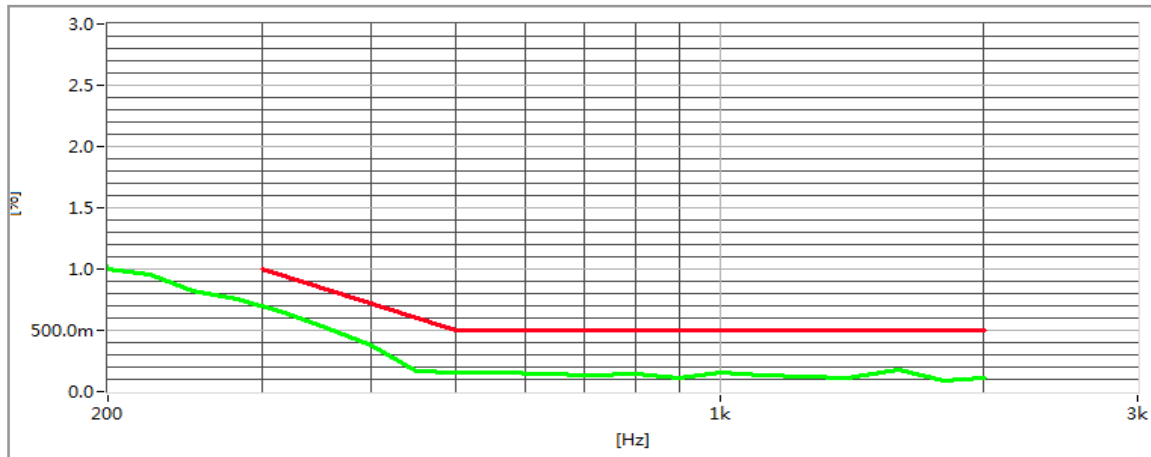
Frequency (Hz)	Upper limit At 1V
300	14.5
3000	14.5

Frequency (Hz)	Lower limit At 1V
400	5
600	10.5
3000	10.5

OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 6046 Cornerstone Ct. West Suite 105 San Diego, CA 92121 USA TEL: +1 858 45 00 555 FAX: +1 858 45 00 508	OLE WOLFF ELEKTRONIK GmbH Schnackenburgallee 14 D-22525 Hamburg GERMANY TEL: +49 (0) 407669070 FAX: +49 (0) 40772929	OLE WOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26A,3F P.O. Box 257 FIN-40101 Jyväskylä FINLAND TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit 1-5, 10/F., Peninsula Tower, 538 Castle Peak Road, Lai Chi Kok, Kowloon HONG KONG TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF ELECTRONICS (M) SDN. BHD. 7, Persiaran Bukit Kecil 1, Taman Sri Nibong, 11900 Bayan Lepas, Penang MALAYSIA TEL: +604 646 9573 FAX: +604 643 0981
---	--	--	---	---	---	---

	DATE	2015.10.15	SPECIFICATION	OLE WOLFF INTERNATIONAL
	PAGE	12/14		http://www.owolff.com
	CN	MODEL NAME: OWR-081525L-32B		Rev.2

12. STANDARD R&B CURVE AND LIMIT (FIG.6)

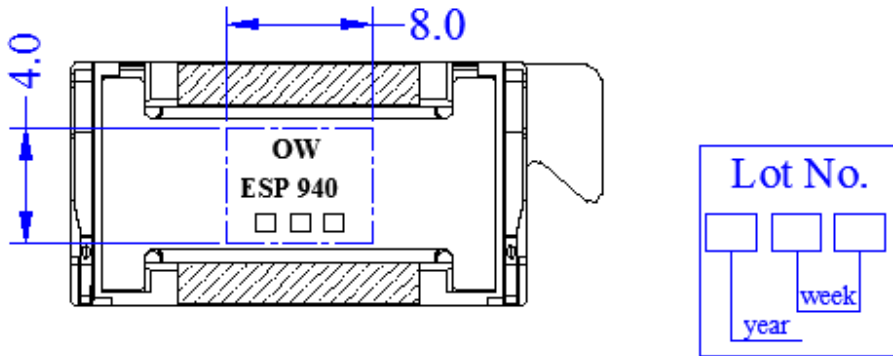


Frequency (Hz)	Upper limit (%)
300	1
500	0.5
2000	0.5

OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 6046 Cornerstone Ct. West Suite 105 San Diego, CA 92121 USA TEL: +1 858 45 00 555 FAX: +1 858 45 00 508	OLE WOLFF ELEKTRONIK GmbH Schnackenburgallee 14 D-22525 Hamburg GERMANY TEL: +49 (0) 407669070 FAX: +49 (0) 40772929	OLE WOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26A,3F P.O. Box 257 FIN-40101 Jyväskylä FINLAND TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit 1-5, 10/F., Peninsula Tower, 538 Castle Peak Road, Lai Chi Kok, Kowloon HONG KONG TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF ELECTRONICS (M) SDN. BHD. 7, Persiaran Bukit Kecil 1, Taman Sri Nibong, 11900 Bayan Lepas, Penang MALAYSIA TEL: +604 646 9573 FAX: +604 643 0981
---	--	--	---	---	---	---

	DATE	2015.10.15	SPECIFICATION	OLE WOLFF INTERNATIONAL
	PAGE	13/14		http://www.owolff.com
	CN	MODEL NAME: OWR-081525L-32B		Rev.2

13. MARKING

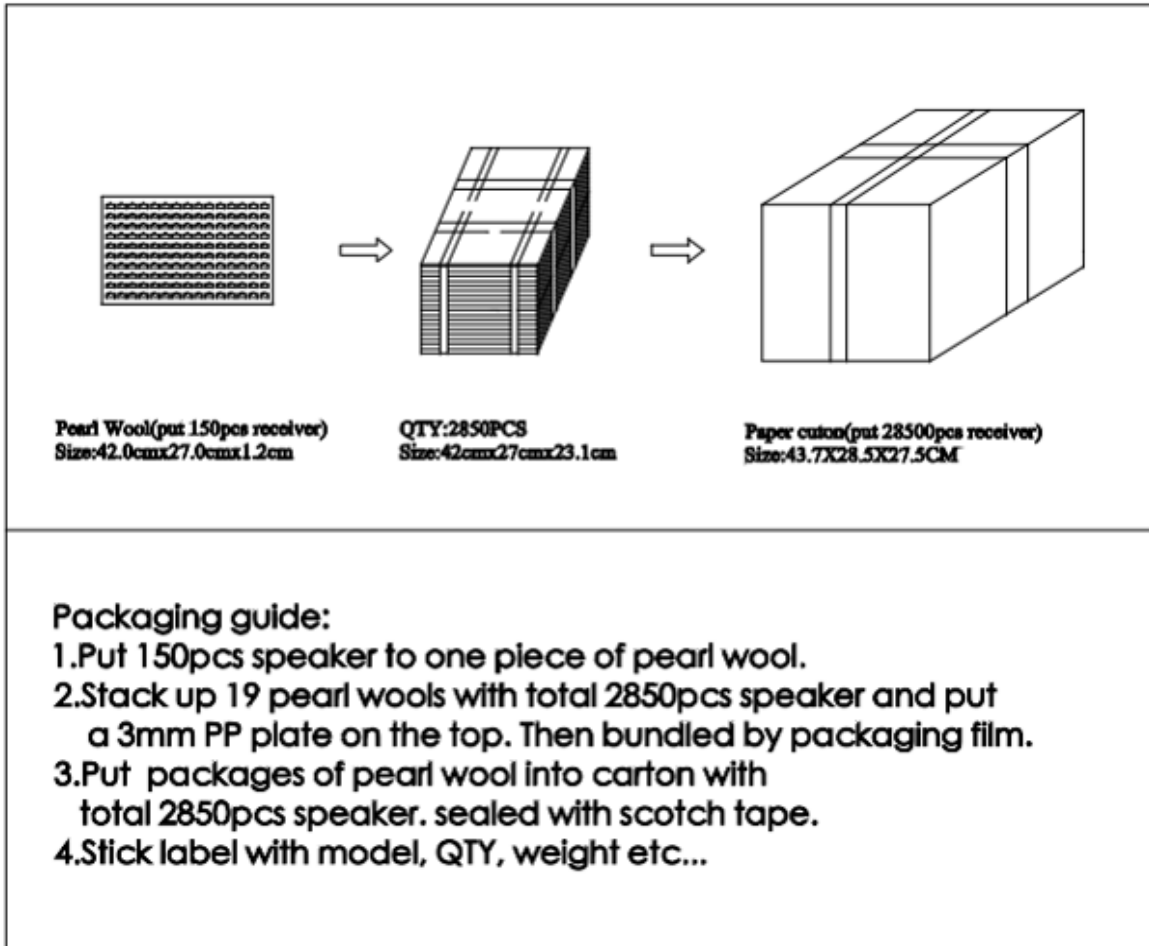


YEAR		WEEK	
year	marking	week	marking
2012	2	1	01
2013	3	2	02
2014	4	3	03
2015	5	4	04
2016	6	5	05
2017	7	↓	↓
		52	52
		53	53
		54	54

OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 6046 Cornerstone Ct. West Suite 105 San Diego, CA 92121 USA TEL: +1 858 45 00 555 FAX: +1 858 45 00 508	OLE WOLFF ELEKTRONIK GmbH Schnackenburgallee 14 D-22525 Hamburg GERMANY TEL: +49 (0) 407669070 FAX: +49 (0) 40772929	OLE WOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26A,3F P.O. Box 257 FIN-40101 Jyväskylä FINLAND TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit 1-5, 10/F., Peninsula Tower, 538 Castle Peak Road, Lai Chi Kok, Kowloon HONG KONG TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF ELECTRONICS (M) SDN. BHD. 7, Persiaran Bukit Kecil 1, Taman Sri Nibong, 11900 Bayan Lepas, Penang MALAYSIA TEL: +604 646 9573 FAX: +604 643 0981
---	--	--	---	---	---	---

	DATE	2015.10.15	SPECIFICATION	OLE WOLFF INTERNATIONAL
	PAGE	14/14		http://www.owolff.com
	CN	MODEL NAME: OWR-081525L-32B		Rev.2

14. PACKAGING



OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 6046 Cornerstone Ct.West Suite 105 San Diego, CA 92121 USA TEL: +1 858 45 00 555 FAX: +1 858 45 00 508	OLE WOLFF ELEKTRONIK GmbH Schnackenburgallee 14 D-22525 Hamburg GERMANY TEL: +49 (0) 407669070 FAX: +49 (0) 40772929	OLE WOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26A,3F P.O. Box 257 FIN-40101 Jyväskylä FINLAND TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit 1-5, 10/F., Peninsula Tower, 538 Castle Peak Road, Lai Chi Kok, Kowloon HONG KONG TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF ELECTRONICS (M) SDN. BHD. 7, Persiaran Bukit Kecil 1, Taman Sri Nibong, 11900 Bayan Lepas, Penang MALAYSIA TEL: +604 646 9573 FAX: +604 643 0981
---	---	--	---	---	---	---