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APPROVAL SPECIFICATION

Receiver

Part Number	OWR-3507T-36A
Note	This item was compliance with the following requirements: 1. RoHS directive 2. REACH
Customer P/N	

Ole Wolff	Signature / Date	Prepared	Checked	Approved
		Ena Wang 2021.06.21	Nathan Chen 2021.06.21	Ryan Li 2020.06.21

Customer	Signature / Date	Confirmation		

REVISION NOTES:

Date	Rev.	Description of Revision
2021.06.21	00	Initial version

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1. SCOPE

THIS SPECIFICATION IS APPLIED FOR A DYNAMIC RECEIVER FOR HEADPHONE.

2. TEST CONDITIONS

TEMPERATURE : 24°C ~ 27°C

HUMIDITY : 60% ~ 70% (R.H.)

ATMOSPHERE : 860 ~ 1060 hPa

3. GENERAL REQUIREMENTS

OPERATING TEMPERATURE RANGE: -25° C ~ 60° C

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

4. MECANICAL LAYOUT & DIMENSIONS

DIMENSIONS : SHOWN IN FIGURE.5

NET WEIGHT: 12.3g+/-10%

5. ELECTRICAL AND ACOUSTICAL CHARACTERISTICS

1	Impedance on IEC 318	36Ω ± 15% at 2kHz
2	Sound Pressure Level on IEC318	117±3 dB at 1000Hz with input 0.190V/1mW (OdB=20μPa) Measure setup as shown in Fig.1 Binning: Bin A: 120dB~118.01dB, dot mark = Red; Bin B: 118.0dB~116dB, dot mark =Blue; Bin C: 115.99dB~114dB, dot mark = Black;
3	Frequency response on IEC318	FR as shown in Fig.3. (Test input 0.190V/1mW)
4	Total Harmonic Distortion (THD) on IEC318	THD as shown in Fig.3 (Test input 0.190V/1mW)
5	Resonance frequency in free field	72Hz with input 0.6V/10mW((for reference, temperature 24 -27 °C)
6	Input Power	(Nom./Max.): 0.01W / 0.02W
7	Rub & Buzz	The input power shall be set at 0.60V. Using an audio oscillator sweep from 50 to 10kHz in the free air. There shall be no buzzes, rattles, nor spurious noises.

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6. Reliability Test Requirements

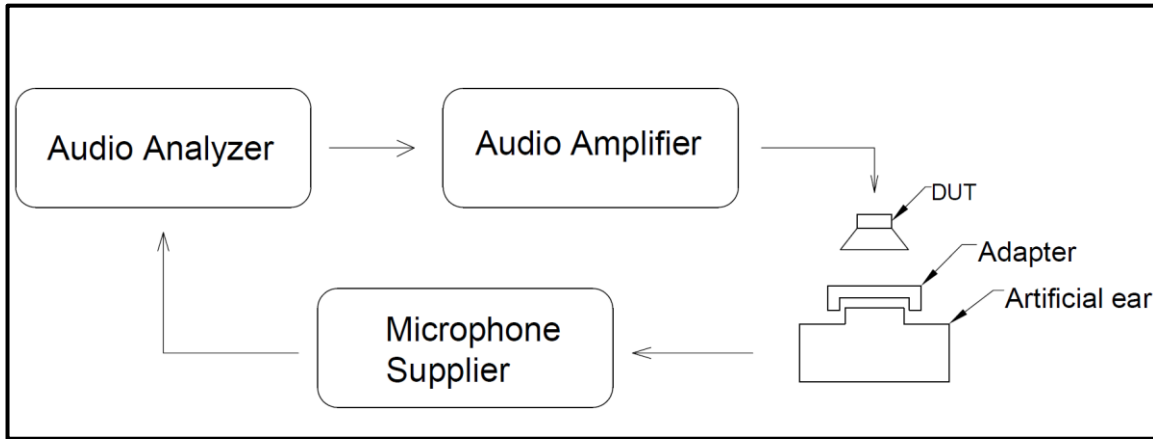
Sensitivity difference at 1000Hz shall be within $\pm 3\text{dB}$ from initial value after each test. The measurement shall be done after minimum 1hour and maximum 2 hours with conditioning of $24^\circ\text{C} \sim 27^\circ\text{C}$.			
No.	ITEMS	TEST CONDITION	
1	HIGH TEMPERATURE TEST STORAGE	Temperature	$70 \pm 3^\circ\text{C}$
		Duration	96hrs
2	LOW TEMPERATURE TEST STORAGE	Temperature	$-30 \pm 3^\circ\text{C}$
		Duration	96hrs
3	HIGH TEMPERATURE HUMIDITY TEST	Temperature	$50 \pm 3^\circ\text{C}$
		Humidity	90%--95%(RH)
		Duration	96hrs
4	DROP TEST	Height	1m to concrete with protector
		Total times	3 times
5	SLIDE TEST	Height	1m to concrete with protector
		Direction	Front, reverse, vertical
		Total times	5 times/direction
6	TEMPERATURE CYCLE TEST	Temperature	$-30 \pm 3^\circ\text{C} \leftrightarrow 70 \pm 3^\circ\text{C}$
		Duration	1hours, 5mins, 1hours
		Cycles	10cycles
7	SHORT TERM MAX INPUT TEST	Test signal and Temperature	Pink noise / 25°C
		Test input power	0.02W/0.85Vrms
		Cycles	1sec On, 1min Off, 60cycles
8	LONG TERM MAX INPUT TEST	Test signal and Temperature	Pink noise / 25°C
		Test input power	0.02W/0.85Vrms
		Cycles	1min On/ 2min Off, 10 cycles
9	RATED POWER TEST	Test signal and Temperature	Pink Noise / 25°C
		Test input power	0.01W/0.6Vrms
		Duration	96hrs

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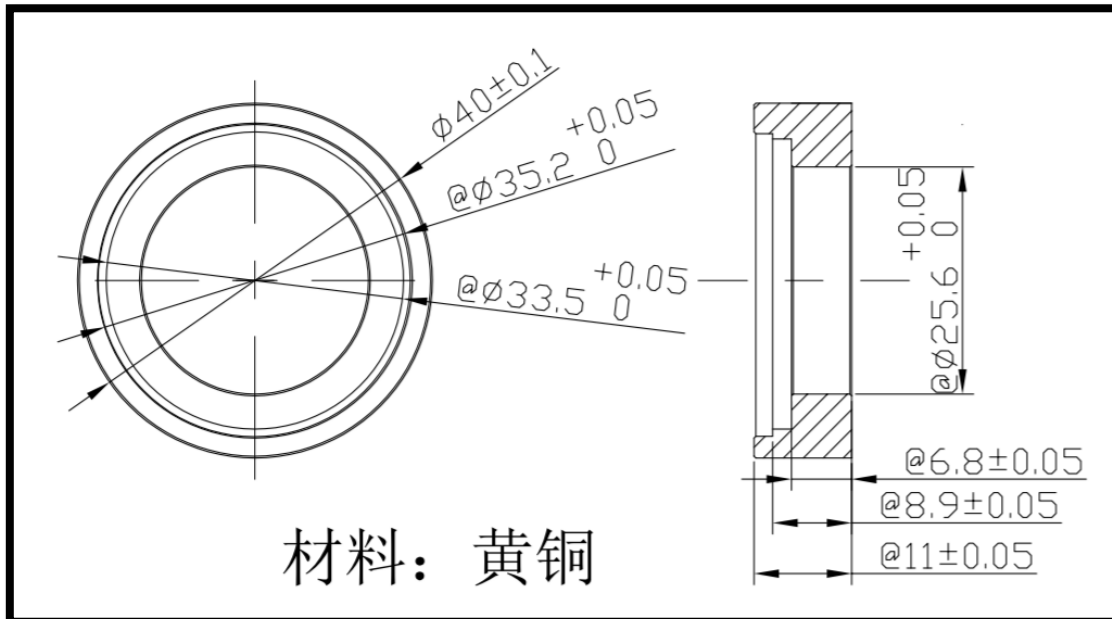
7. TEST SET UP (Fig.1)

MEASUREMENT CIRCUIT FOR DYNAMIC SPEAKER



NO	EQUIPMENT	REMARKS
1	DUT	Receiver
2	Adapter	As shown on Fig.2
3	Audio Analyzer	LISTEN SOUNDCHECK
4	Audio Amplifier	QSC GX3
5	Artificial ear	GRAS 43AA
6	Microphone supplier	GRAS 12AX

8. TEST JIG (Fig.2)

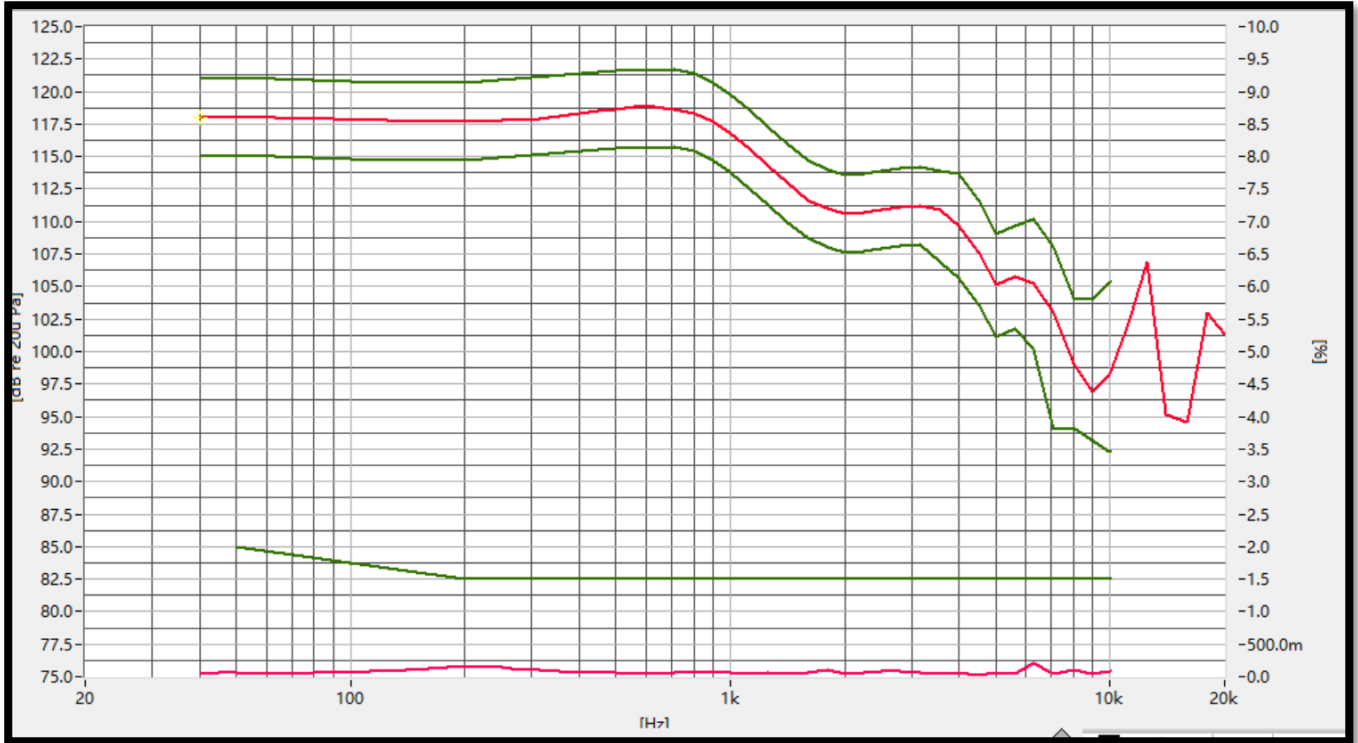


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9. Standard Frequency Response Curve & Standard THD (Fig.3)

Test input 0.190V (IEC 318) 1/6Oct. Soundcheck stimulus step size 8 min cycles and 5ms min duration.

The following tolerances are offset values. Mask is absolute value based on the golden sample offset.



FR mask

F.POINT	40	50	63	100	200	500	710	800	900	1k	1.12k	1.25k	1.4k	1.6k	Hz
Upper limit	3	3	3	3	3	3	3	3	3	3	3	3	3	3	dB
Lower limit	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	dB

F.POINT	1.8k	2k	2.24k	2.5k	2.8k	3.15k	3.55k	4k	4.5k	5k	5.6k	6.3k	7.1k	8k	Hz
Upper limit	3	3	3	3	3	3	3	3	4	4	4	4	5	5	dB
Lower limit	-3	-3	-3	-3	-3	-3	-3	-3	-4	-4	-4	-4	-5	-5	dB

F.POINT	9k	10k	
Upper limit	7	7	
Lower limit	-	-6	

THD mask

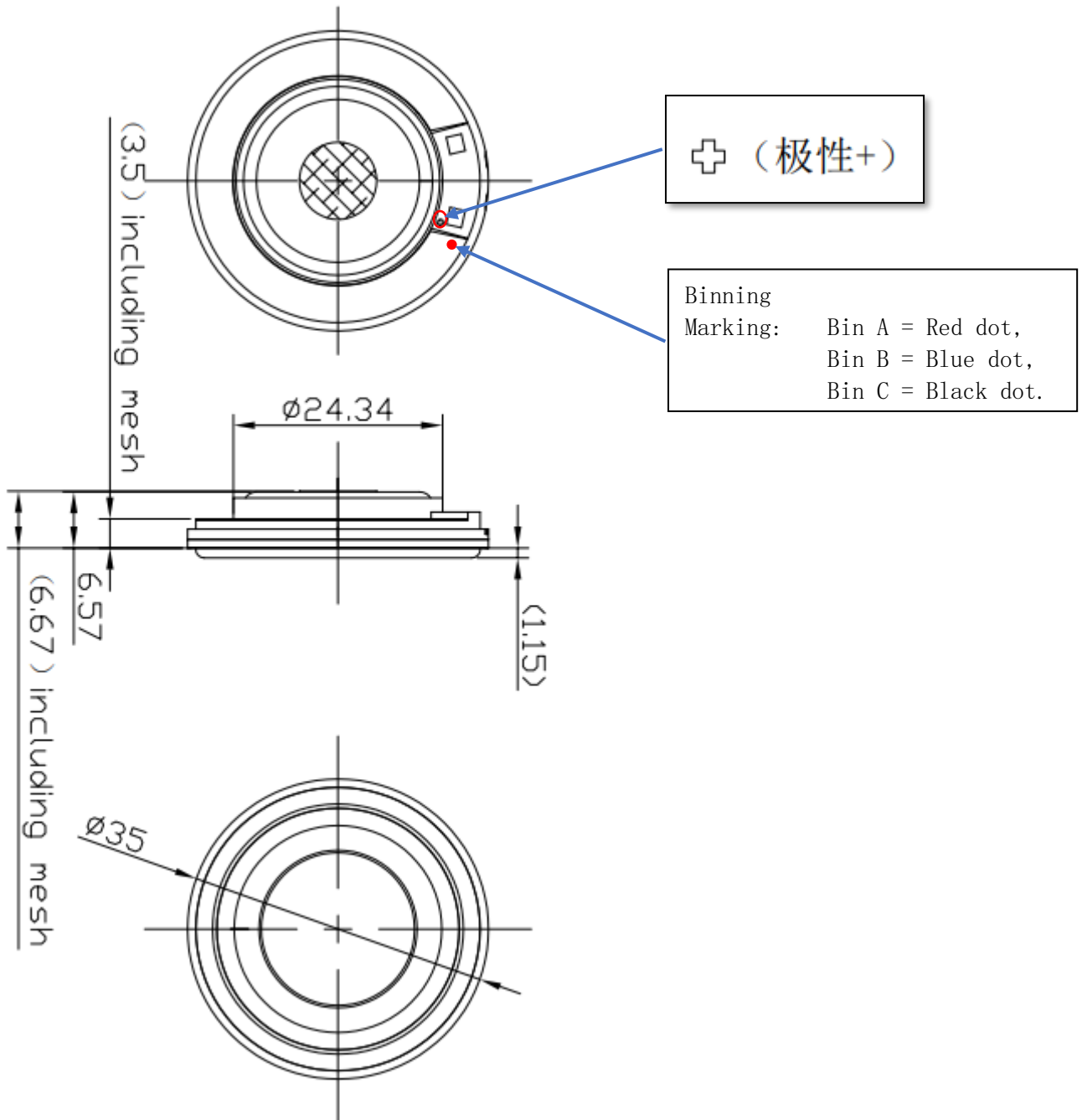
F.POINT	50	200	630	1k	1.25k	2.5k	3.15k	6.3k	8.0k	10.0k	Hz
Upper limit	2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	%

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10. DIMENSION (Fig.4)

Unit: mm

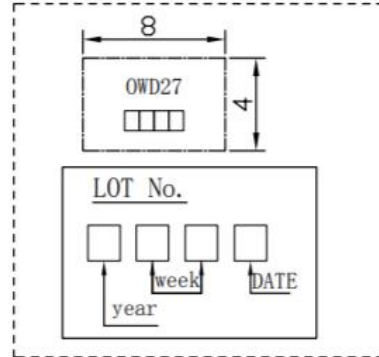
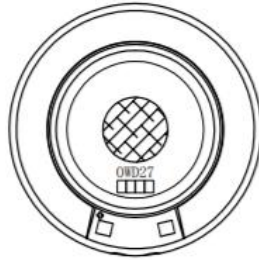
Tolerance: +/-0.2



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11. Marking (Fig.5)

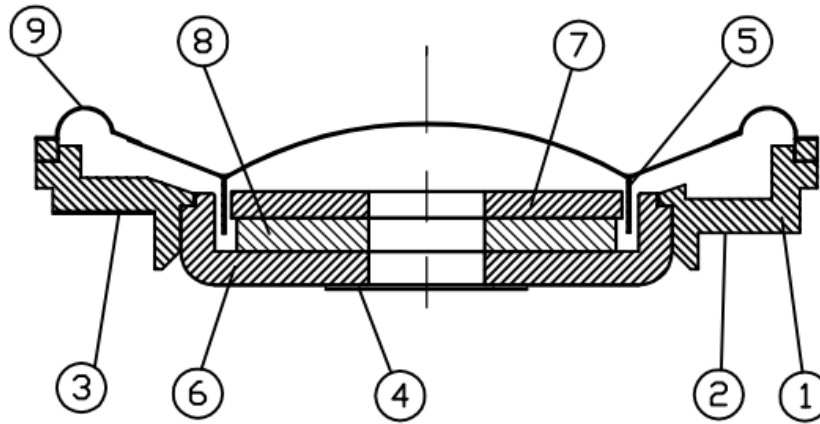


YEAR		WEEK		DATE	
year	marking	week	marking	date	marking
2020	0	1	01	MON	1
2021	1	2	02	TUE	2
2022	2	3	03	WED	3
2023	3	↓	↓	↓	↓
		52	52	SUN	7

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11. Material list (Fig.6)

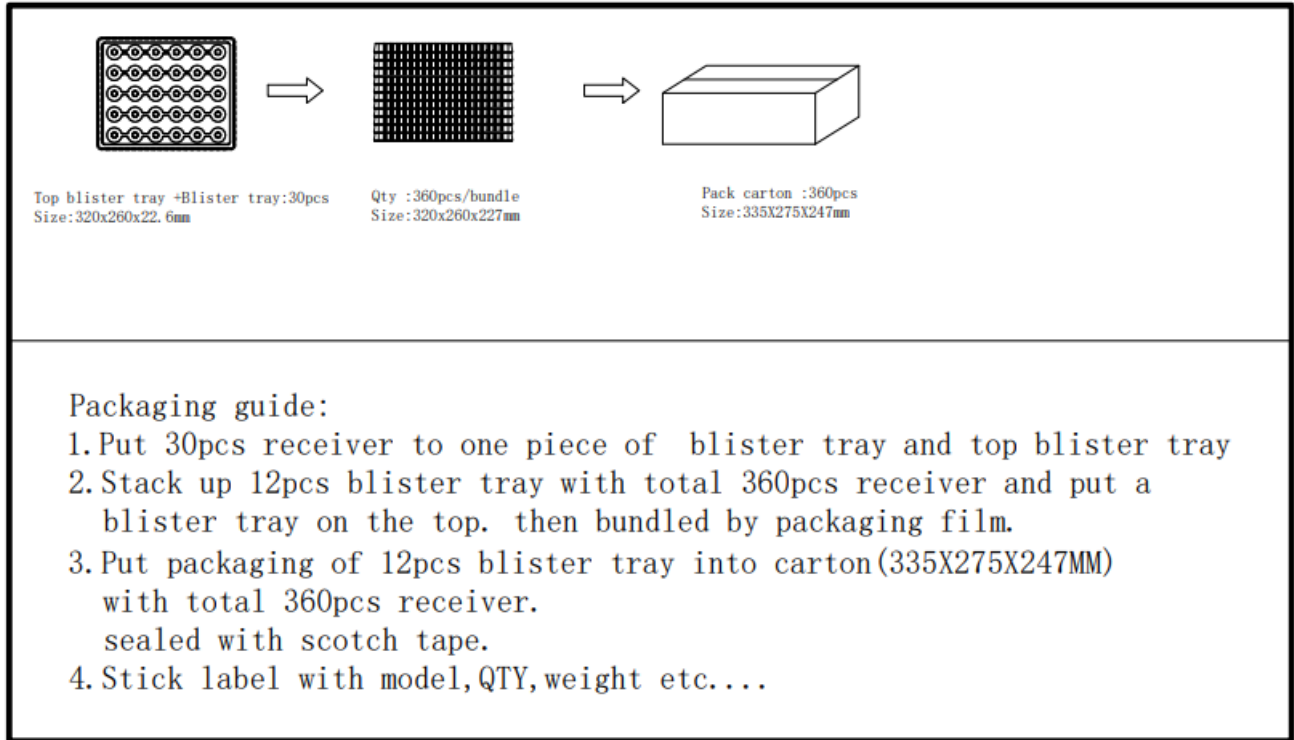


No.	PART NAME	QTY	MATERIAL
1	FRAME	1	PC+20%GF
2	TERMINAL	1	SUS304
3	SCREEN A	1	POLYESTER
4	SCREEN B	1	POLYESTER
5	VOICE COIL	1	SPCCAW
6	YOKE	1	SPCC Cr ³⁺
7	POLE PIECE	1	SPCC Cr ³⁺
8	MAGNET	1	NdFeB Cr ³⁺
9	DIAPHRAGM	1	PU+AZM

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12. Packing (Fig.7)



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