

MESSRS.

SPECIFICATION FOR APPROVAL**承 认 书**

Product	DYNAMIC SPEAKER BOX
Part No.	HDK-261004ZA-BOX1 (D712P)
Customer Approval	

Approved By	Checked By	Made By
王台平 Mar-06-2021	刘中明 Mar-06-2021	曹丽萍 Mar-06-2021

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EDITION:1.1



History change record

[illegible]

1. Specification
HDK-261004ZA-BOX1 (D712P)

ITEM		SPECIFICATIONS
01	Type	Dynamic Speaker BOX
02	Rated Input Power	2W (in 1cc Box)
03	Max. Input Power	2.5W for 1 minute (in 1cc box)
04	Impedance	$4\Omega \pm 15\%$
05	Resonance Frequency	$1100\text{Hz} \pm 20\%$ (in 1cc box)
06	Sensitivity (S.P.L.)	$96 \pm 3\text{dB}$ (2.0W / 0.1m) at 0.8-2.0KHz in 1cc box on baffle
07	Frequency Range	F0 – 20KHz
08	Total Harmonics Distortion	Max10% (at 1.0KHz)
09	Weight	$4.2\text{g} \pm 10\%$
10	Appearance	Should not exist any obstacle to be harmful to normal operation; damages, cracks, rusts and distortions, etc.
11	Operation Test	Must be normal at program source – 2.0W
12	Buzz & Rattle	Must be normal at 2.83Vrms(in 1cc box) sine-wave from 300 -5KHz
13	Polarity	When positive voltage is applied to the terminal marked (+), diaphragm should move to the front.
14	Terminal Strength	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.
15	Temperature	Operating temperature: -25°C to $+60^{\circ}\text{C}$ Storage temperature: -25°C to $+60^{\circ}\text{C}$

2. Measuring Method

2.1 Test Condition

Standard

Temperature : 15 ~ 35℃

Relative humidity : 25% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

Basic

Temperature : 20±3℃

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

2.2 Standard Test Fixture

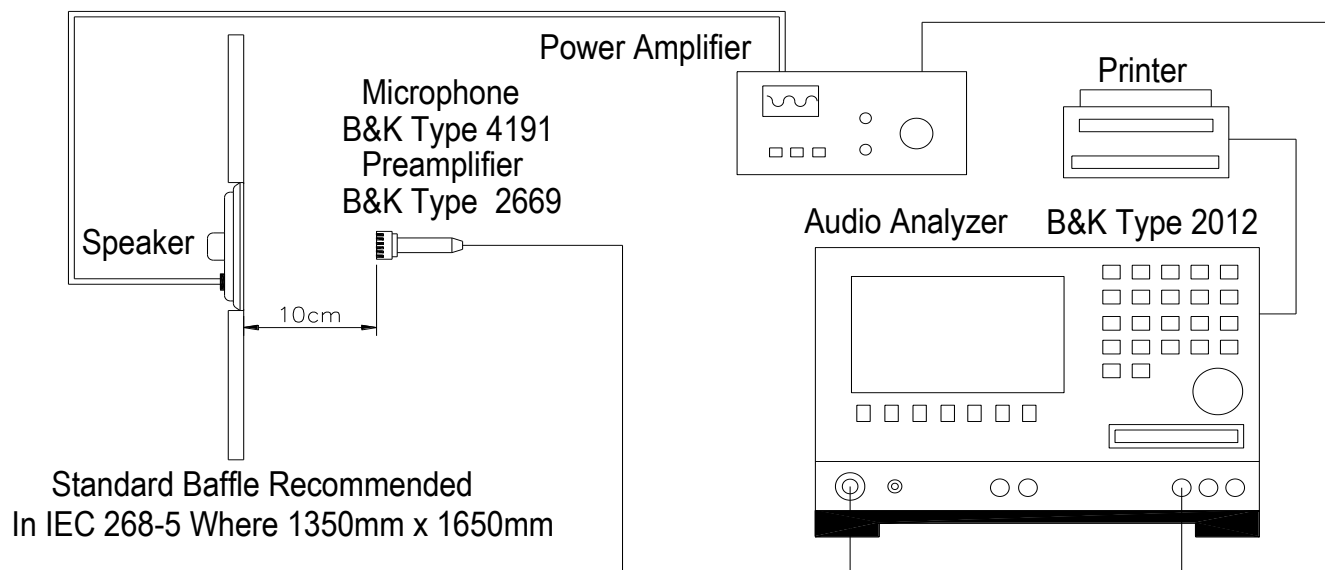
1.Input Power : 2.0W (2.83V)

2.Zero Level : -dB

3.Mode : SPEAKER

4.potentiometer Range : 50dB

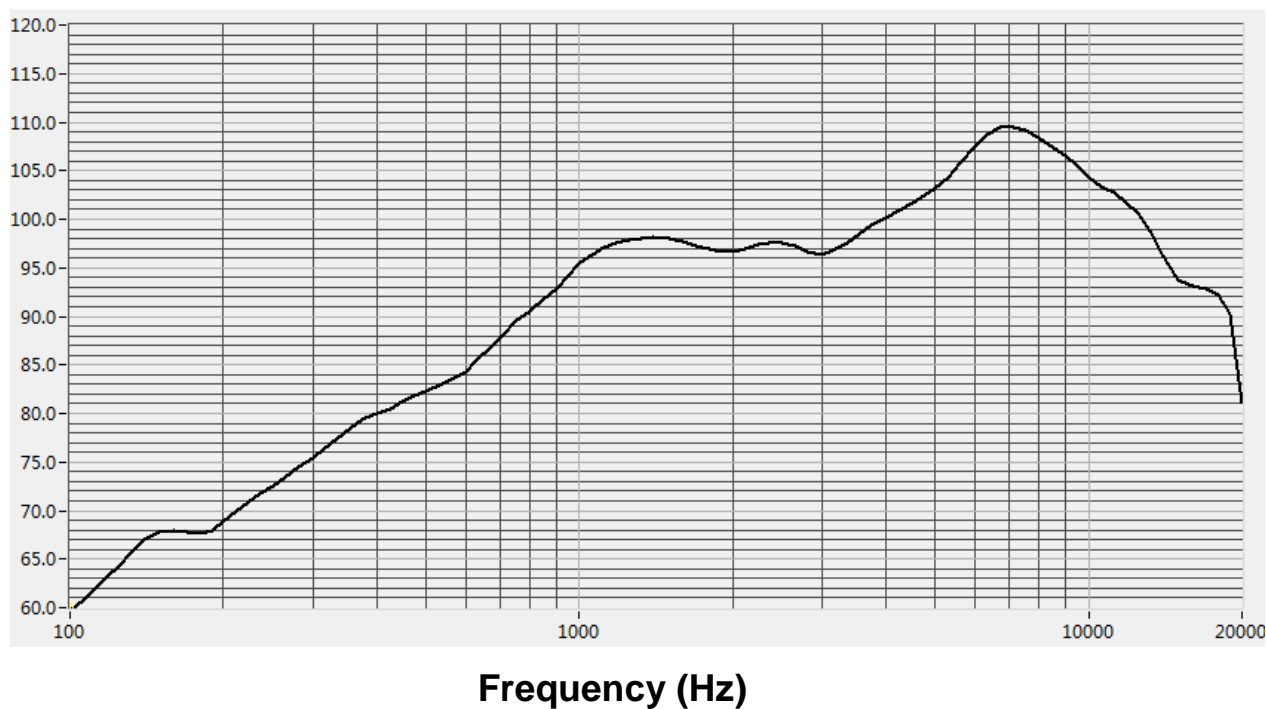
5.Sweep Time : 0.5sec



2.3 Frequency Response Curve

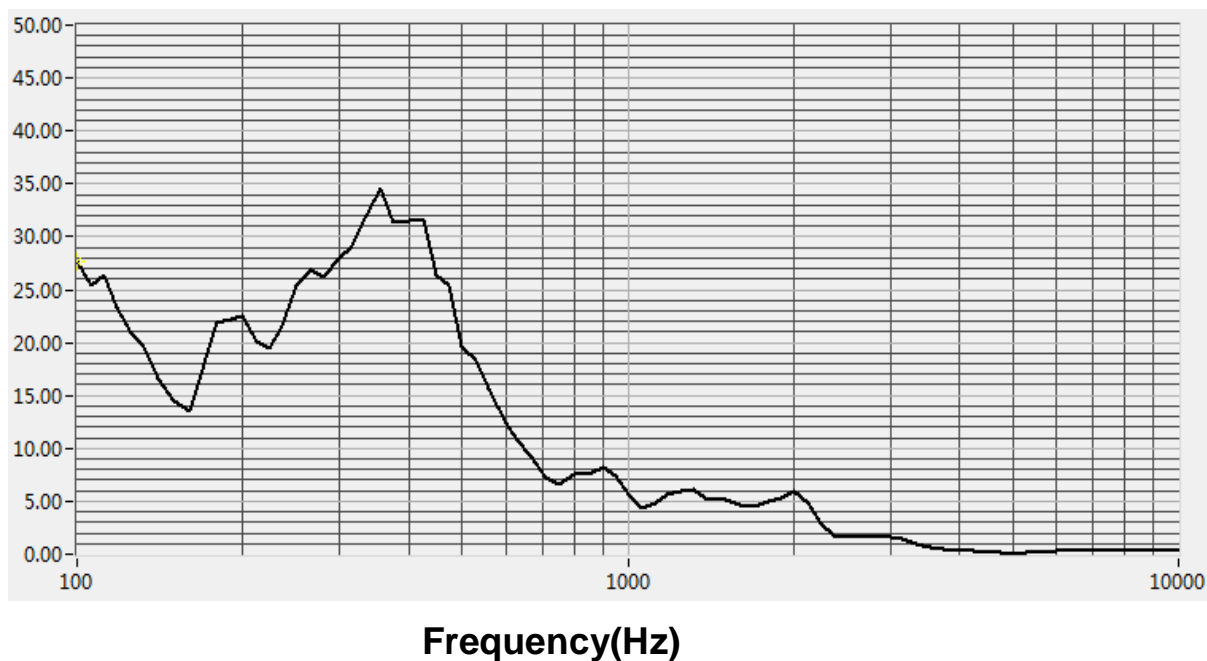
BOX SPL Curve (2.0W/0.1m)

Figure 1: Typical Frequency Response Curve
Frequency Response



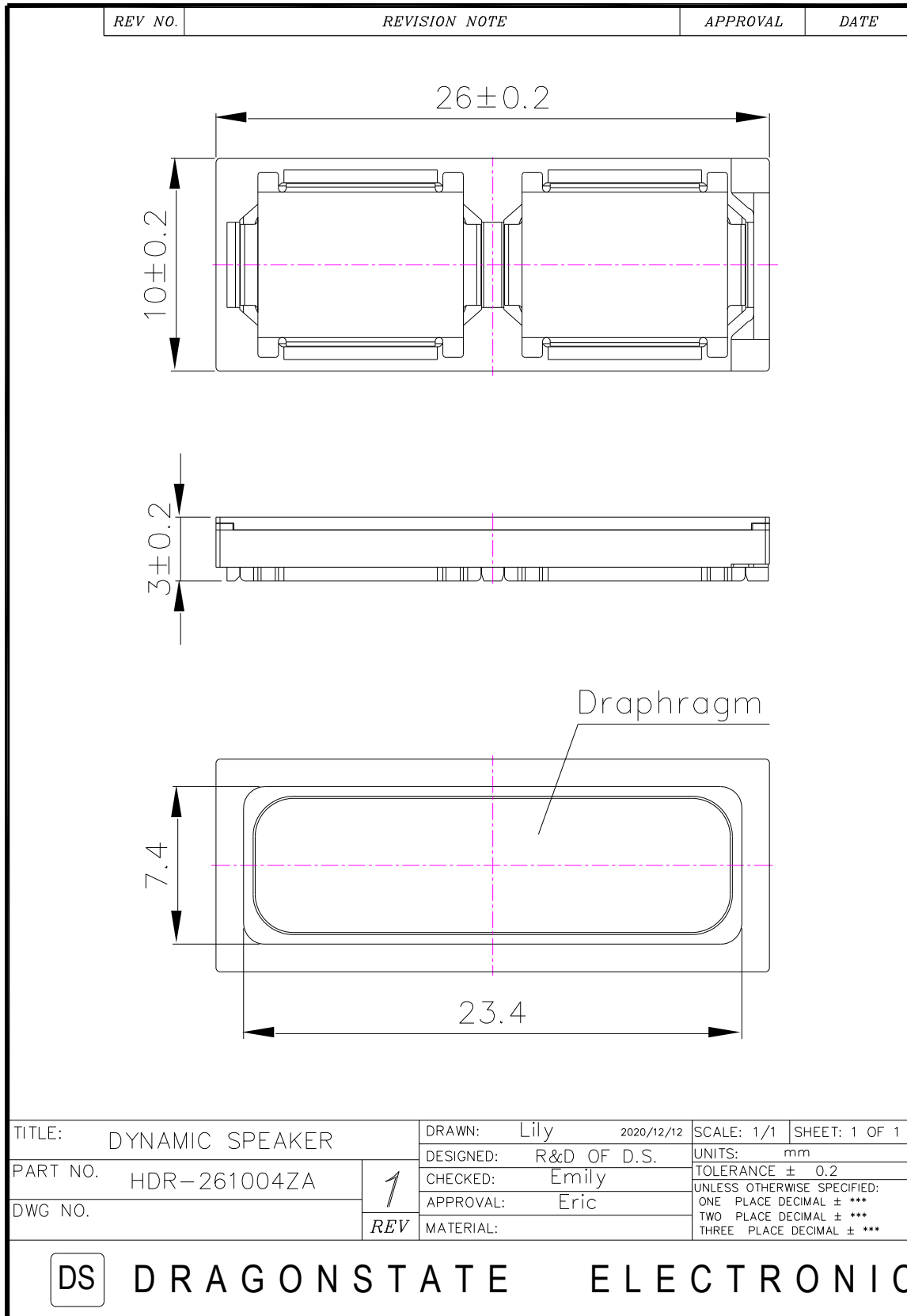
BOX THD Curve (2.0W/0.1m)

Figure 2: Typical THD Curve
Total Harmonic Distortion

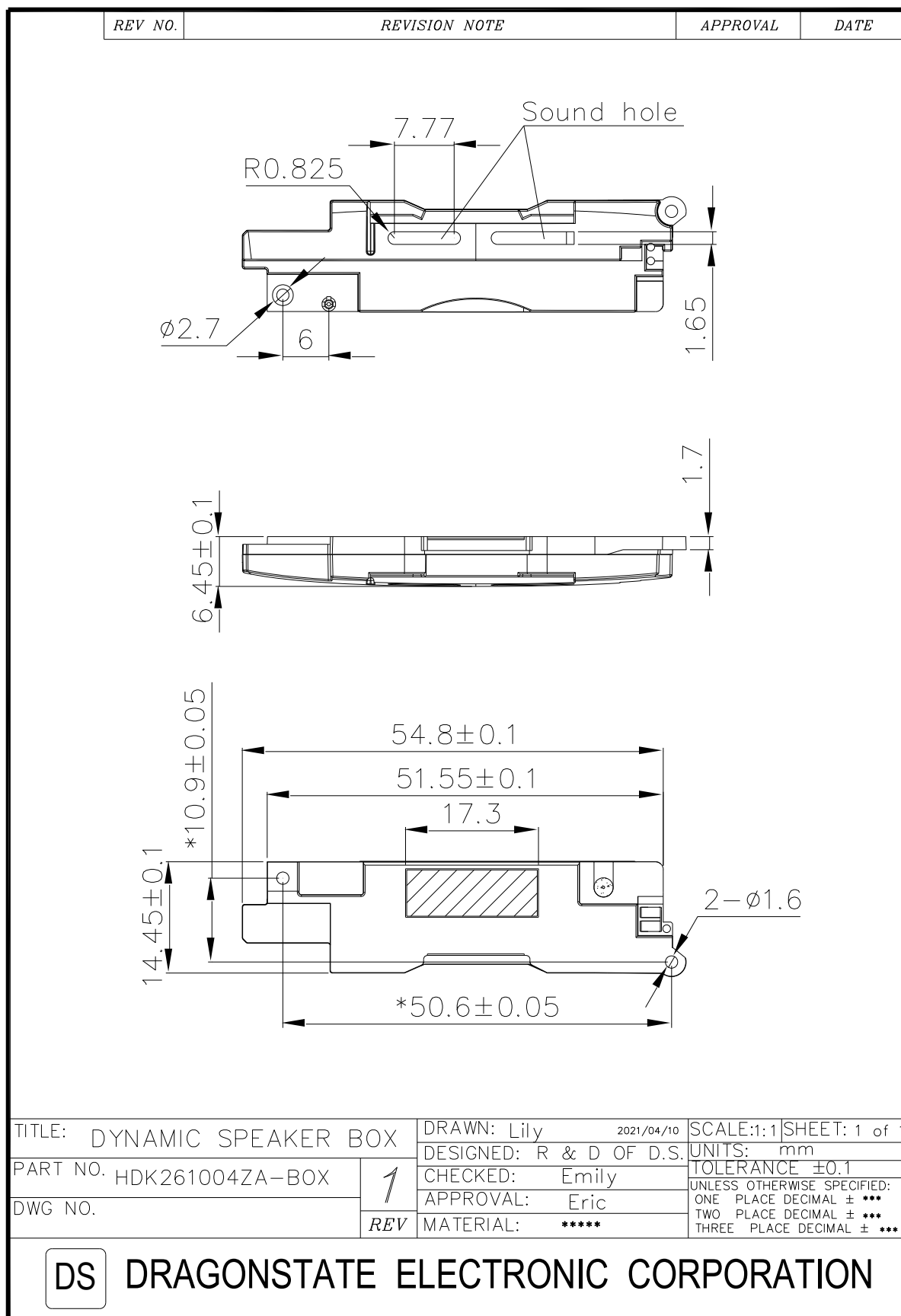


3. Dimension

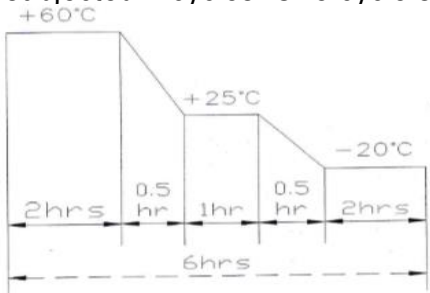
SPK Unit Dimension




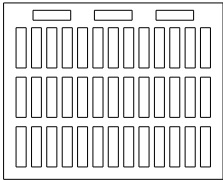
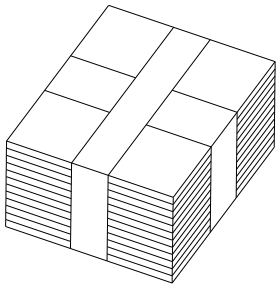
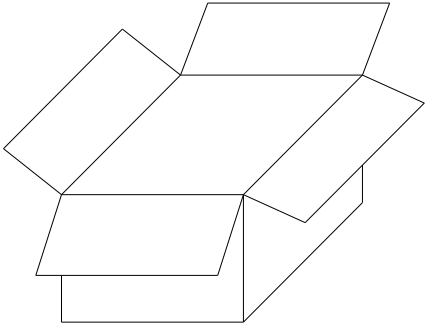
BOX Dimension



4. Reliability Tests

Items.		Specifications
01	High temp. Test	Keep 96 hours at $+60^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
02	Low temp. Test	Keep 96 hours at $-25^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
03	High temp/Humidity test	Keep 48 hours at $+40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ relative humidity 95% and leave 3 hours in normal temperature and then checked.
04	Temp./Humidity cycle	<p>The part shall be subjected 4 cycles. One cycle shall be 6 hours and consist of;</p> 
05	Thermal cycle test.	Low temperature: $-20^{\circ}\text{C} \pm 3^{\circ}\text{C}$, High temperature: $+60^{\circ}\text{C} \pm 3^{\circ}\text{C}$, cycle: 1 hour/ each cycle, and then keep 5 cycles in a room.
06	Vibration	10~200~10Hz sin-wave sweep 15min. 5G (constant) X,Y, Z 3 direction. 2 hours each, total 6 hours.
07	Fix drop test	Fix on jig. Then drop from 100cm height to the concrete floor x, y, z 6 direction. 5 times each, total 30 times.
08	Free drop test	Free drop from 75cm height to the concrete floor X, y, z 6 direction. 1 times each, total 6 times.
09	Rated Power test	Rated power pink noise is applied for 96 hours
10	Max Power test	Max power 1 min on – 2 min off for 10 cycles.
11	Terminal strength test	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.
Criterion: After these test, the change of SPL shall be within $\pm 3\text{ dB}$.		

5 .Packing

REV NO.	REVISION NOTE	APPROVAL	DATE
	 <p>Cover(350x285x5mm) Material: Paper</p>		
	 <p>Box(350x285x15mm) 42pcs Material: Paper+Epe</p>		
	 <p>Middle(350x285x180mm) 42x12=504(pcs) Material: Paper+Epe</p>		
	 <p>Outer Box (590x390x405mm) 2016pcs(504pcsx4) Material: Paper</p>		
TITLE: Packing		DRAWN: Lily 2021/02/19	SCALE:1:1 SHEET: 1 of 1
PART NO.	1 REV	DESIGNED: R & D OF D.S.	UNITS: mm
		CHECKED: Emily	TOLERANCE ±0.5
DWG NO.		APPROVAL: Eric	UNLESS OTHERWISE SPECIFIED: ONE PLACE DECIMAL ± *** TWO PLACE DECIMAL ± *** THREE PLACE DECIMAL ± ***
		MATERIAL: *****	
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px 5px; margin-right: 10px;">DS</div> <div>DRAGONSTATE ELECTRONIC CORPORATION</div> </div>			