SH 3032P-08 A

LOUDSPEAKER

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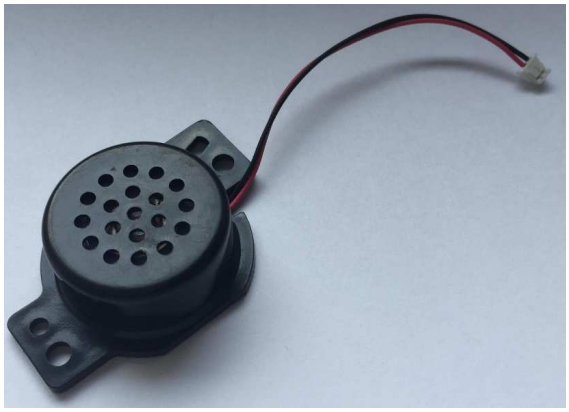
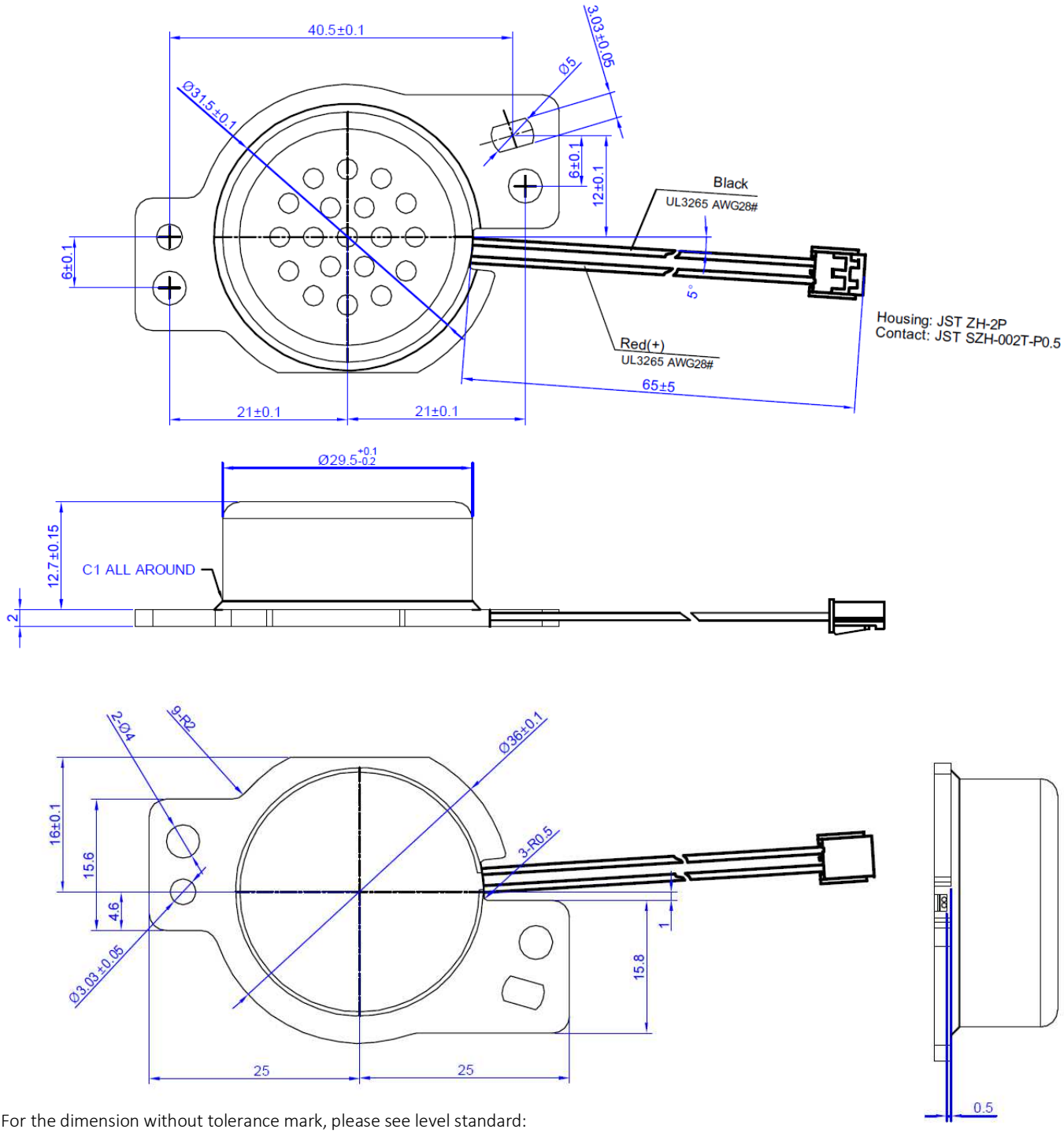
CONTENT



1. SPECIFICATIONS

Parameter	Unit	Conditions / Description	MIN	TYP	MAX
Impedance	Ω	At 2.000Hz	28.8	32	35,2
Input Power	W			1.3	1.5
Operating Voltage	Vp-p	Impulse voltage, square wave, duty cycle 50%, asymmetric	6		12.8
	Vp-p	Impulse voltage, square wave, duty cycle 50%, symmetric	4		9
Output SPL	dBA	Values are shown in 3.2 SPL table			
Frequency range	Hz		1.000		4.000
Voice Coil	Ø	Golden Colour		0.045	
Contact				CONNECTOR	
Packaging				TRAY	
Operating Temperature	°C		-40		+105
Storage Temperature	°C		-40		+105
Weight	g			11.8	

2. DRAWING

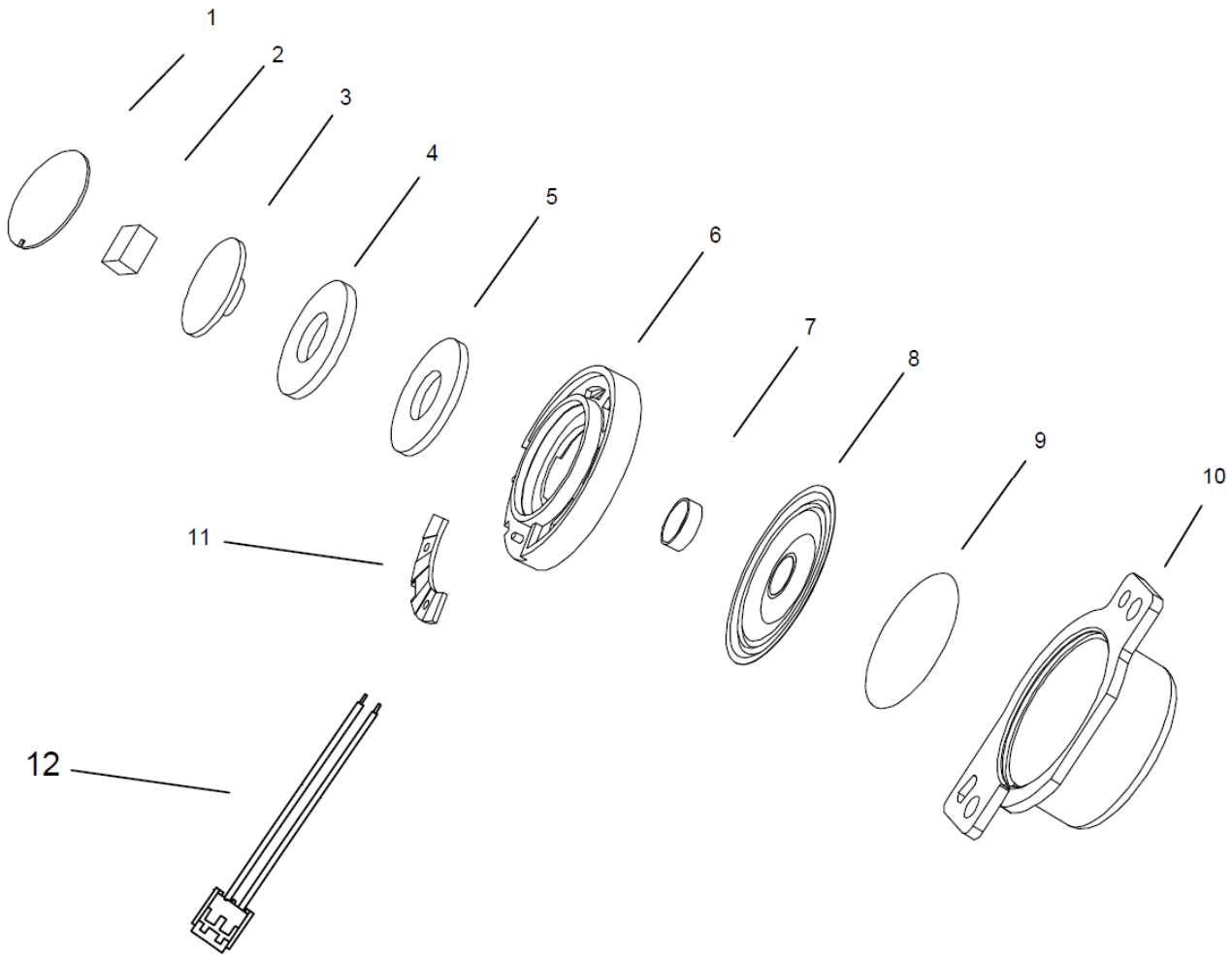


For the dimension without tolerance mark, please see level standard:

Dimension Tolerance	0~3	>3~6	>6~30	>30~120
Tolerance Level	± 0.1	± 0.1	± 0.2	± 0.2

DESIGNED BY	Ralf Hinnerichs	DATE	2013.01.08	PART NO.	INDEX
RELEASED BY	Ralf Hinnerichs	DATE	2013.01.08	SH 3032P-08 A	A
CHANGED BY	Rabea Richter	DATE	2019.08.28		
DRAWING NO.	412825011				

BILL OF MATERIAL



No.	Part Name	Material
12	Connect Wire	Cu and PVC
11	PCB	Epoxy and Cu (plating Sn)
10	Housing	Plastic PBT +30% GF
9	Mesh	Silk
8	Diaphragm	PEI δ=0.05mm
7	Voice Coil	Ø 0.045 Cu, self-bonding by hot air
6	Frame	Plastic MPPO +20% GF
5	Piece	SPCC
4	Magnet	Nd-Fe-B N35H
3	Yoke	SPCC
2	Mat	Sponge
1	Cover	Plastic PBT +30% GF

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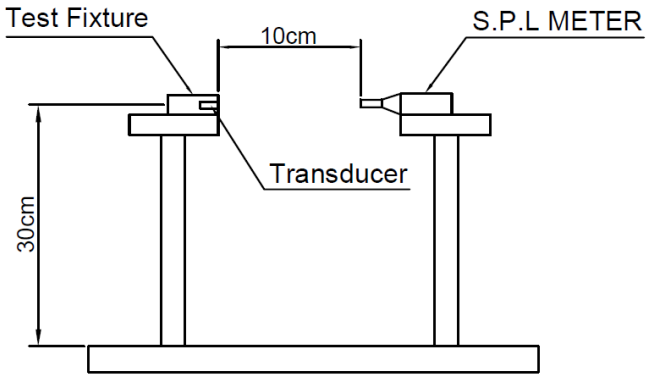
3. TEST METHOD

3.1 TEST SETUP



3.2 SPL TABLE

Frequency /Hz	Min SPL /dBA	Max SPL /dBA
720	87	97
750	88	98
900	90	100
1000	95	105
1600	87	97
1900	87	97
2000	87	97

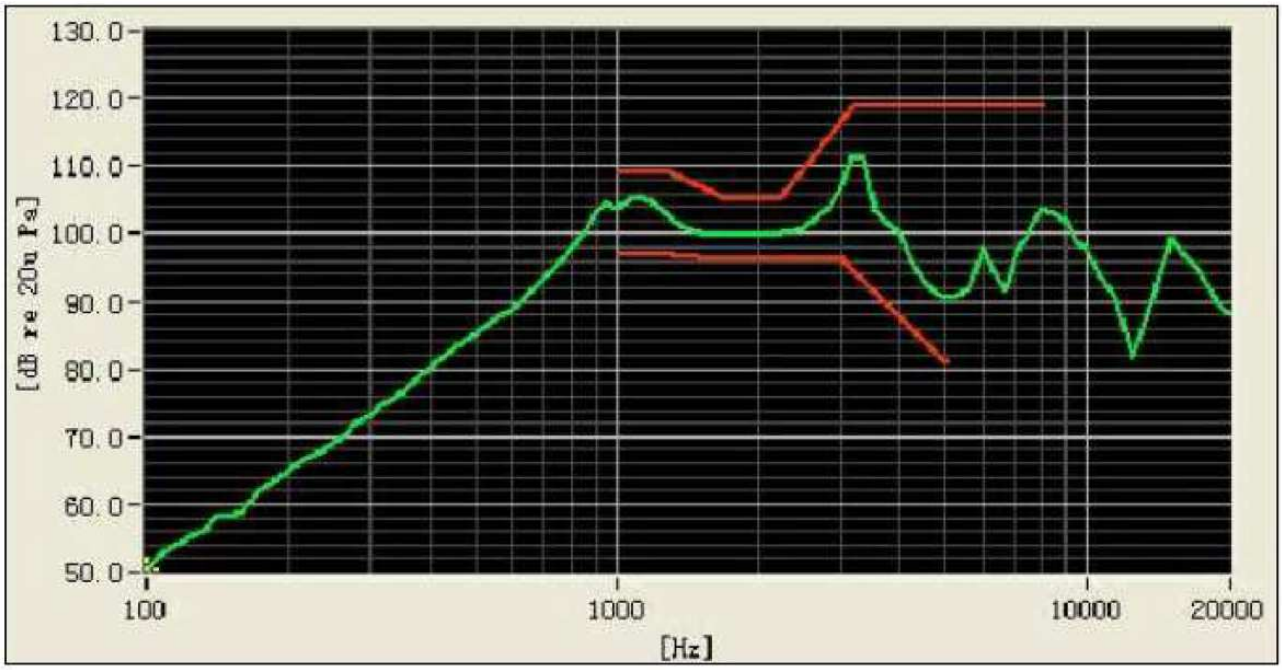
3.3 TEST CONDITIONS

The test assembly is in free field or a test room with min 2m ×2m ground and 2m high distance between loudspeaker and SPL meter=10cm

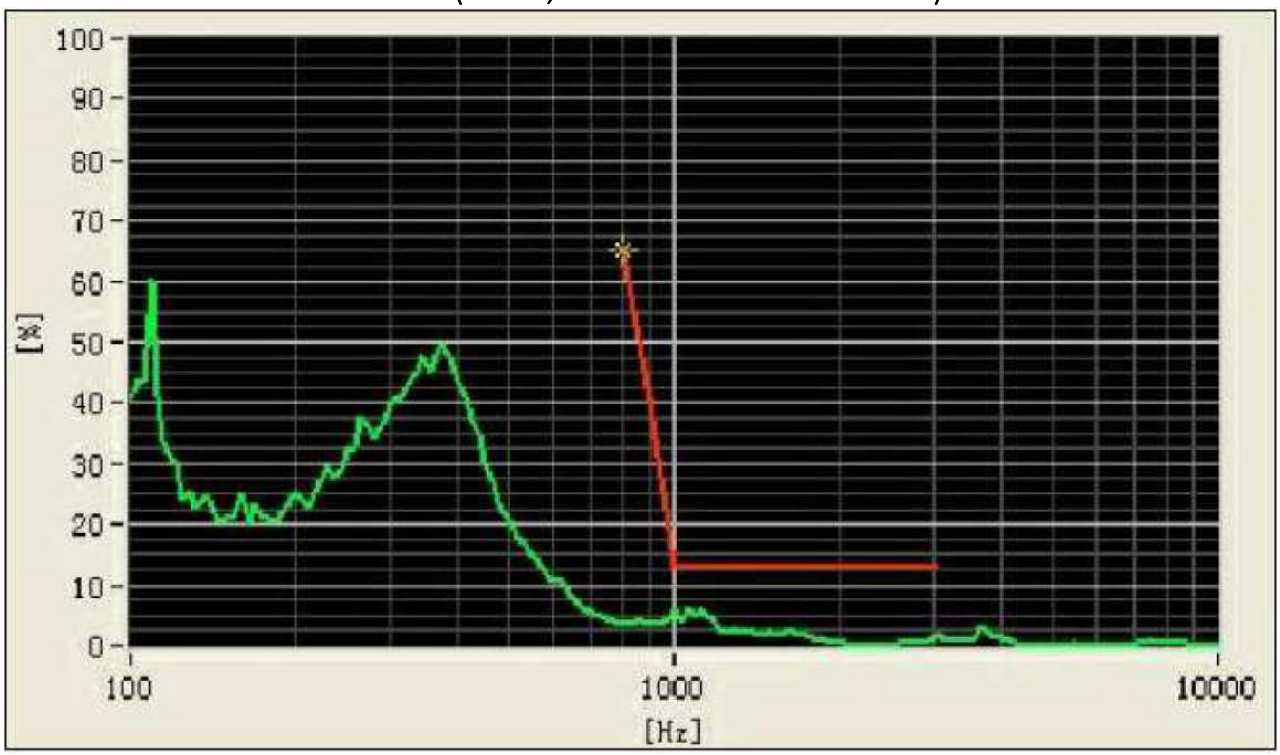
Trigger voltage is 5.6V0-p, 50% duty square wave signal

The trigger signal comes from a function generator FG100. The trigger voltage is adjusted to 5.6V0-p constant voltage (in case of load)

3.4 FREQUENCY CURVE (0.15W, 0.1m SOUND CHECK TESTING)



3.5 TOTAL HARMONIC DISTORTION (0.15W, 0.1m SOUND CHECK TESTING)



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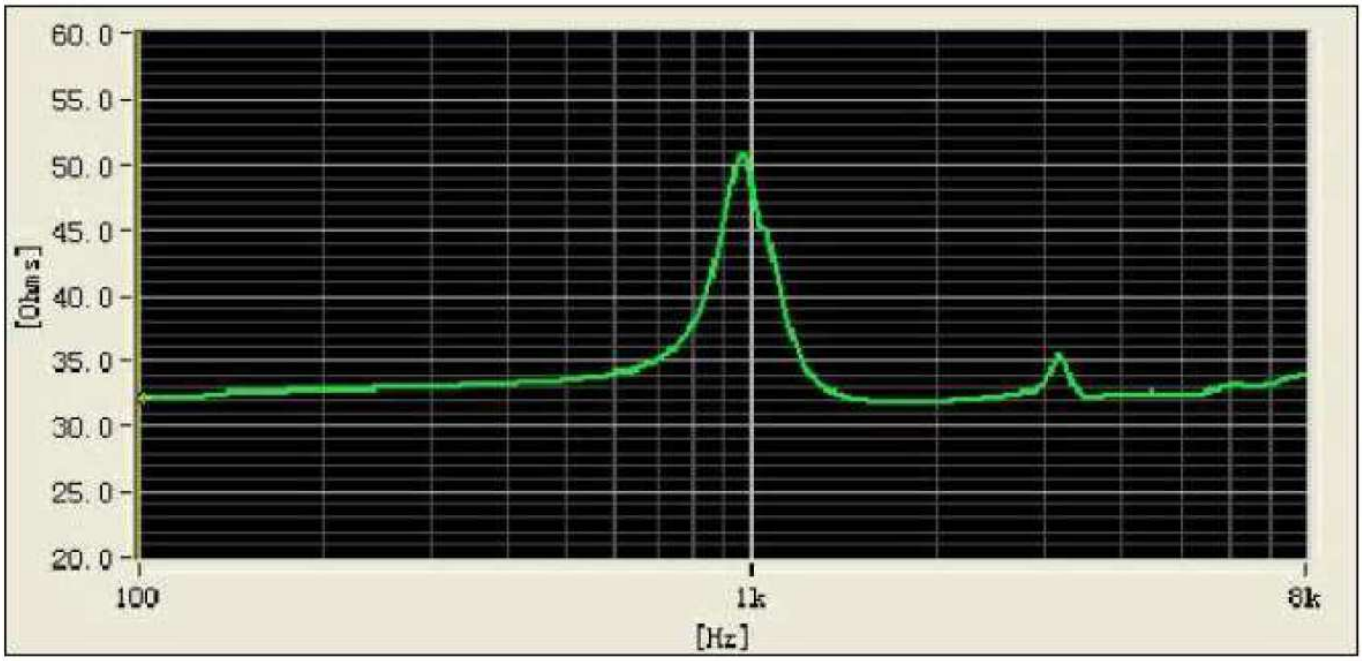
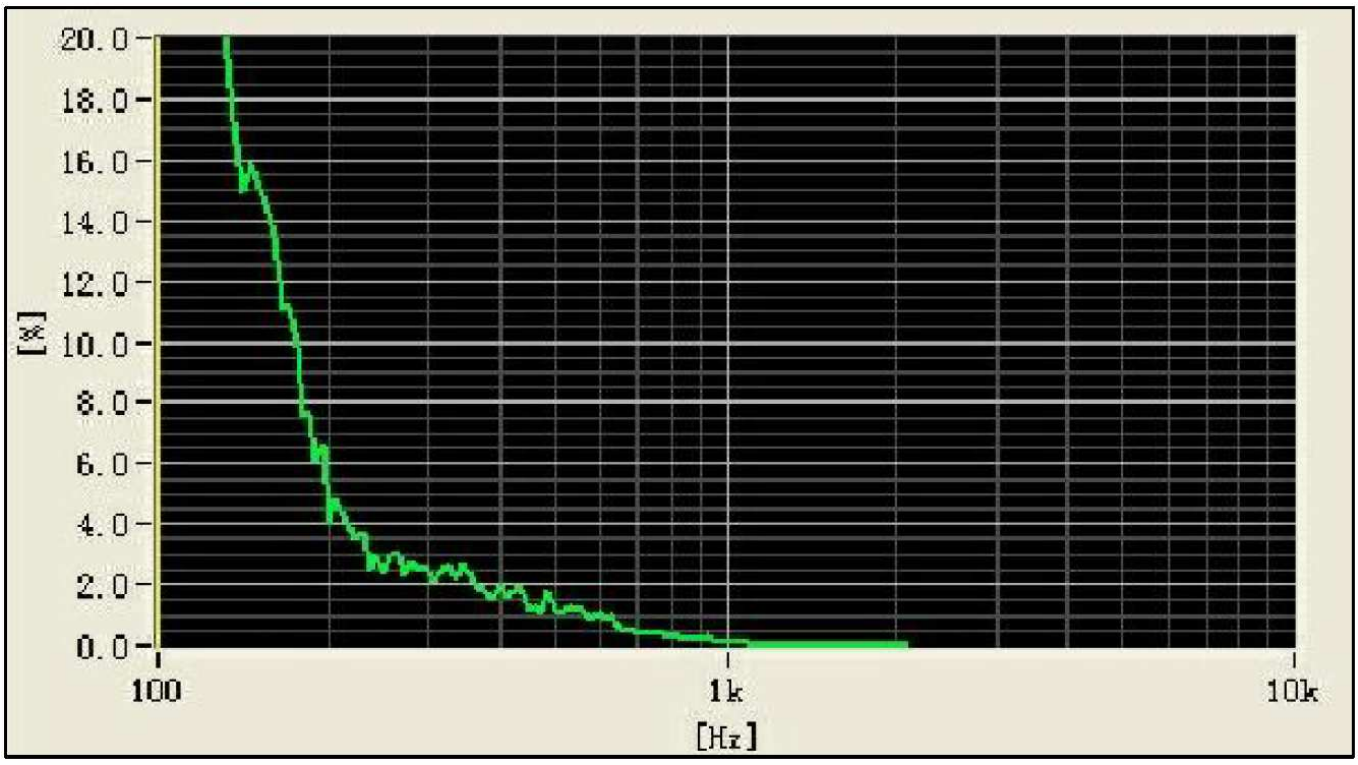
3.6 IMPEDANCE CURVE (0.15W, 0.1m SOUND CHECK TESTING)



3.7 RUB & BUZZ CURVE (0.15W, 0.1m SOUND CHECK TESTING)



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4. RELIABILITY TEST

4.1 Endurance Test

Duration	240 hours

At square wave, duty cycle: 50% asymmetric, Un=7Vop
f=2048± 30Hz. Temperature cycle -40...+85°C
with cycle duration 4 hours; 10s on/off

4.2 High Temperature Durability Test acc. to IEC 60068 part2-2

Temperature	+85 ± 3°C
Duration	1000 hours

4.3 Low Temperature Durability Test acc. to IEC 60068 part2-1

Temperature	-40 ± 3°C
Duration	500 hours

4.4 Humidity Durability Test acc.to IEC 60068 part2-3

Temperature	+40 ± 3°C
Relative Humidity	93% RH
Duration	56 days

4.5 Temperature Cycle Durability Test acc.to IEC60068 part2-14

Low Temperature	-40 ± 3°C
High Temperature	+85 ± 3°C
Transfer time low to high	<10 Seconds
Cycles	100

4.6 Shock Test acc. to IEC 60068 part2-27

100g for each free mutually perpendicular direction to
each of 3 times by sine wave

4.7 Vibration Test acc. to IEC 60068 part 2 -6

sine-wave excitation; 8...300Hz, 2g, 1 octave/min;
test time 16 hours each axis
Additional requirements:
Test of solderability and resistance to soldering
heat acc. to VDON4.3643.001
X-ray solderpoint inspection according to VDON 4.4814.001
Washability: not washable
Cadmium prohibited as per DIN 5.5000.1

5. NOTICE

5.1 **Storage Condition**

The products should be stored in a room, where the temperature/humidity is stable. And avoid such places where there are large temperature changes. Please store the products at the following conditions:

Temperature: -10 to + 40°C, Humidity: 15 to 85% R.H.

5.2 **Expire Date on Storage**

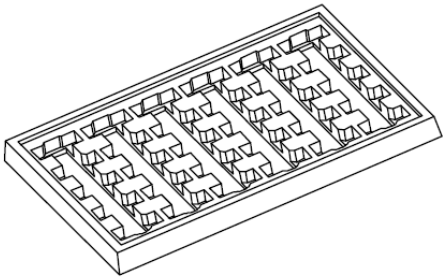
Expire date (Shelf life) of the products is six months after delivery under the conditions of a sealed and an unopened package. Please use the products within six months after delivery. If you store the products for a longer time (more than six months), use Them carefully, because the products may be degraded in the solderability and/or rusty. Please confirm solderability and characteristics for the products regularly.

5.3 **Notice on Product Storage**

(1) Please do not store the products in a chemical atmosphere (Acids, Alkali, Bases, Organic gas, Sulfides and so on), because the characteristics may be reduced in quality, and/or be degraded in the solderability due to the storage in a chemical atmosphere.

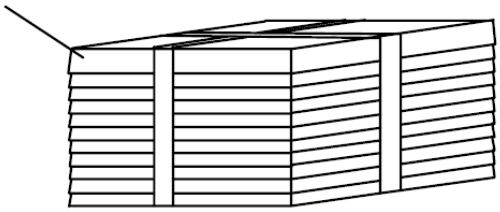
(2) Please use the products immediately after the package is opened, because the characteristics may be reduced in quality, and/or be degraded in the solderability due to storage under the poor condition.

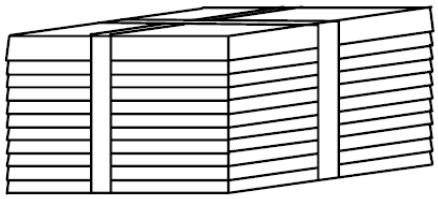
6. PACKING



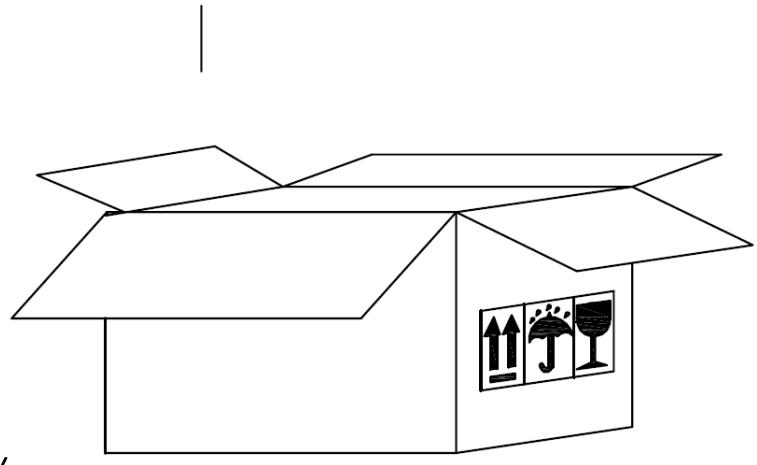
ESD packing

only cover





11 trays,300 pcs



6.1 PACKING QUANTITY

30 pcs per tray
22 trays per carton (two trays only cover)
600 pcs per carton in total
Carton size 59x45x28cm

7. HISTORY CHANGE RECORD

REV	CHANGE ITEMS		DATE
	BEFORE CHANGE	AFTER CHANGE	
1	Old Layout	New Layout	2019.08.28
2	Weight 9g	Weight 11,8g	2019.08.28