

SPECIFICATION FOR APPROVAL

规格书

Customer (客户): BHTC

Customer P/N: 219.406-10
(客户型号)

QINLON P/N : SP-1508SA01
(本厂型号)

DESCRIPTION: SMD Loudspeaker
(样品编号)

SAMPLES Date 2020.03.15

【注意/Note】

- 1, THIS PRODUCT MUST COMPLY WITH RoHS DIRECTIVE .(此本品符合欧洲 RoHS 规定指令)
2. IN CASE OF CHANGES, SUCH AS DIE & MOLD, MANUFACTURING PROCESS, MATERIAL, APPEARANCE, AND INSPECTION etc. ,THE SAME PROCEDURE IS REQUIRED.(此部品确认后`。如模具、制造方法、材料、外观、检查等发生变更的情况下必须事前由双方进行合议)

CUSTOMER'S APPROVED SIGNATURE

SUPPLIER: CHANGZHOU QINGLONG ELECTRONIC COMPONENTS CO.,LTD

TEL(电 话): 86-519-85500395 85500651

FAX(传 真): 86-519-85500519

E-mail: qinlon@263.net <http://www.qinlon.com>

Issued by 担当	Checked by 核查	Approved by 确认	Initial Date 日期	Updated 更新	Version
Liang H.W.	He Binbin	Lu Tianming	2020/03/15		V0

LoudSpeaker Specification

Electrical and Mechanical Characteristics

Part Number Description: **SP** (speaker), **15**(diameter 13mm), **08**(impedance 8 ohm), **S**(SMD type) ,**A** (Double sides emit sound on PCB) , **01** (series)

Part No.	QINLON Part No 本厂编号	SP-1508SA01	Revision 版本	V0
	Customer project 顾客项目	Audi D5/C8	Customer No 顾客型号	219.406-10
No.	Item 项目	Specification 规格	Testing Condition 测试条件	
1.	Impedance 阻抗	8Ω±15%	At 2 kHz 1.0 Vrms	
2.	Resonance Freq 最低共振周波数	800Hz±20%	Without Baffle	
3.	Output S.P.L. 出力音压	87±3dB	0.1m / 0.5W @1kHz, 1.6kHz, 2kHz, 3.2kHz Average	
4.	Rated Power 定格入力	0.5 W	2.0Vrms	
5.	Max Power 最大入力	0.8 W	2.53Vrms	
6.	Frequency Range 实效频宽	F0~20 kHz	Output S.P.L. -10 dB	
7.	Operation 可靠性试验	Must Be Normal	Program Source 0.5 W	
8.	Buzzes & Rattles 异常音试验	Should not be audible buzz and rattle 无异常声	Sine Wave Between (正弦波入 力) at 2.37Vrms /300Hz~3.4 kHz	
9.	Distortion 失真	≤5%		
10.	Operating Temperature 工作温度	-40℃ to +105℃		
11.	Storage Temperature 储存温度	-40℃ to +105℃		
12.	重量 Weight	~1.5		

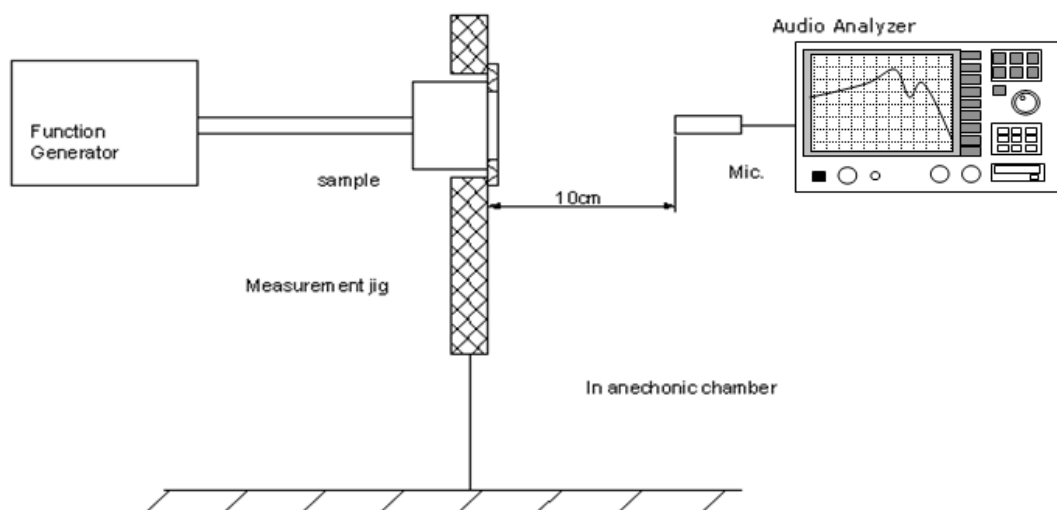
P/N: SP-1508SA01

Reliability test 环境测试:

.1	Cold Test 耐寒试验	After having been in a test chamber for 240 hours at the condition of $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and then left 2 hours in a room. ($-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$, 240 小时试验室温两小时后, 无异常)
2.	Heat Test 耐热试验	After having been in a test chamber for 240 hours at the condition of $+105^{\circ}\text{C} \pm 2^{\circ}\text{C}$ then left 2 hours in a room. ($+105^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 240 小时试验常温 2 小时后, 无异常的不良)
3	Load Test 连续负荷试验	Must be normal after load test : 2Vrms 240 hours. (2Vrms 连续 240 小时试验后无异常的不良)
4	Damp heat 稳态湿热试验	at $40^{\circ}\text{C} + 2^{\circ}\text{C}/93\%\text{R.H.}$ humidity 240 hours. ($+40^{\circ}\text{C} \pm 2^{\circ}\text{C}/93\%\text{R.H.}$ 240 小时后, 无异常的不良)
5	Short Term Maximum Power test 瞬间最大功率测试	Test for 1 hour under maximum power. Input shall be white noise in rated frequency response. And the signal will be 1 second on, 59 seconds off, total 60 cycles. (白噪音 0.8W, 1 秒开 59 秒关, 连续 60 循环, 试验后无异常之不良)
6	Temperature cycle 温度循环试验	Temperature change: $1 \pm 2^{\circ}\text{C}/\text{min}$, duration at $+65^{\circ}\text{C}$ 2hours(each cycle), duration at -25°C 2hours(each cycle), duration 8hours for one cycle, total 10 cycles
7	Drop Test 跌落试验	1m (on the concrete floor), 1 each corner, 3 each sides, 6 plain (从 1.0m 的高度跌落 10 次, 无异常不良)

Sensitivity difference shall be within $\pm 3\text{dB}$ from initial value after test

SPL (Sound Pressure Level) Measurement

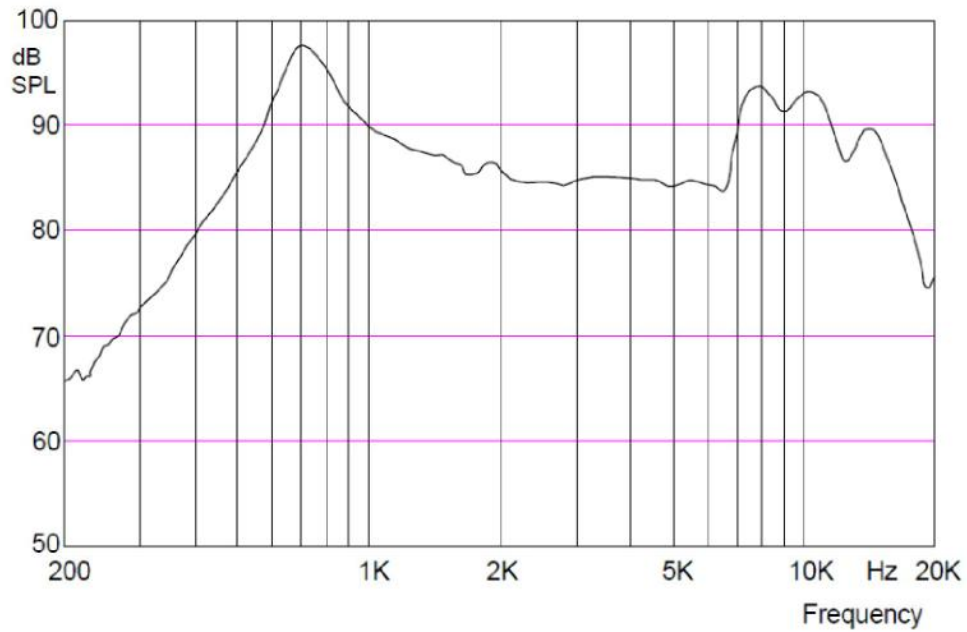


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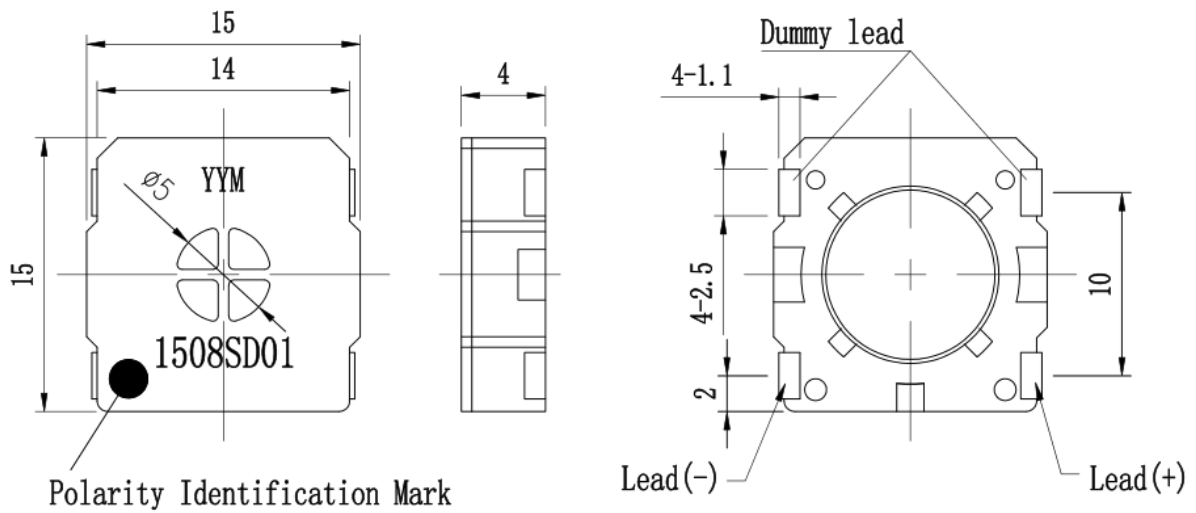
Product Outside View

Frequency Response

- Test Signal Input Power : 0.5 W
- Measured distance : 0.1m / on the Axis of speaker



Outline Drawing



Polarity Identification Mark

YY: year

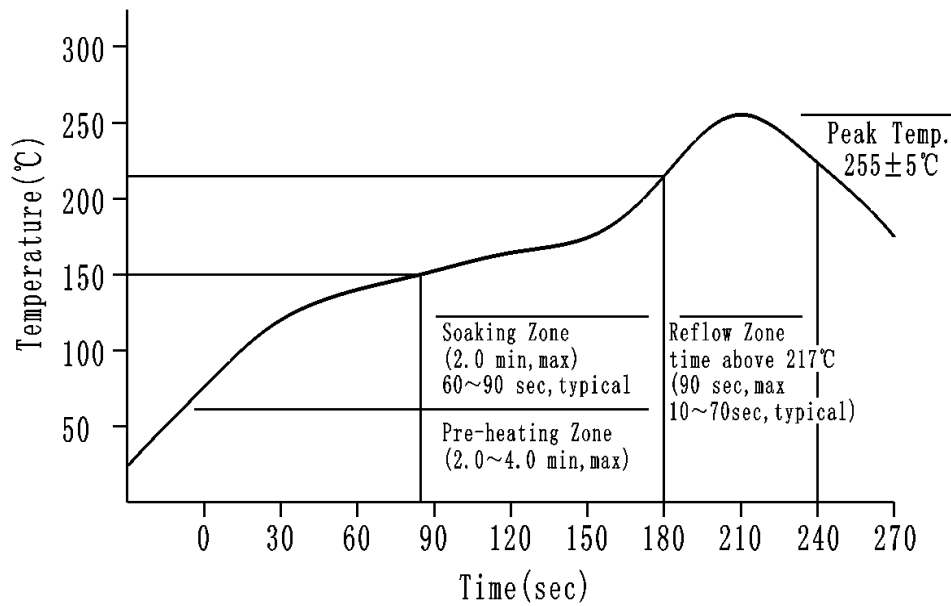
M: month

Unit:mm

Tolerance:±0.2

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焊接示意图 LEAD FREE REFLOW PROFILE



Note:

1) The transducers should not be exposed to extremely high temperatures for prolonged periods of time in reflow soldering process. As excessive heat will degrade the electric performance.

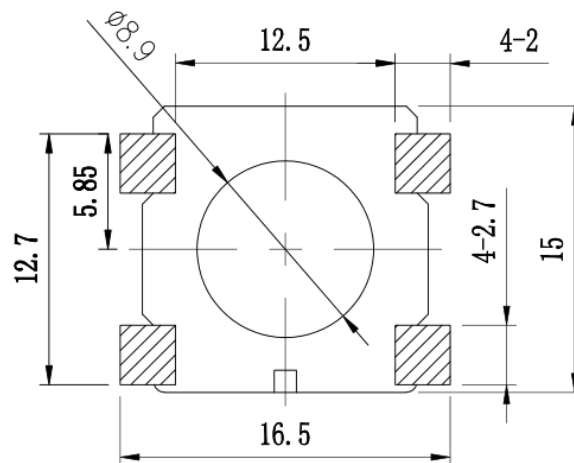
在回流焊过程时，产品不能长时间停留在高温区，因为高热会使产品电性能下降。

2) In case of using the top of soldering temperature higher than recommended max.temperature .

Please check and discuss with our sales representatives or product engineers .

如果焊接温度高于推荐的最大温度，请与销售代表和产品工程师检查讨论。

推荐的焊接布置尺寸 Recommended Land Pattern



▨ Soldering Point

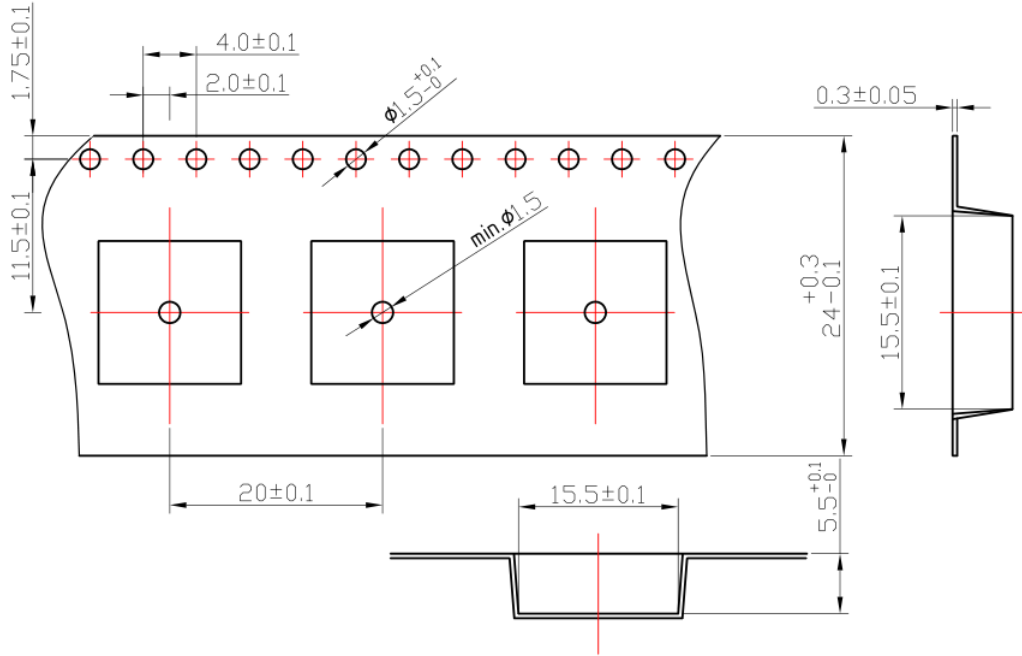
Recommended Land Pattern Dimensions

推荐的焊接布置尺寸

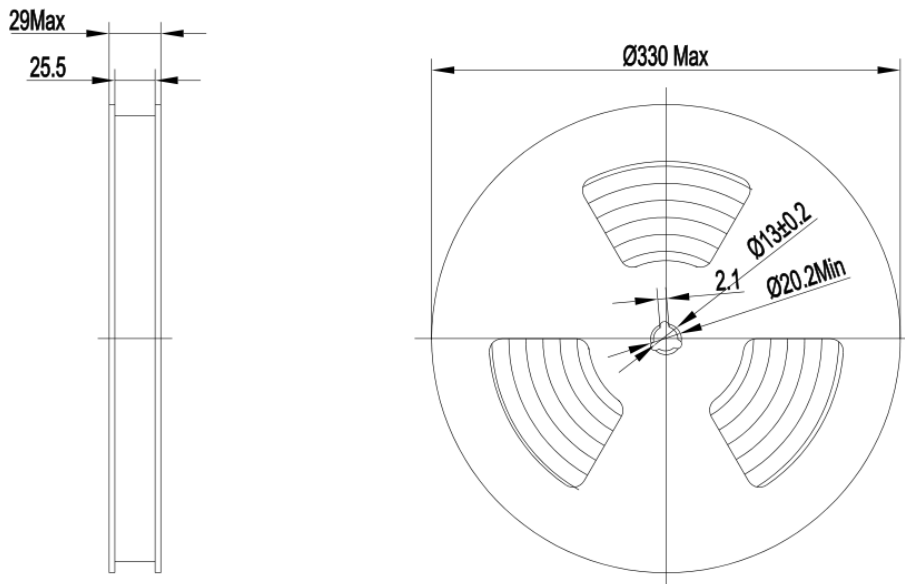
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Tape on Reel Packing

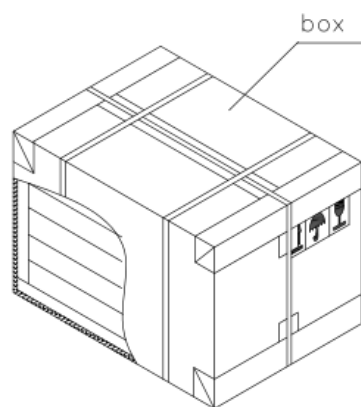
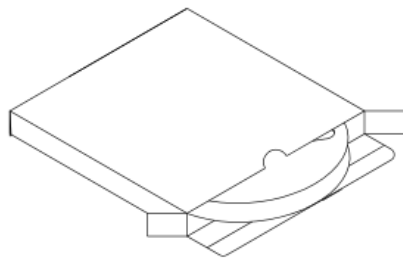
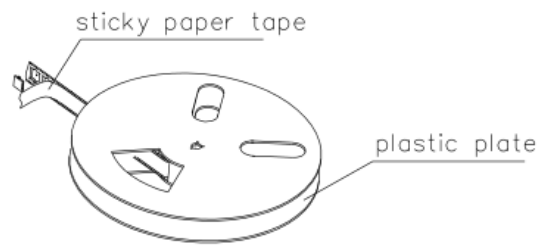
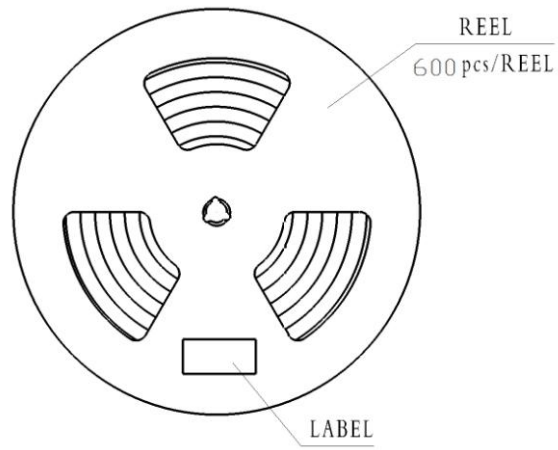
Dimensions of carrier tape



Dimensions of reel



Carton



Notes:

- 1、 600PCS/reel;
- 2、 5reel /carton , 3000Pcs/Carton in total;
- 3、 Carton:380x280x370mm