

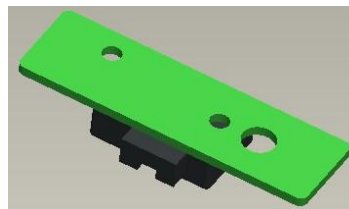
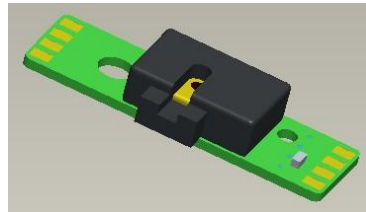


TRANSOUND ELECTRONICS CO., LTD

Microphone Module Specification

T SMA-1956KA-001-HF

Ver. B



THE THIRD INDUSTRIAL ZONE SIJIA VILLAGE
SHIJIE DONGGUAN GUANGDONG

www.transsound.com

MICROPHONE Module APPROVAL SHEET

客 戶 CUSTOMER		
產品型號 MODEL	TSMA-1956KA-001-HF	
外型尺寸 DIMENSIONAL	See Mechanical Drawing (Page10/12)	
靈敏度 SENSITIVITY	-22±3dB (0dB=1V/Pa,at 1KHz)	
客戶料號 CUSTOMER MODEL		
VENDOR		CUSTOMER
MADE BY	CHECKED BY	APPROVED BY

臺灣公司 (Taiwan company)
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Record of Revisions

Item	Version	Released date	Page	Reason of change
01	A	2012/06/28	12	First version to be released
02	B	2012/09/01	12	Changed the Mechanical Drawing

Model: TSMA-1956KA-001-HF

Test Condition: VDD= 3.3 V, fCLK= 2.4 MHz, Ta= 26±2 °C, Room Humidity= 65±5 %

Parameter	Specification	Condition	Unit
1、 Type	Microphone		-
2、 ECM/MEMS	MEMS		-
3、 Directivity	Omni-directional		-
4、 Dimension	19.0 x 5.6		mm
5、 Height	3.0		mm
6、 Sensitivity	-22±3	f=1kHz, 0dB=1V/Pa	dBFS
7、 S/N Ratio	≈61.5	f=1kHz, 0dB=1V/Pa, A-weighted curve	dB
8、 Current Consumption	<0.6	Clock-ON	mA
	<50	Clock-Off	μA
9、 Operating Voltage	1.6~3.6		V
10、 Clock Frequency	1~3.25		MHz
Date	Checked By	Designed By	
2012.06.28		黄龙燕	

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1、 Overview

1.1 Purpose and Scope

The *TSMA-1956KA-001-HF* is a microphone module for Laptop. The *TSMA-1956KA-001-HF* carries a high performance microphone which has purified audio sampling and high sensitivity.

The scope on this spec. for this module includes:

- a. PCBA
- b. Microphone × 1
- c. RoHS compliant
- d. Package
- e. Halogen free.

Do not include:

- a. Additional ESD solution such as AL-foil
- b. Other required directives
- c. Additional Grounding wires
- d. Other mechanical parts.

Above optional items can be designed by customer demand.

2、 System Specification

Category	Item	Specification
Module	Dimension(L×W×H)	19×5.6×3.0±0.3 (H) mm
Microphone	Microphone Type	Omni-directional SMT Microphone×1
	Sensitivity	-22±3 dBFS
	SNR	≈61.5dB
	TDH	<2% (1KHZ sine wave)
	Rubber/Sponge	Rubber
PCB	Thickness	0.60±0.10mm
Interface	Microphone interface	PDM format
Other	Tally Lamp	n/a
	Power Supply	Supply range 3.3Vdc ±5%
	Power Consumption	<0.6mA
	Weight	≈0.3g±10%
	Operating Temperature	0~45 degree C

3、 Electronic Specifications

3.1 Electronic Specifications

Item	Specification
Power Supply	3.3V DC \pm 5%
Power Consumption	Under 3mW
Current Consumption	Under 0.6mA

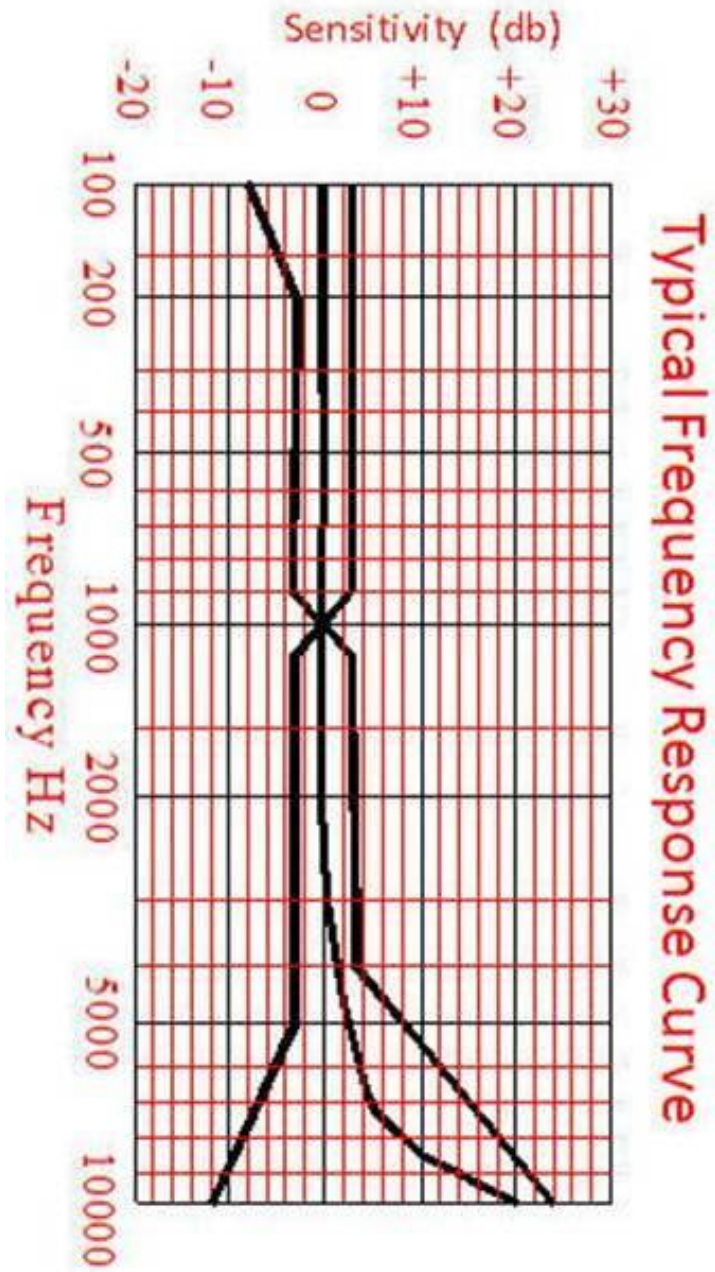
3.2 Pin definition of PCBA

Item	Specification
Pad definition	Pad1、 Pin8: CLK Pad2、 Pin7: DATA Pad3、 Pin6: GROUND Pad4、 Pin5: POWER

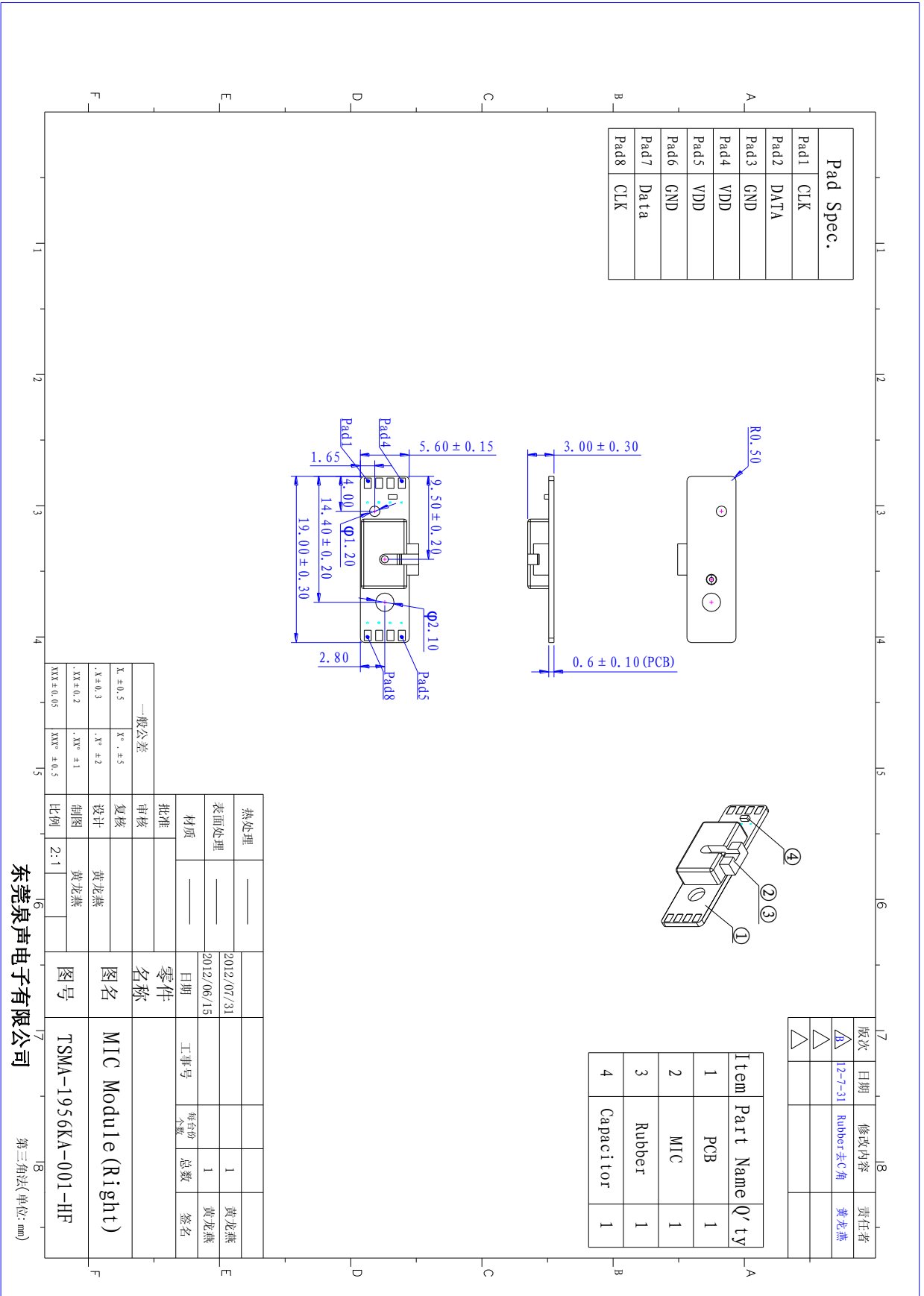
3.3 Microphone Specification

Item	Specification
Microphone Vendor	Knowles SPM1423HM4H
Microphone type	Omni-directional SMD Microphone
Sensitivity range	-19~-25 dBFS
SNR	\approx 61.5dB
THD	$<$ 2%
Interface	PDM format
Microphone Package Dimension	4.72 \times 3.76 \times 1.25 mm

3.4 Frequency Response Curve



4、Mechanical Drawing

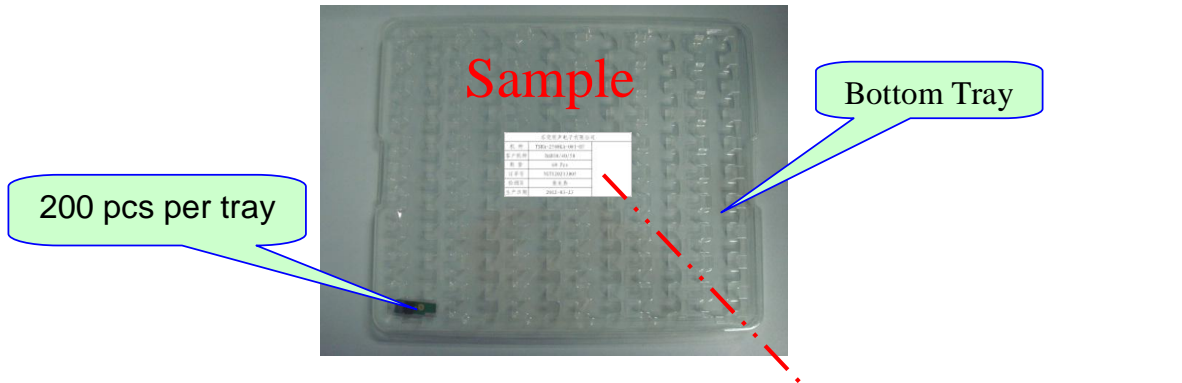


5、Packaging

◆ Packing q'ty:200 pcs per tray

The tray dimension and material

- ☞ Top tray material:transparent antistatic PET,Thickness:0.5mm
- ☞ Bottom tray material:transparent antistatic PET,Thickness:0.5mm



Tray Label

- ◆ Paste a piece of the label on the tray
- ◆ Dimension:80mm×40mm×0.1mm thickness
- ◆ Colour:Black on white background
- ◆ Label structure:Please see the figure

东莞泉声电子有限公司		Sample
料号	TSMA-1956KA-001-HF	
客户料号	S400CA	
数量	200Pcs	
订单号	YGT120628001	
生产日期	2012-06-28	

◆ 25 layers tray per PE bag and 2 PE bag per carton

- ☞ The PE Bag Size:230×270
- ☞ The Material:transparency antistatic PE bag;Thickness:0.05mm.

◆ 1 PE bag per partition and 2 PE bag per carton

- ☞ The Carton Size:450×280×200
Thickness is 7mm,material:B+C flute
- ☞ The 2 pcs long partition size:430×180
Thickness is 5mm,material:Bflute
- ☞ The 3 pcs short partition size:260×180
Thickness is 5mm,material:Bflute.

Put the paper sheet on carton 's top and bottom

- ☞ Paper sheet size: 430×260
- ☞ The thickness: 5 mm Material: B flute

Paper sheet



东莞泉声电子有限公司	
料号	T SMA-1956KA-001-HF
客户料号	S400CA
数量	5000Pcs
订单号	YGT120628001
检测员	黄龙燕
生产日期	2012-06-28



PE bag Label
 Paste a piece of the label on the PE bag
 Dimension:80mm×40mm×0.1mm thickness
 Colour:Black on white background
 Label structure:Please see the figure

泉声电子有限公司 出厂合格证			
品名	TS-	检验方法	抽样()全数()
测试条件		检验水准	一般检验水准II
感度要求		允许水准(AQL)	0.65() 1.0()
数量		判定	
制造日期	20 年 月 日	品管负责人	
包装日期	20 年 月 日		
检查日期	20 年 月 日		

Carton Label
 Paste a piece of the label on the carton
 Dimension:80mm×60mm×0.1mm thickness
 Colour:Black on white background
 Label structure:Please see the figure