Tel:0086-0574-87773030
Fax:0086-0574-87471600

SPECIFICATION

FOR APPRONAL

Customer :

Product Name : MEMS Microphone

Model Name : VSM3526AB-S38-B1F

Drawing No. : VS20250111005

Signature of Voise

Approved by	Checkde by	Issued by	Date

福爱斯电子有限公司
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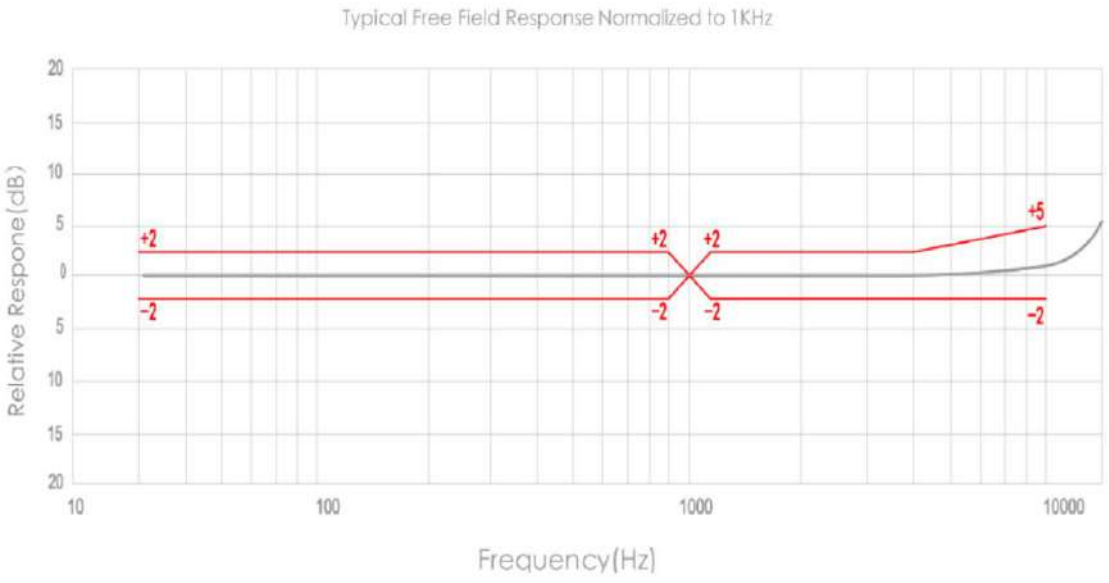
1. Acoustic and Electrical Characteristics

Test conditions:
Ta=23± 2°C, RH=55±20%, VDD = 1.8V, VDD (min) < VDD < VDD (max)
no load, unless otherwise indicated

	Items	Symbol	Condition	Min	Typ.	Max	Unit
1	Directivity	-	Omnidirectional				
2	Operating Voltage	V_{DD}	–	1.6	1.8	3.6	V
3	Sensitivity	S	94dB SPL@ f=1KHz	-39	-38	-37	dB/V/Pa
4	Current consumption	I	–	–	110	–	μA
5	Output impedance	ZOUT	f=1KHz	–	220	300	Ω
6	Signal to Noise Ratio	S/N(A)	94dB SPL@ f=1KHz (A-weighted)	–	65	–	dB(A)
7	Total Harmonic Distortion	THD	94dB SPL@1kHz	–	0.2	1.0	%
9	Acoustic Overload Point	AOP	10%THD@1kHz	–	128	–	dB SPL
10	Power Supply Rejection	PSR	100 mVpp square wave @ 217Hz, V_{DD} = 2.0V, A-weighted	–	-106	-103	dB/V
11	Power Supply Rejection Ratio	PSRR	200 mVpp sinewave@ 1kHz, V_{DD} = 2.0V	–	77	–	dB

2. Frequency Response Curve



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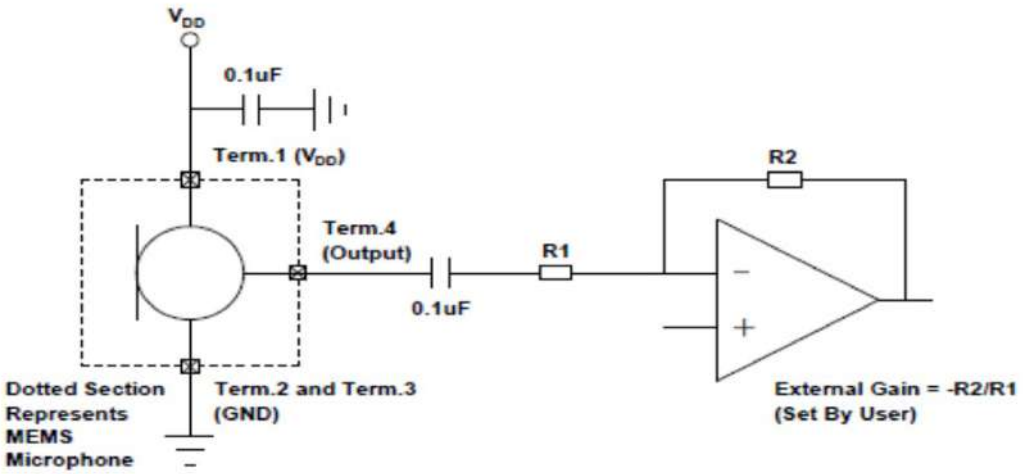
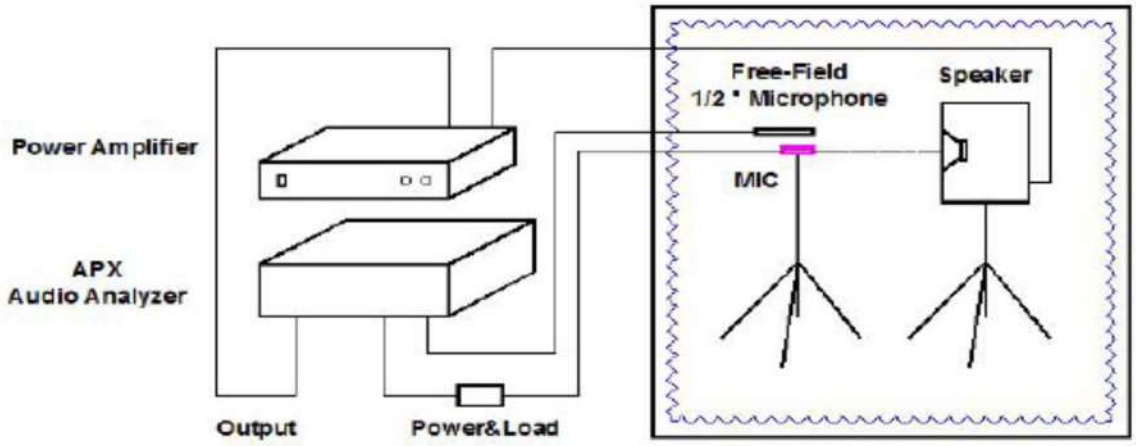
3. Recommended Interface Circuit



4. Test Setup Drawring



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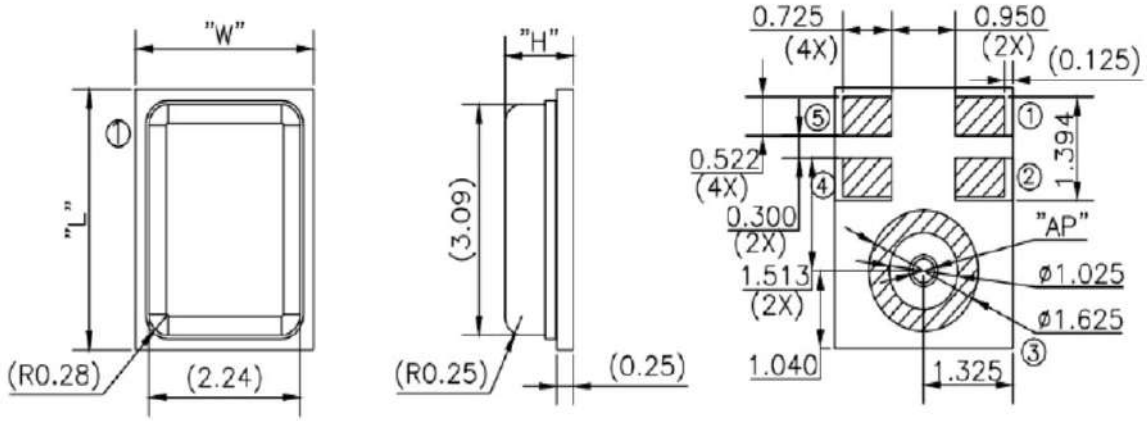
5. Mechanical Specifications

Top view Side view Bottom view



Item	Dim.	Tol.	Units
Length	3.50	±0.10	mm
Width	2.65	±0.10	mm
Height	0.98	±0.10	mm
AP	ø0.325	±0.05	mm

Mechanical Dimension

Pin	Pin name	Type	Description
1	OUTPUT	Signal	Output Signal
2	GND	Power	Ground
3	GND	Power	Ground
4	GND	Signal	Ground
5	V_{DD}	Power	Power Supply

Pin Definition

Note:

All dimensions are in millimeter(mm).

Tolerance： +/-0.1mm unless otherwise specified.

Weight： 0.02±10%g

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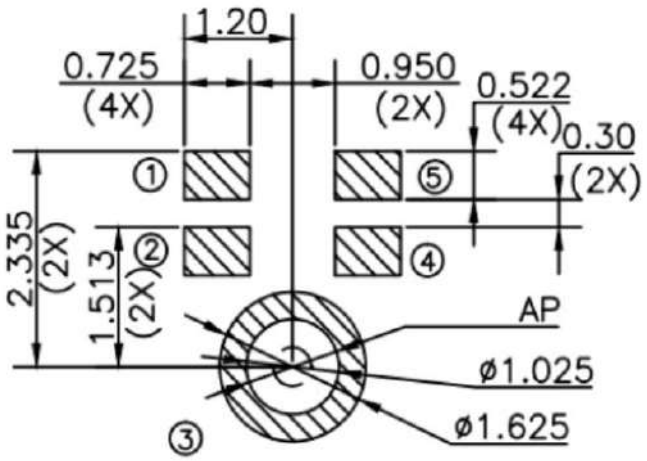
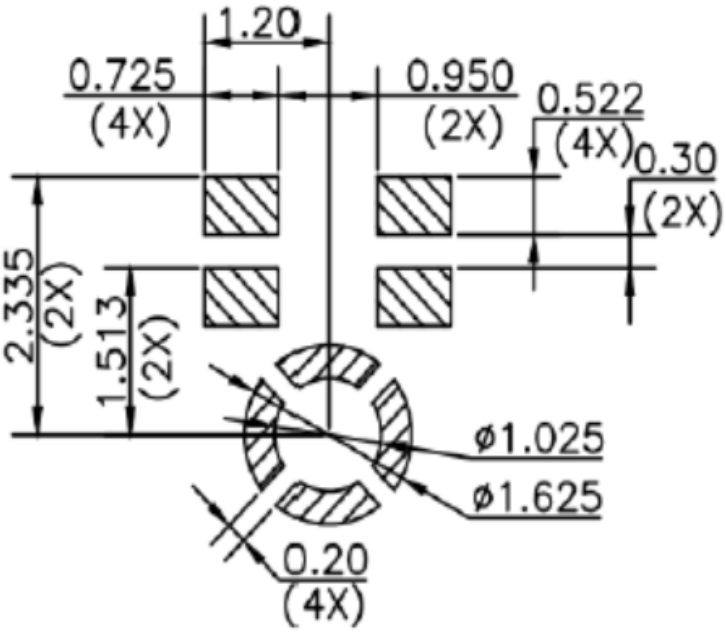
6. Example of land pattern

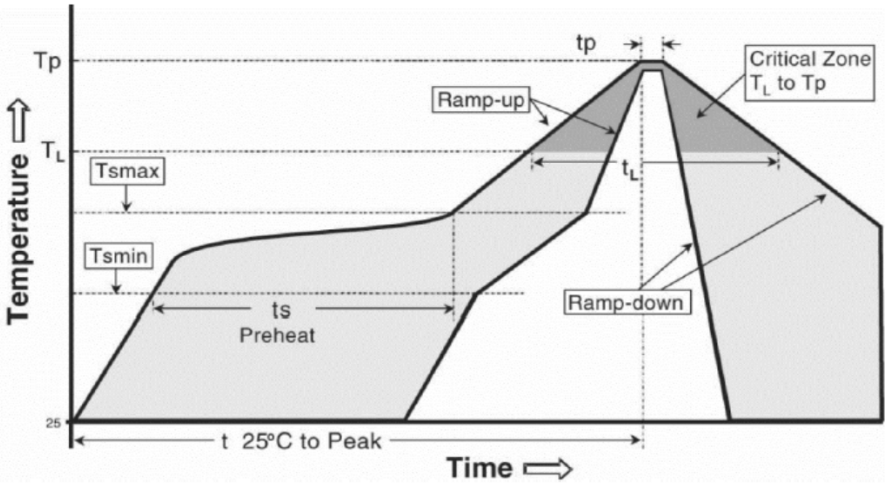


Example of Land Pattern Drawing

7. Example solder stencil pattern



8. Reflow Guarantee



Profile Feature	Pb-Free
Average ramp-up rate (Tsmax to Tp)	3℃/second max
Preheat:	
- Temperature Min (Tsmin)	150℃
- Temperature Max (Tsmax)	200℃
- Time (Tsmin to Tsmax) (ts)	60-180 seconds
Time maintained above	
- Temperature (T_L)	217℃
- Time (T_L)	60-150 seconds
Peak Temperature (Tp)	260℃
Time within 5℃ of actual Peak Temperature (tp)	20-40 seconds
Ramp-down Rate	6℃/second max
Temperature 25℃ to Peak Temperature	8 minutes max

Notes:

1. Do not board wash or clean after the reflow process.
2. Do not brush board with or without solvents after the reflow process.
3. Do not directly expose to ultrasonic processing, welding, or cleaning.
4. Do not insert any object in acoustic port hole of device at any time.
5. Do not apply air pressure into the acoustic port hole.
6. Do not pull a vacuum over acoustic port hole of the microphone.
7. Do not apply a vacuum when repacking into sealed bags at a rate faster than 0.5 atm/sec.
8. Recommended number of reflow is not more than 5 times.

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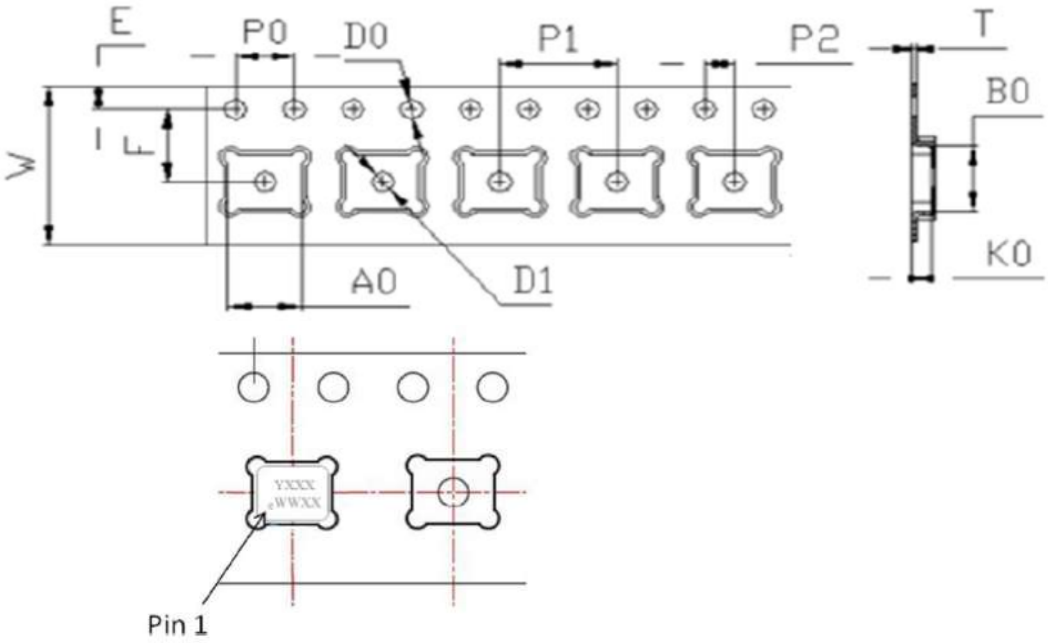
9.Packaging Spcifications

9.1 Tape Specification

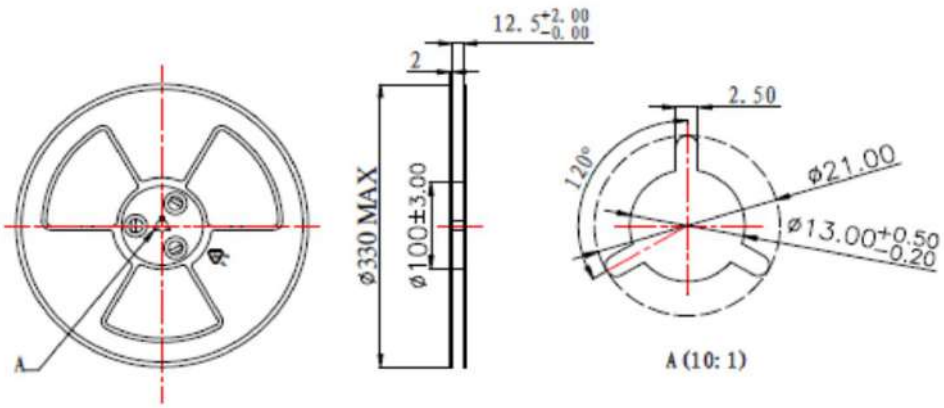


Pin1:

Line	Character	Description
1	YXXX	Y=Year code, WW=Week code, XX=Date code
2	WWXX	

9.2 Reel Dimension

13" reel dimensions (unit:mm)



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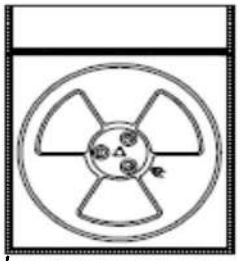
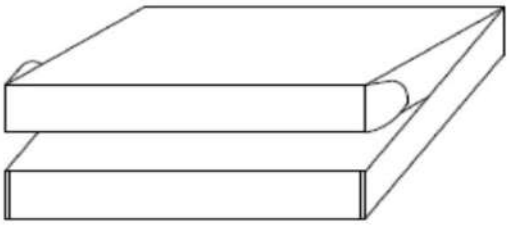
9.3.The Content of Box(13" reel)



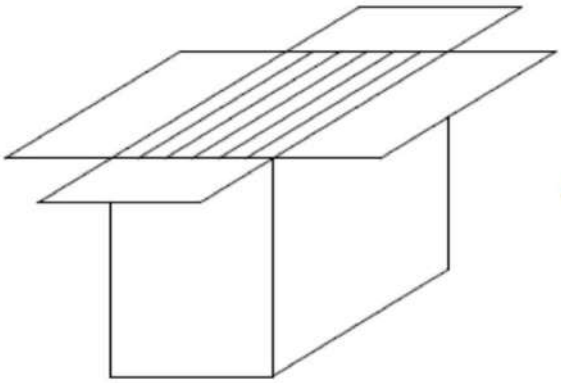
Packing(5000pcs)

2Sets



Inner Box (10000pcs)

6Sets



Outer Box(60000pcs)

Qty/ Reel	Qty/ One Inner Box	Qty/ Outer Box（Six Inner Box）
5000 pcs	10,000 pcs	60,000 pcs
Φ330mm	355×340×45mm	365×290×370mm

10. Storage and Transportation

1. Keep MEMS MIC in warehouse with less than 75% humidity and without sudden temperature change, acid air, any other harmful air or strong magnetic field.
2. Recommend storage period no more than 1 year and floor life(out of bag) atfactory no more than 4 weeks.
3. The MEMS MIC with normal pack can be transported by ordinary conveyances. Please protect products against moist, shock, sunburn and pressure during transportation.
4. Storage Temperature Range：-40℃～+85℃（Microphone units with package）
5. Operating Temperature Range：-40℃～+105℃

11. Reliability Specifications

Note：The microphone sensitivity after stress must deviate by no more than ±3dB from the initial value.

Test Item	Detail
Thermal Shock Test	100 cycles of air-air thermal shock from-40℃ to +105℃ with 15 minute soaks.
High Temperature Test	+105℃ environment while under bias for 240 hours.
Low Temperature Test	-40℃ environment while under bias for 240 hours.
Humidity Test	+85℃/85% R.H. environment while under bias for 240 hours.
Vibration Test	16 minutes in each X, Y, Z axis from 20 to 2,000 Hz with peak acceleration of 20G
Drop Test	1.5-meter height onto a concrete surface each time at three directions in state of packaging.
Reflow Test	5 reflow cycles with peak temperature of +260℃.
ESD Test	Under C=150pF, R=330ohm. Tested to ±8KV contact to the case and tested to ±2kV contact to I/O terminals.10 times. Grounding.