


**MODEL:** CMM-3312AT-44308-TR | **DESCRIPTION:** MEMS MICROPHONE

**FEATURES**

- round
- analog
- small package
- reflow solder compatible
- omnidirectional


**ELECTRICAL**

parameter	conditions/description	min	typ	max	units
directivity	omnidirectional				
sensitivity (S)	at 94 dB SPL, 1 kHz	-47	-44	-41	dB
supply voltage (V <sub>DD</sub> )		1.6	2.0	3.6	V
current consumption (I <sub>DSS</sub> )	V <sub>DD</sub> = 2.0 V		80		μA
sensitivity reduction	V <sub>DD</sub> = 3.6 ~ 1.6 V		-0.5		dB
frequency (f)		100		10,000	Hz
signal to noise ratio (S/N)	at 94 dB SPL, 1 kHz (A-weighted)		58		dBA
total harmonic distortion (THD)	at 94 dB SPL, 1 kHz		0.2		%
acoustic overload point (AOP)	at 10% THD, 1 kHz		105		dB SPL
output impedance (Z <sub>out</sub> )	at 1 kHz			300	Ω

Notes: 1. All specifications measured at 23±2°C, humidity at 55±20%, unless otherwise noted.

**ENVIRONMENTAL**

parameter	conditions/description	min	typ	max	units
operating temperature		-40		100	°C
storage temperature	in packaging	-40		70	°C
RoHS	yes				

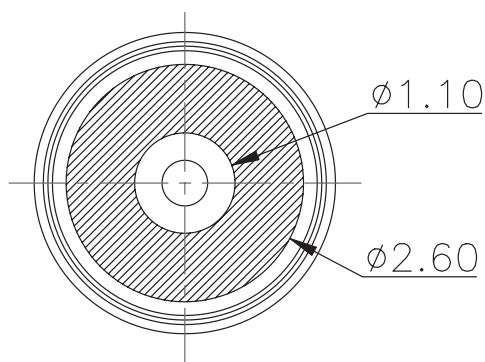
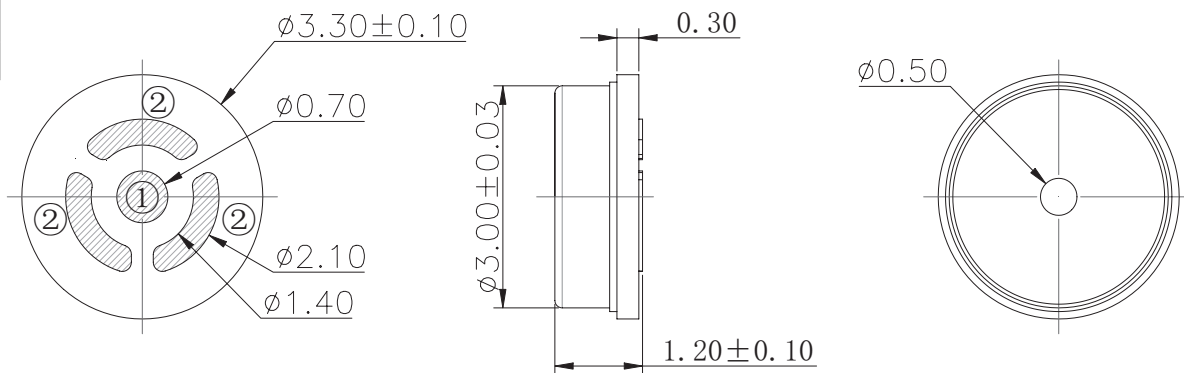
**MECHANICAL**

parameter	conditions/description	min	typ	max	units
dimensions	Ø3.30 x 1.20				mm
acoustic port	top				
terminals	surface mount				
weight			0.023		g

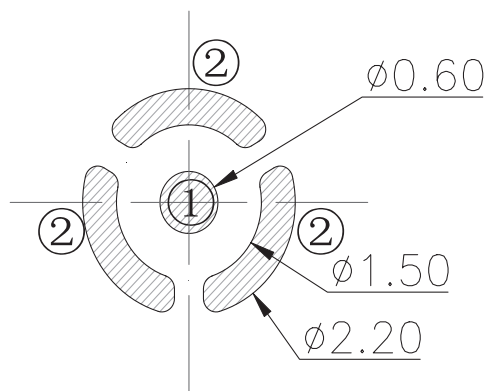
## MECHANICAL DRAWING

units: mm  
tolerance:  $\pm 0.1$  mm

TERMINAL CONNECTIONS	
TERM.	FUNCTION
1	VDD output
2	GND



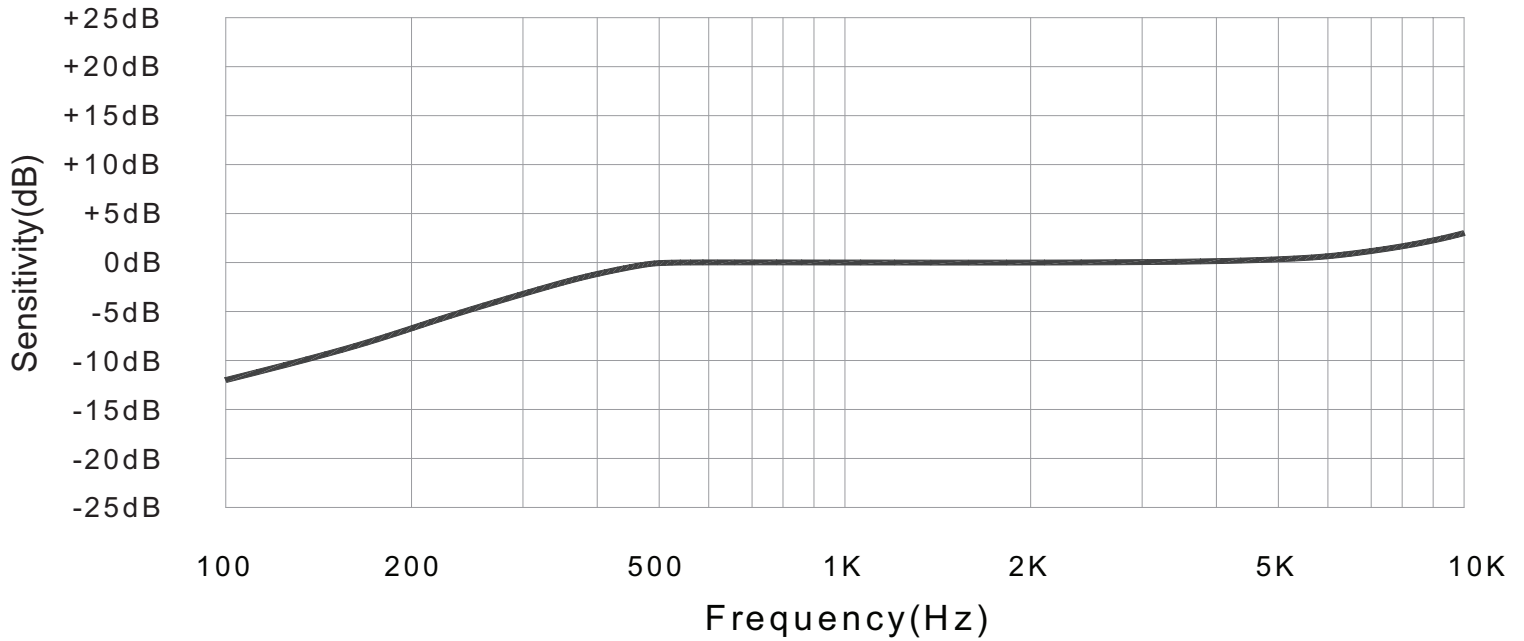
Recommended Vacuum Nozzle Pickup  
Top View



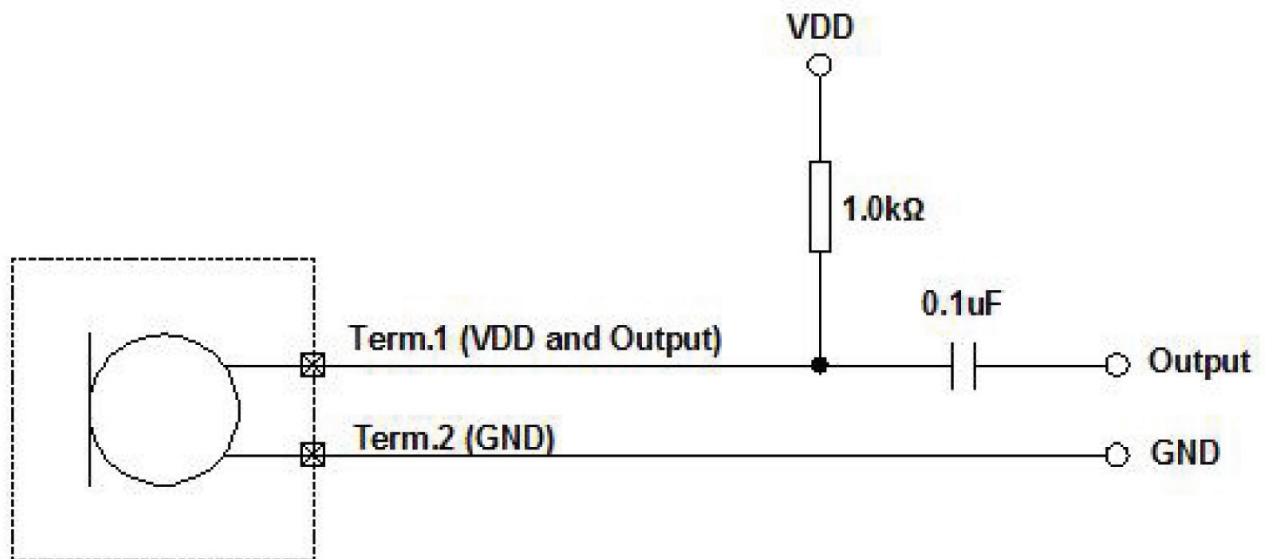
Recommended PCB Layout  
Top View

## FREQUENCY RESPONSE CURVE

Frequency Response (0dB=1V/Pa)



## APPLICATION CIRCUIT

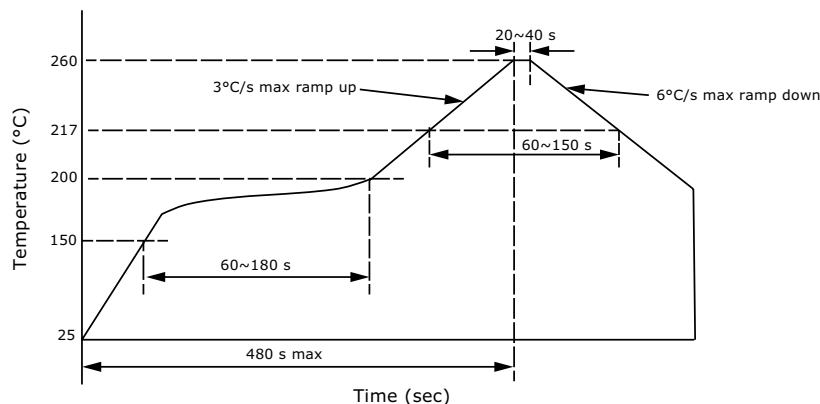


Dashed Section  
Represents  
MEMS  
Microphone

## SOLDERABILITY

parameter	conditions/description	min	typ	max	units
reflow soldering	see reflow profile			260	°C

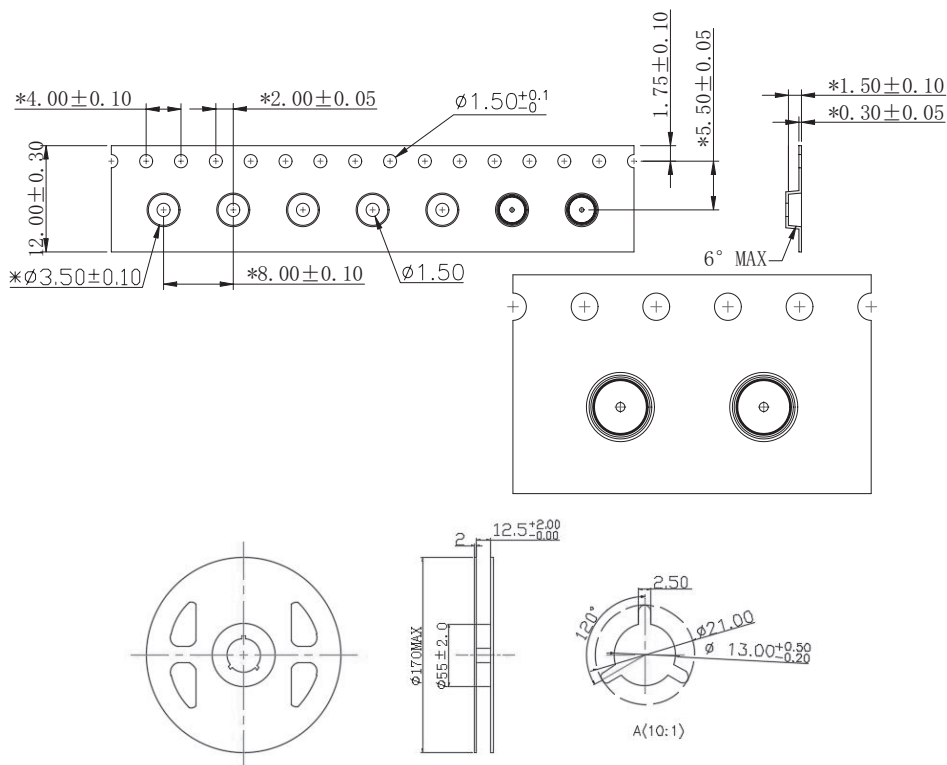
- Note:
1. Vacuuming over acoustical hole is not allowed.
  2. Not suitable for wash process.
  3. Not recommended to exceed 5 reflow cycles.



## PACKAGING

parameter	conditions/description	min	typ	max	units
reel storage <sup>4</sup>	at relative humidity <75%	-40		70	°C
MSL	Class 1				
reel size	Ø170 mm max				
reel QTY	1,000 pcs per reel				

- Note: 4. Recommended storage period no more than 1 year. Floor life (out of bag) no more than 4 weeks.



## REVISION HISTORY

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rev.	description	date
1.0	initial release	11/07/2018

The revision history provided is for informational purposes only and is believed to be accurate.



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