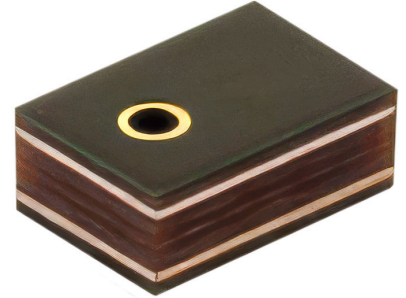


**MODEL:** CMM-27181AT-381Z-TR | **DESCRIPTION:** MEMS MICROPHONE**FEATURES**

- top port
- compact size
- power supply rejection ratio 65 dB

**ELECTRICAL**

parameter	conditions/description	min	typ	max	units
directivity	omnidirectional				
sensitivity [S]	at 94 dB SPL, 1 kHz	-39	-38	-37	dB
supply voltage [V _{DD}]		1.6	2.0	3.6	V
current consumption [I _{DD}]	V _{DD} = 2.0 V	100	160	250	μA
frequency [f]		20		10,000	Hz
signal to noise ratio [S/N]	BW = 20~20 kHz [A-weighted]	62	64	66	dBA
total harmonic distortion [THD]	at 94 dB SPL, 1 kHz	0.05	0.15	0.50	%
acoustic overload point [AOP]	at 10% THD, 1 kHz	126	128	130	dB SPL
phase	20 Hz~10 kHz at 94 dB	-5	0	5	deg
output impedance [Z _{out}]	at 1 kHz	60	100	250	Ω
dc output	V _{DD} =2.0 V	0.65	0.90	1.30	V
PSRR	200 mVp-p sine wave @ 1 kHz, V _{DD} = 2.0 V	55	65	75	dB
PSR	100 mVp-p square wave @ 217 Hz, V _{DD} = 2.0 V [A-weighted]	-105	-95	-85	dBV[A]

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		100	°C
RoHS	yes				

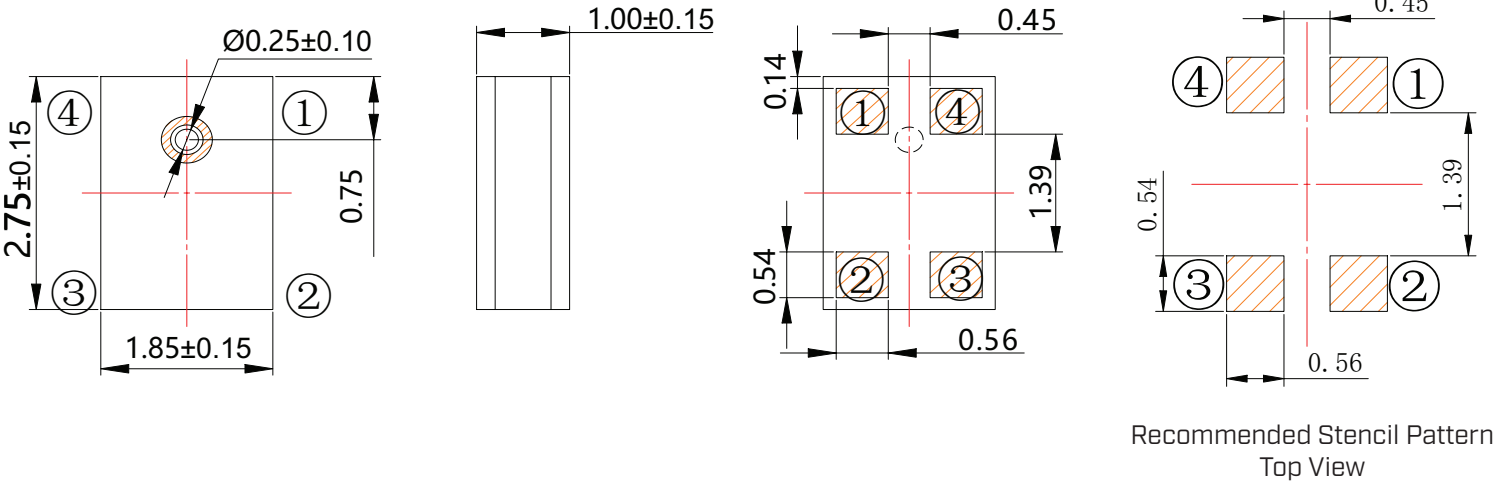
MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	2.75 x 1.85 x 1.00				mm
acoustic port	top				
terminals	surface mount				
weight		0.0126	0.0129	0.0132	g

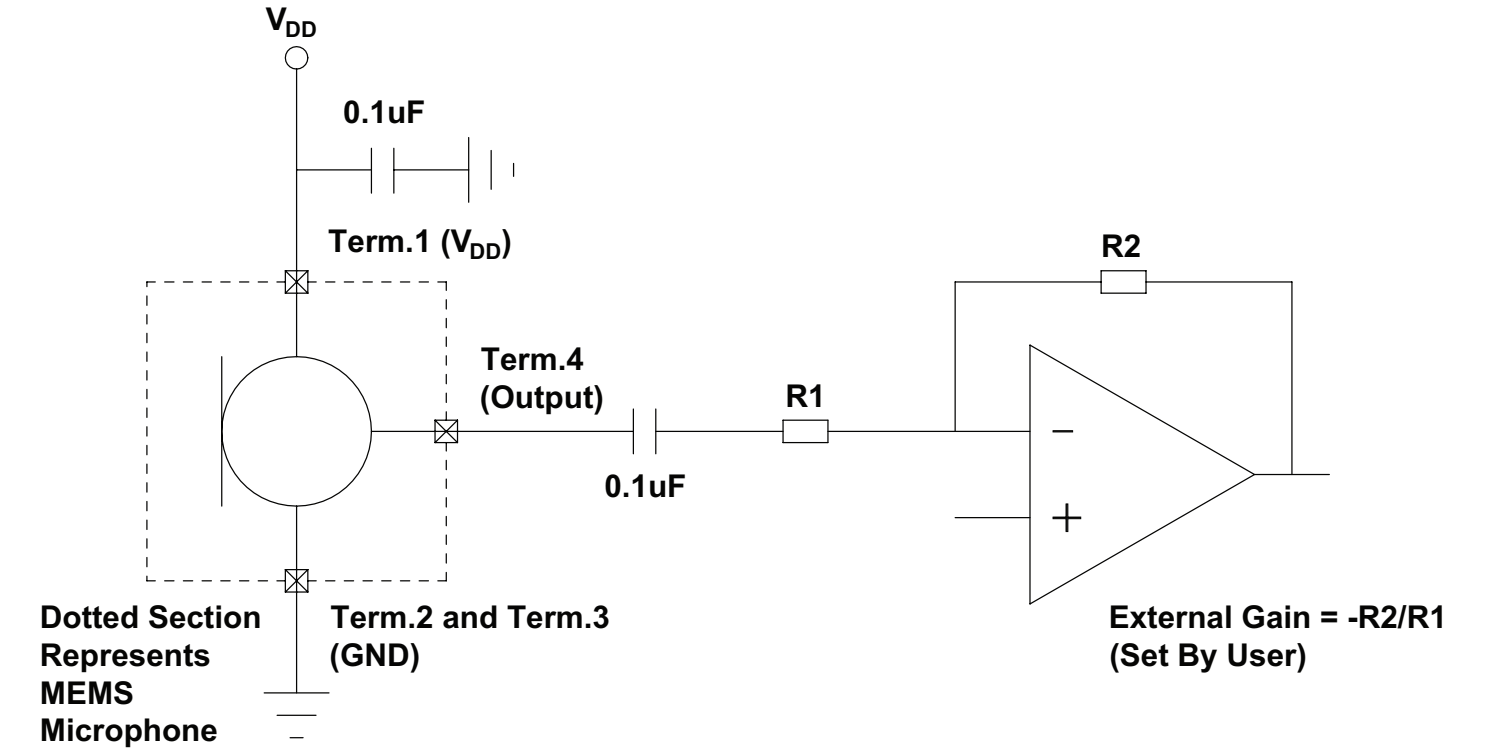
MECHANICAL DRAWING

units: mm
tolerance: ±0.1 mm

TERMINAL CONNECTIONS	
TERM.	FUNCTION
1	V _{DD}
2	GND
3	GND
4	output

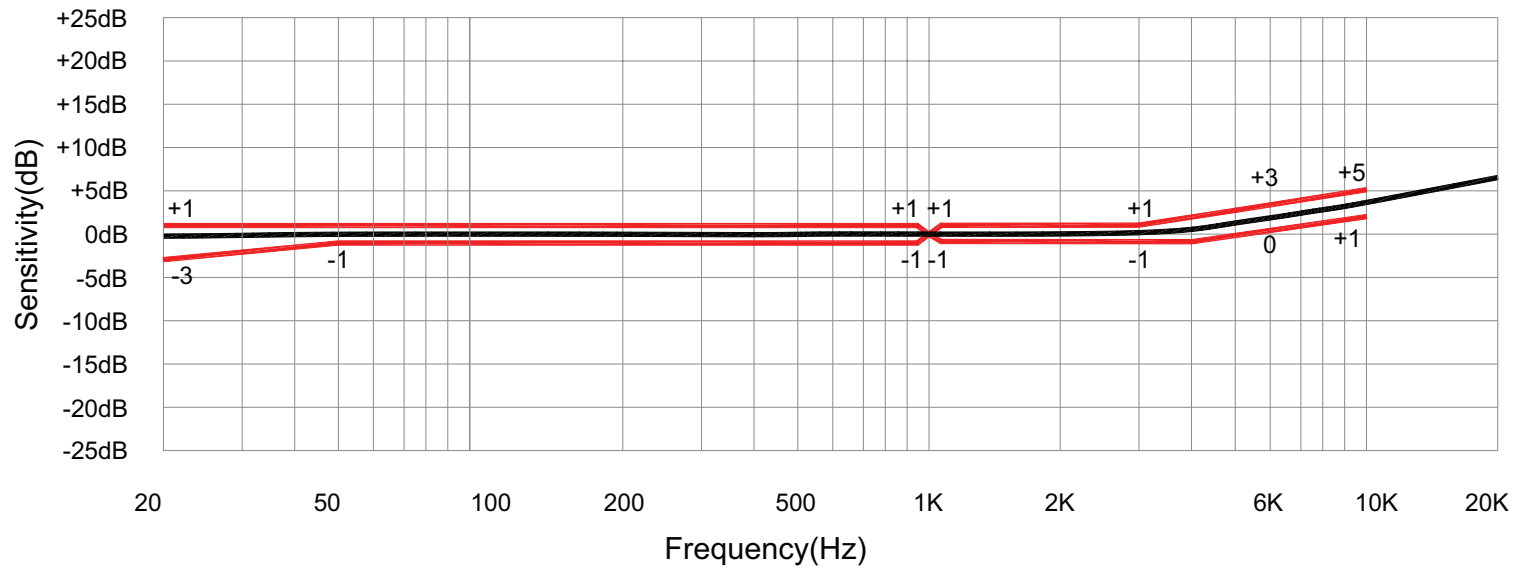


INTERFACE CIRCUIT

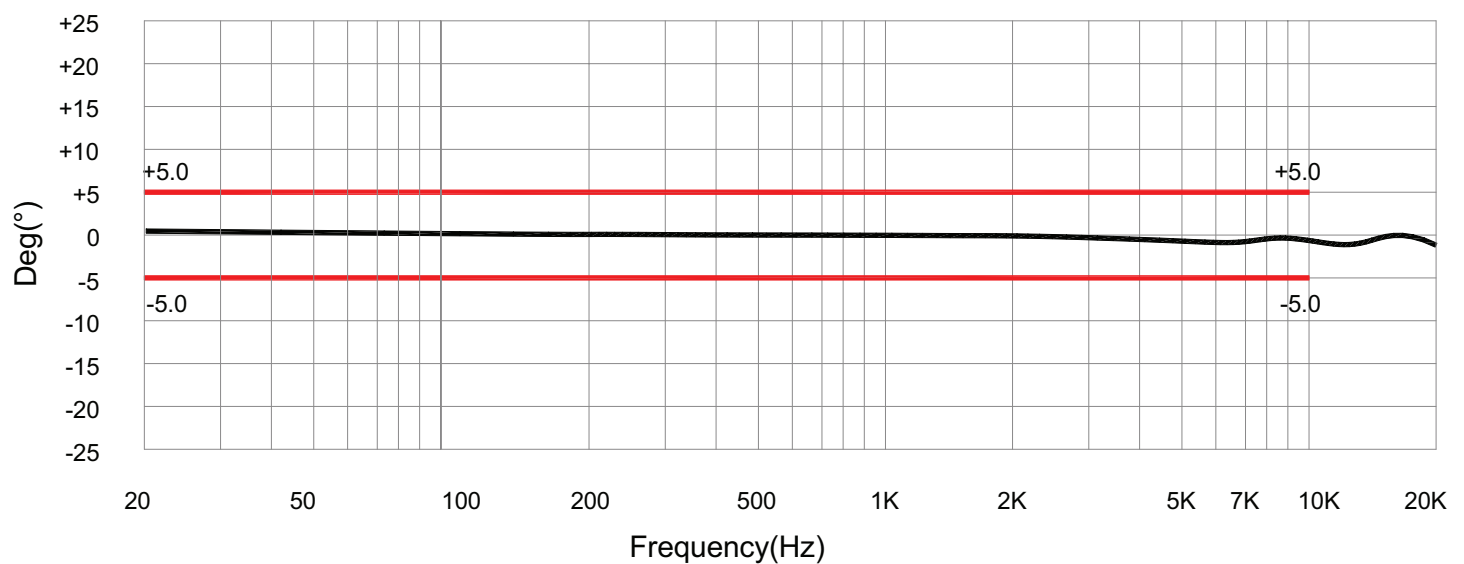


FREQUENCY RESPONSE CURVE

Frequency Response (0dB=1V/Pa)



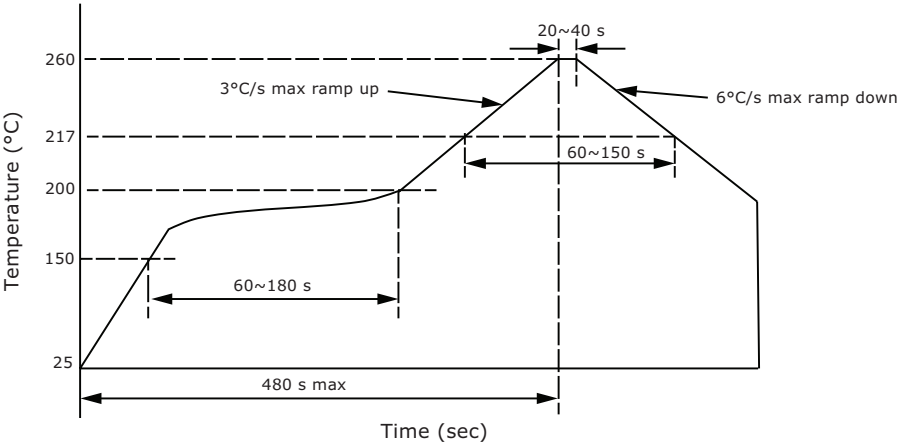
PHASE CURVE



SOLDERABILITY

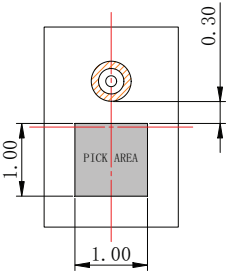
parameter	conditions/description	min	typ	max	units
reflow soldering ²	see reflow profile			260	°C

Note: 2. Not recommended to exceed 3 reflow cycles.



HANDLING RECOMMENDATIONS

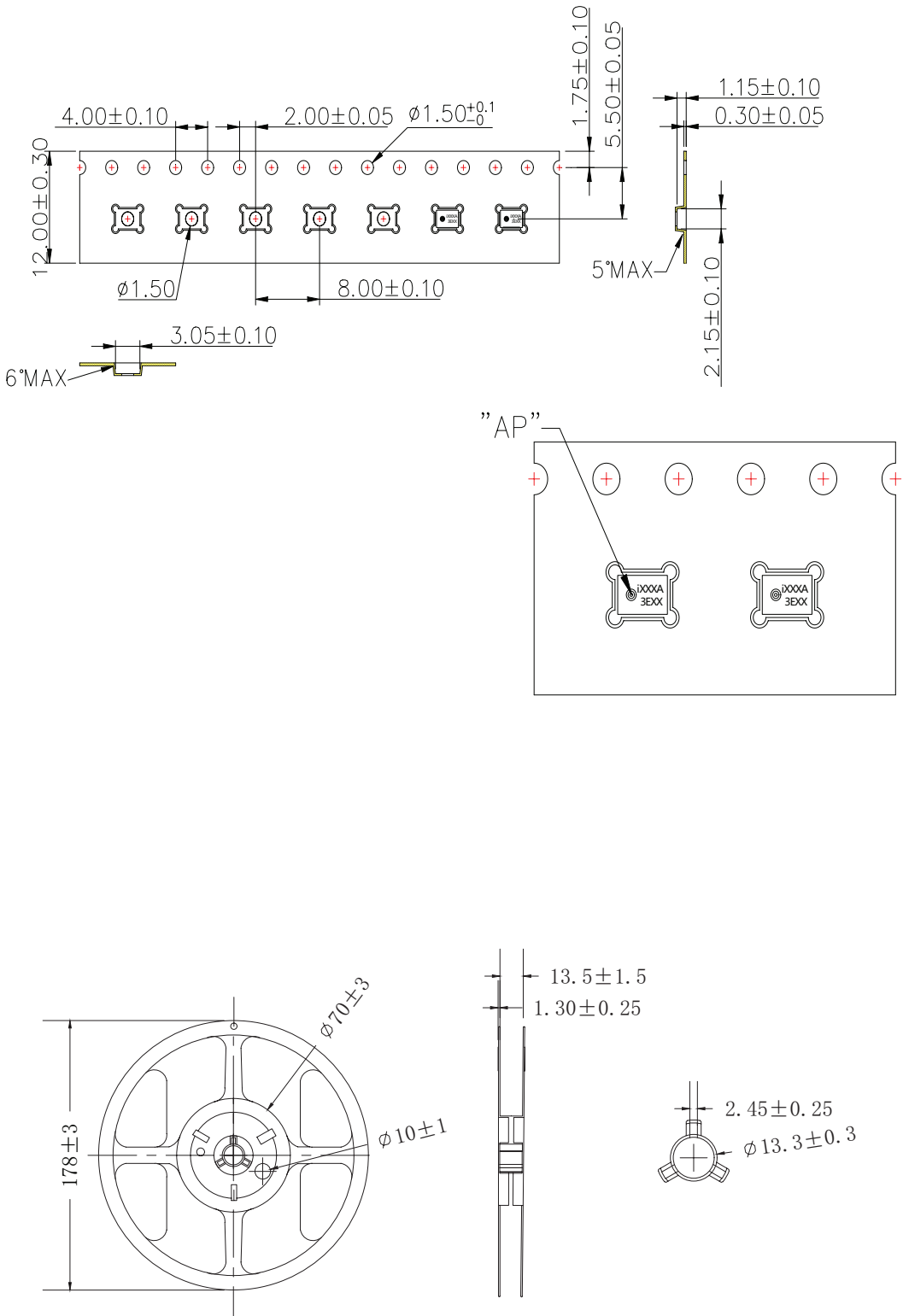
1. Not recommended to blow air heavily over acoustic port as debris could impact mic function.
2. Not suitable for wash process after reflow.
3. Not recommended to brush board with or without solvents after reflow process.
4. Not recommended to directly expose to ultrasonic processing or cleaning.
5. Not recommended to insert any object in port of device at any time.
6. Not recommended to apply over 30 psi of air pressure into the port hole.
7. Not recommended to pull a vacuum over port hole.
8. Not recommended to apply a vacuum when repackaging into sealed bag a rate faster than 0.5 atm/sec.
9. Not recommended to clean table or carried plate with air guarding system that could induce particle floating inside mic.



Recommended Vacuum Nozzle Pickup
Top View

PACKAGING

parameter	conditions/description	min	typ	max	units
reel size	Ø178 mm				
reel QTY	1,000 pcs per reel				
carton size	415 x 235 x 215 mm				
carton QTY	20,000 pcs				



REVISION HISTORY

rev.	description	date
1.0	initial release	09/14/2026

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



Same Sky offers a one (1) year limited warranty. Complete warranty information is listed on our website.

Same Sky reserves the right to make changes to the product at any time without notice. Information provided by Same Sky is believed to be accurate and reliable. However, no responsibility is assumed by Same Sky for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

Same Sky products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

sameskydevices.com