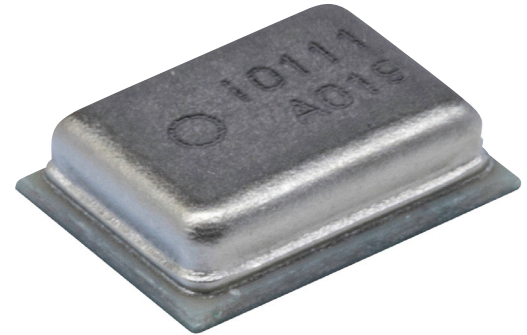


**MODEL:** CMM-3526DB-26165-TR | **DESCRIPTION:** MEMS MICROPHONE**FEATURES**

- high sensitivity
- bottom port
- PDM output

**ELECTRICAL**

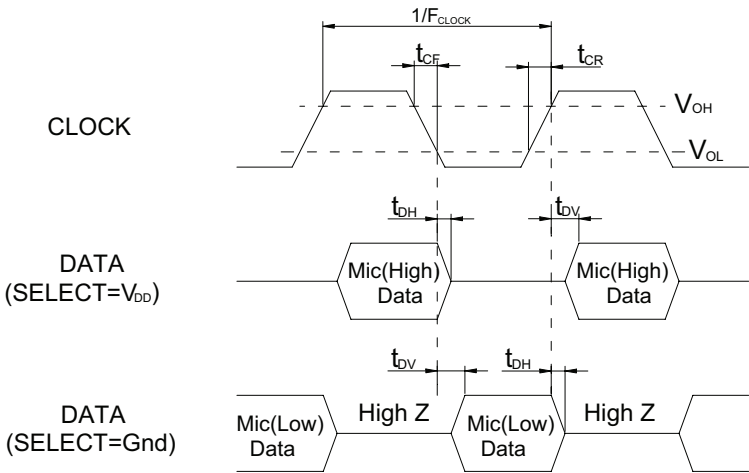
parameter	conditions/description	min	typ	max	units
directivity	omnidirectional				
sensitivity [S]	at 94 dB SPL, 1 kHz	-27	-26	-25	dB FS
supply voltage [V _{DD}]		1.6		3.6	V
current consumption [I _{DD}]			0.54		mA
signal to noise ratio [S/N]	at 94 dB SPL, 1 kHz [A-weighted]		65		dBA
total harmonic distortion [THD]	at 94 dB SPL, 1 kHz		0.2		%
acoustic overload point [AOP]	at 10% THD, 1 kHz		120		dB SPL
power supply rejection [PSR]	100 mVp-p square wave @ 217 Hz [A-weighted]		-90		dB FS

DIGITAL INTERFACE

parameter	conditions/description	min	typ	max	units
clock frequency		1.024	2.4	3.4	MHz
sleep current [I _{SLEEP}]	F _{CLOCK} < 1 kHz		3	4	μA
fall-asleep time	F _{CLOCK} < 1 kHz			50	μs
wake-up time	F _{CLOCK} ≥ 1.024 MHz			52	ms
data format	1-Bit PDM				
short circuit output current [I _{SC}]	grounded data pin		1	10	mA
output load [C _{LOAD}]				100	pF
logic input high [V _{IH}]	I _{OUT} = 1 mA	0.65XV _{DD}		V _{DD} +0.3	V
logic input low [V _{IL}]	I _{OUT} = 1 mA	-0.30		0.35XV _{DD}	V
logic output high [V _{OH}]	I _{OUT} = 1 mA	0.65XV _{DD}		V _{DD} +0.3	V
logic output low [V _{OL}]	I _{OUT} = 1 mA	-0.30		0.35XV _{DD}	V
clock duty cycle		40		60	%
clock rise time [t _{CR}]				10	ns
clock fall time [t _{CF}]				10	ns
delay time for valid data [t _{OV}]		18		60	ns
delay time for high z [t _{OH}]		0		16	ns

Notes: 1. All specifications measured at 23±2°C, humidity at 55±20%, V_{DD} = 2.0 V, F_{CLOCK} = 2.4 MHz, unless otherwise noted.

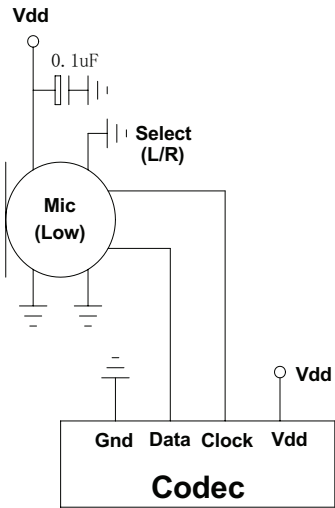
TIMING CHARACTERISTICS



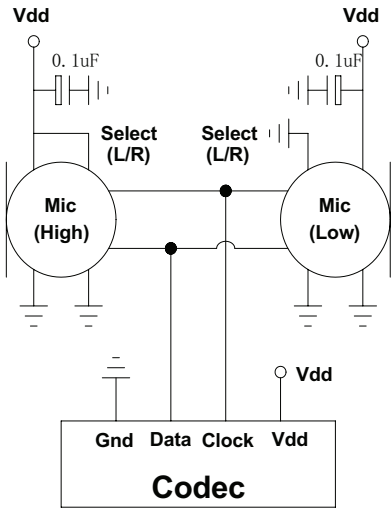
Microphone	Select (L/R)	Asserts DATA On	Latch DATA On
Mic[High]	V _{DD}	rising clock edge	falling clock edge
Mic[Low]	GND	falling clock edge	rising clock edge

RECOMMENDED INTERFACE CIRCUIT

Single Microphone



Dual Microphone



ENVIRONMENTAL

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

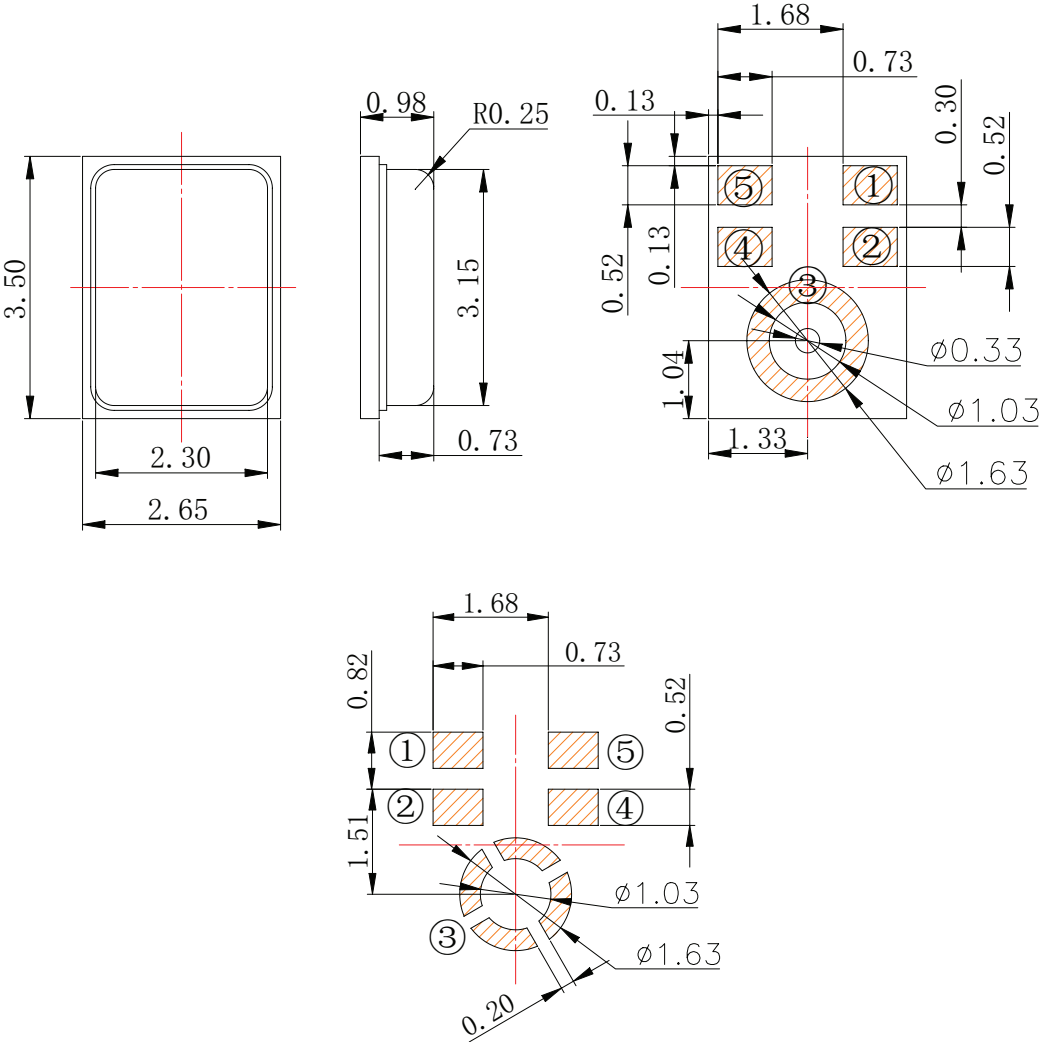
MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	3.50 x 2.65 x 0.98				mm
acoustic port	bottom				mm
terminals	surface mount				
weight			0.018		g

MECHANICAL DRAWING

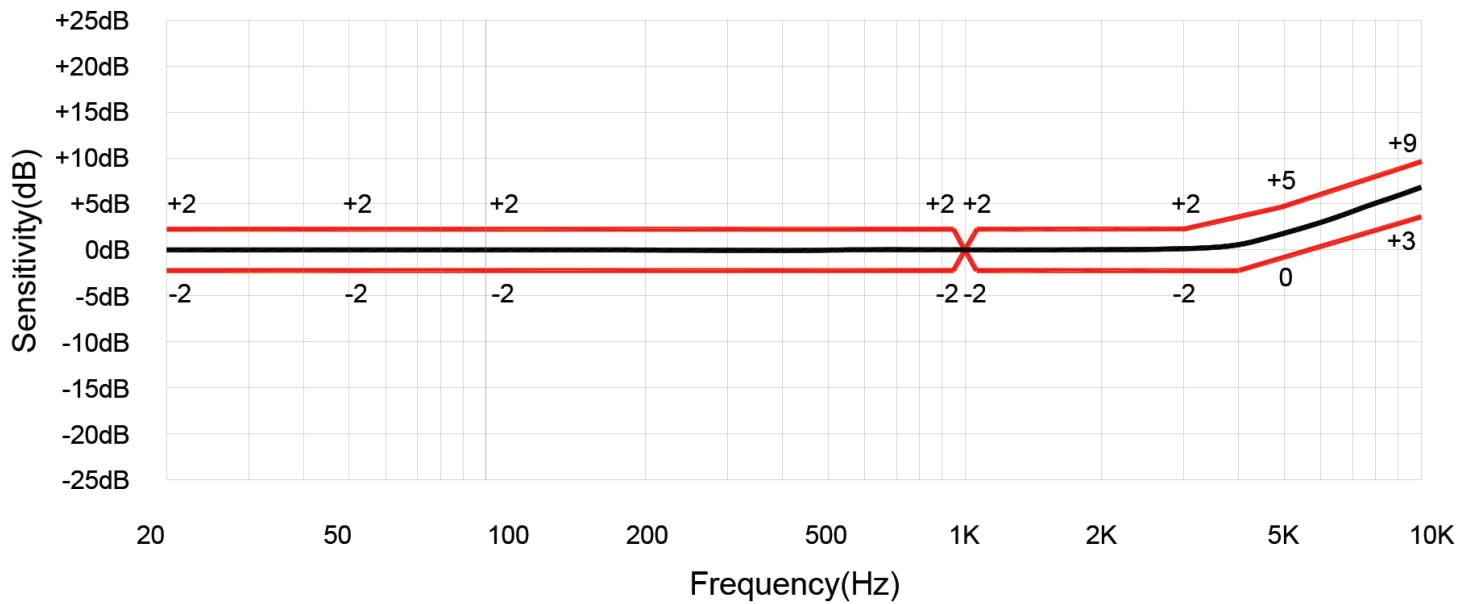
units: mm
tolerance: ±0.10 mm

TERMINAL CONNECTIONS	
TERM.	FUNCTION
1	DATA
2	L/R
3	GND
4	CLOCK
5	VDD

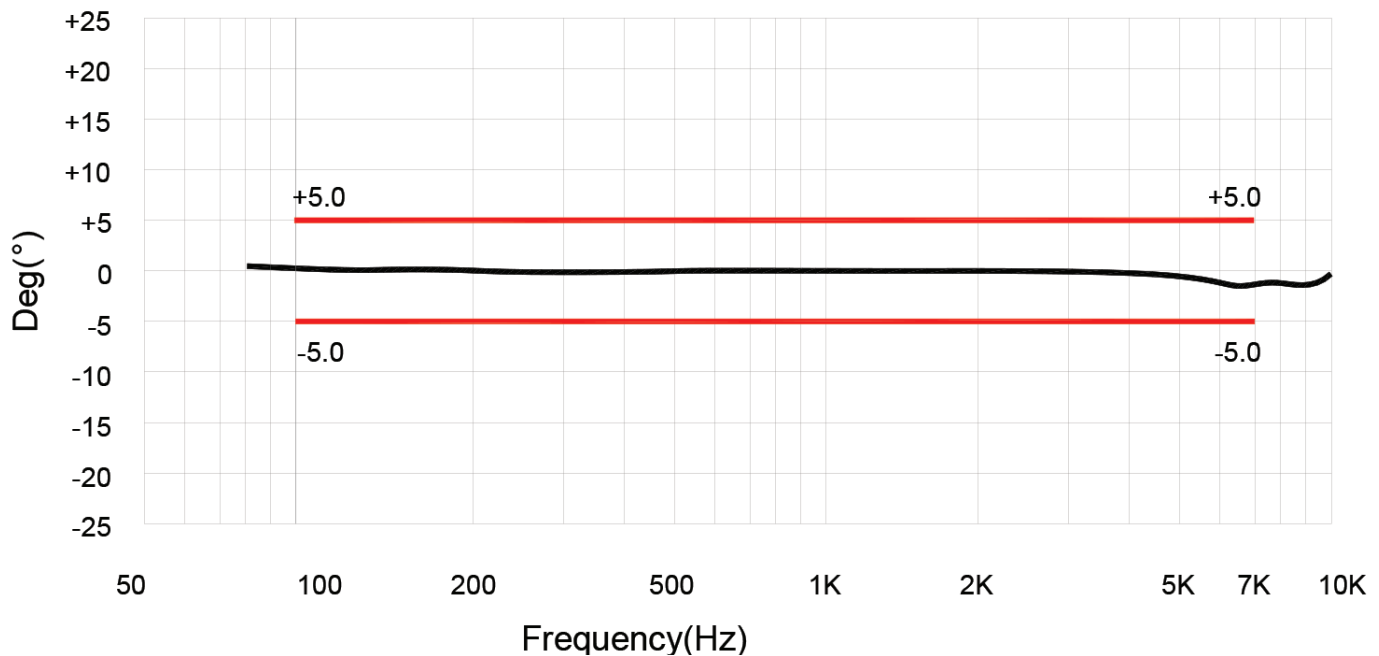


Recommended PCB Layout
Top View

FREQUENCY RESPONSE CURVE



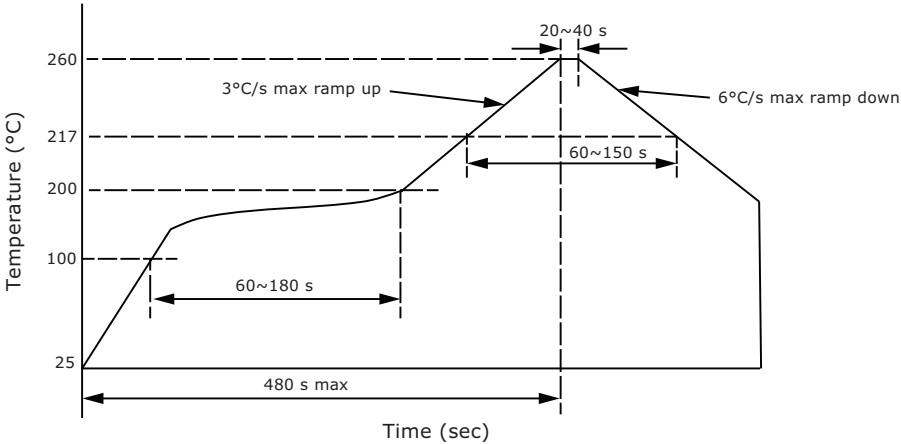
PHASE CURVE



SOLDERABILITY

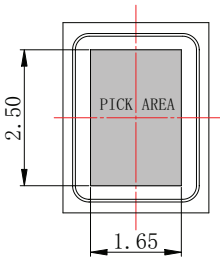
parameter	conditions/description	min	typ	max	units
reflow soldering ²	see reflow profile			260	°C

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

REVISION HISTORY

rev.	description	date
1.0	initial release	08/09/2023
1.01	CUI Devices rebranded to Same Sky	09/11/2024

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.

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