CUI Devices is now Same Sky! Learn More

MODEL: DEVKIT-MEMS-005 | DESCRIPTION: MICROPHONE DEVELOPMENT KIT

FEATURES

- 4 detachable evaluation boards
- analog MEMS
- top port & bottom port
- plated through hole I/O terminals for multiple testing options



RoHS

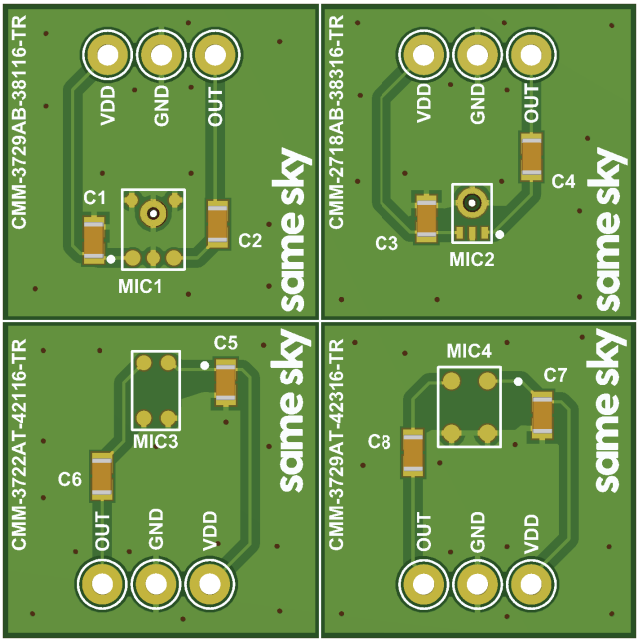
EVAL BOARD

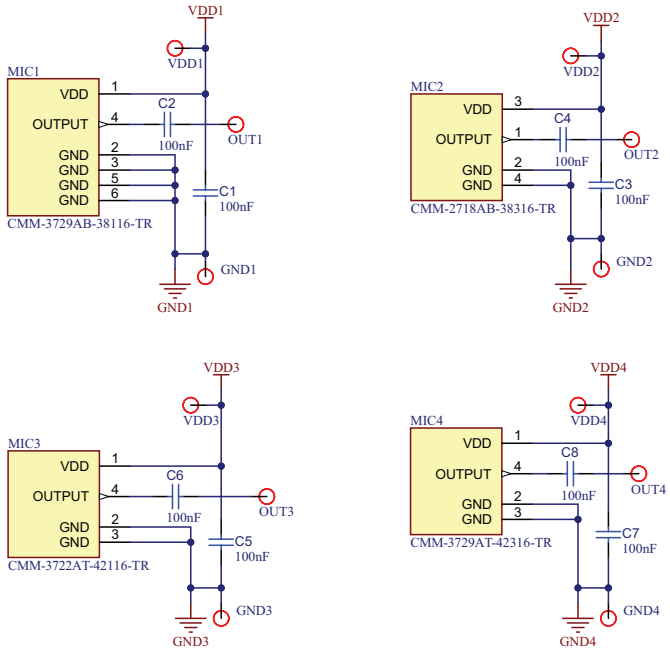
	circuit	technology	output	acoustic port	size (mm)	sensitivity typ (dB)	current max (µA)
CMM-3729AB-38116-TR	MIC1	MEMS	analog	bottom	3.76 x 2.95	-38	250
CMM-2718AB-38316-TR	MIC2	MEMS	analog	bottom	2.75 x 1.85	-38	250
CMM-3722AT-42116-TR	MIC3	MEMS	analog	top	3.76 x 2.24	-42	250
CMM-3729AT-42316-TR	MIC4	MEMS	analog	top	3.76 x 2.95	-42	250

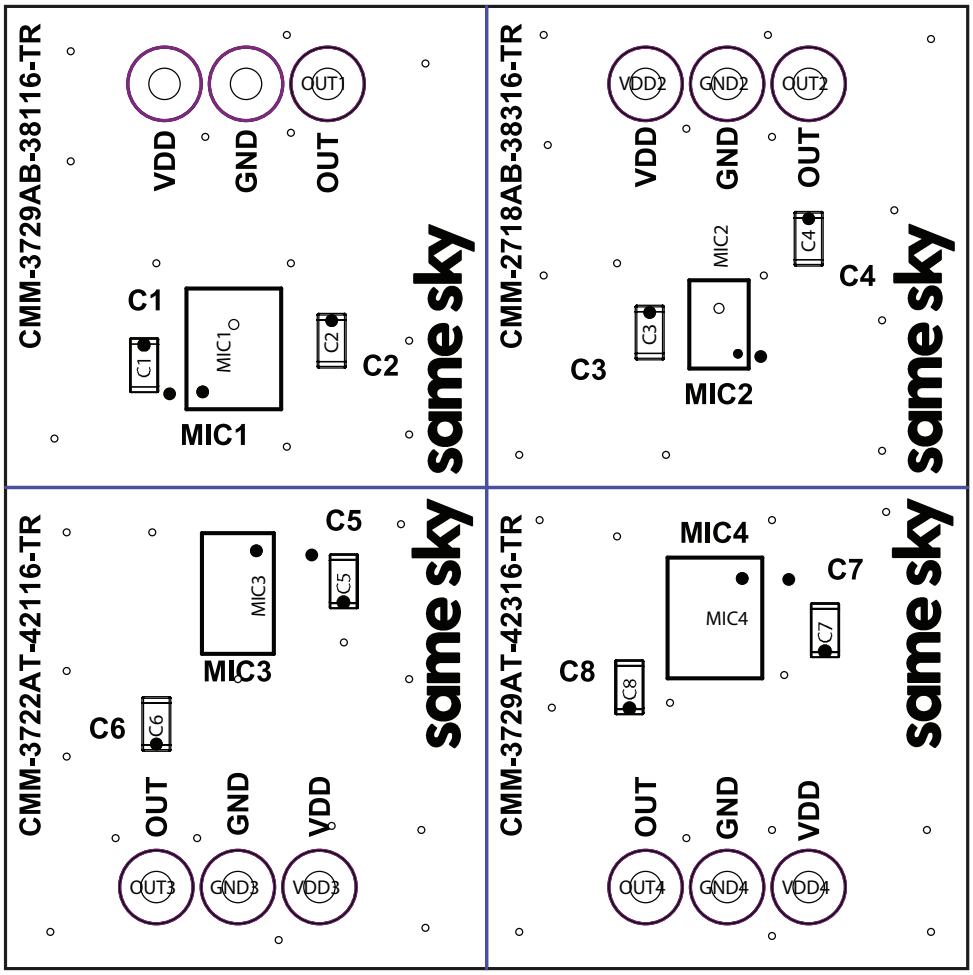
OPERATIONAL INSTRUCTIONS

This Same Sky MEMS microphone evaluation board consists of four independent analog microphone evaluation circuits. Top and bottom sound port options are provided. External bypass capacitors are included on the power supply rails of the evaluation boards and DC blocking capacitors are placed in the analog output signal paths. A DC power supply of 1.6~3.6 Volts should be connected between the VDD and GND pins of the board to be evaluated. Please refer to the respective data sheets for proper connections to the remaining signal pins.

CIRCUIT DIAGRAMS & BOARD LAYOUTS







CMM-3729AB-38116-TR

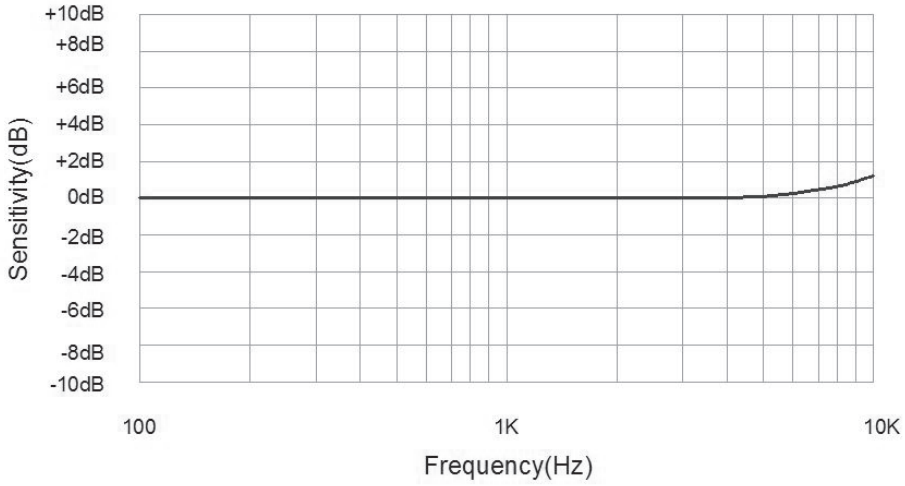
WWW.SAMESKYDEVICES.COM/PRODUCT/RESOURCE/CMM-3729AB-38116-TR.PDF

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_{DSS})	V_{DD} = 2.0 V		160		µA
sensitivity reduction	V_{DD} = 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)		57		dBA
total harmonic distortion (THD)	at 94 dB SPL, 1 kHz		0.2		%
acoustic overload point (AOP)	at 10% THD, 1 kHz		125		dB SPL
output impedance (Zout)	at 1 kHz			300	Ω

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

FREQUENCY RESPONSE CURVE



CMM-2718AB-38316-TR

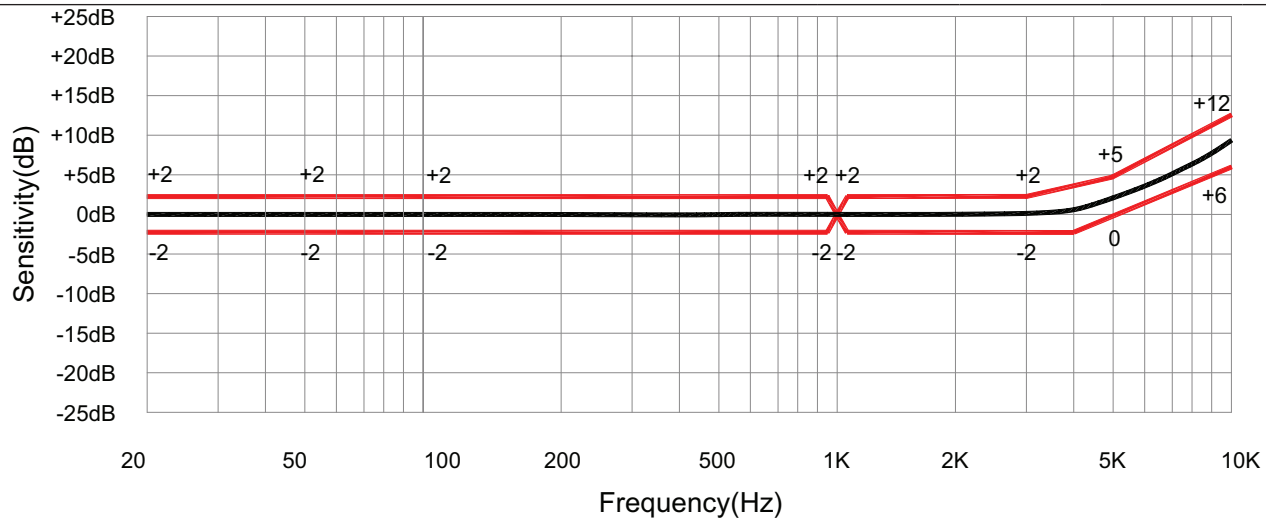
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ELECTRICAL

parameter	conditions/description	min	typ	max	units
directivity	omnidirectional				
sensitivity (S)	at 94 dB SPL, 1 kHz	-41	-38	-35	dB
supply voltage (V_{DD})		1.5	2.0	3.6	V
current consumption (I_{DSS})	V_{DD} = 2.0 V		150	250	µA
frequency (f)		100		10,000	Hz
signal to noise ratio (S/N)	at 94 dB SPL, 1 kHz (A-weighted)		62		dBA
total harmonic distortion (THD)	at 94 dB SPL, 1 kHz		0.2		%
acoustic overload point (AOP)	at 10% THD, 1 kHz		126		dB SPL
output impedance (Zout)	at 1 kHz			300	Ω
PSRR	200 mVp-p sine wave @ 1 kHz, VDD = 2.0 V		80		dB
PSR	100 mVp-p square wave @ 217 Hz, VDD = 2.0 V		-105		dBV(A)

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

FREQUENCY RESPONSE CURVE



CMM-3722AT-42116-TR

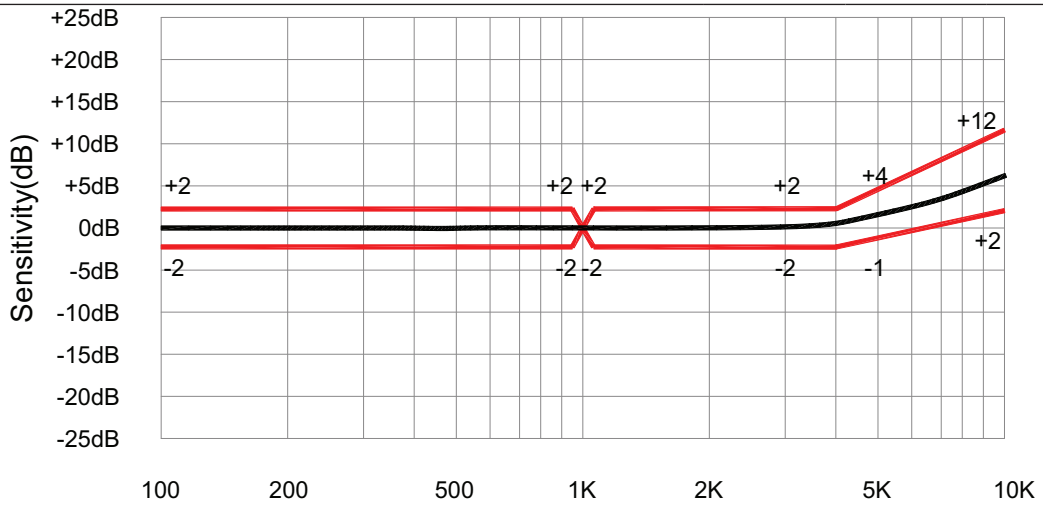
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ELECTRICAL

parameter	conditions/description	min	typ	max	units
directivity	omnidirectional				
sensitivity (S)	at 94 dB SPL, 1 kHz	-43	-42	-41	dB
supply voltage (V_{DD})		1.5	2.0	3.6	V
current consumption (I_{DSS})	V_{DD} = 2.0 V		155	250	µA
frequency (f)		100		10,000	Hz
signal to noise ratio (S/N)	at 94 dB SPL, 1 kHz, BW=20-5 kHz (A-weighted) at 94 dB SPL, 1 kHz, BW=20-8 kHz (A-weighted) at 94 dB SPL, 1 kHz, BW=20-20 kHz (A-weighted)		58 57 56		dBA dBA dBA
total harmonic distortion (THD)	at 94 dB SPL, 1 kHz		0.1		%
acoustic overload point (AOP)	at 10% THD, 1 kHz		130		dB SPL
output impedance (Zout)	at 1 kHz			100	Ω
PSRR	200 mVp-p sine wave @ 1 kHz, VDD = 2.0 V		80		dB
PSR	100 mVp-p square wave @ 217 Hz, VDD = 2.0 V (A-weighted)		-105		dBV(A)

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

FREQUENCY RESPONSE CURVE



CMM-3729AT-42316-TR

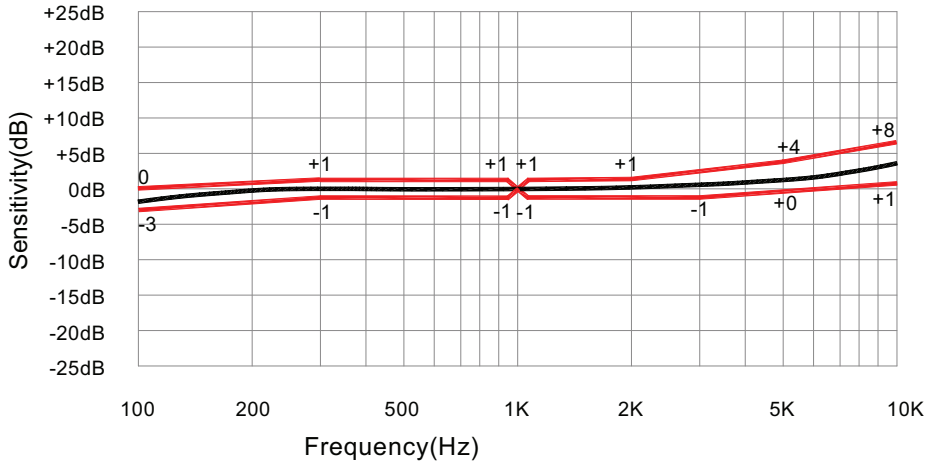
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ELECTRICAL

parameter	conditions/description	min	typ	max	units
directivity	omnidirectional				
sensitivity (S)	at 94 dB SPL, 1 kHz	-45	-42	-39	dB
supply voltage (V_{DD})		1.6	2.0	3.6	V
current consumption (I_{DSS})	V_{DD} = 2.0 V		155	250	µA
sensitivity reduction	V_{DD} = 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		0.1		%
acoustic overload point (AOP)	at 10% THD, 1 kHz		132		dB SPL
output impedance (Zout)	at 1 kHz			300	Ω
PSRR	200 mVp-p sine wave @ 1 kHz, V_{DD} = 2.0 V		75		dB
PSR	100 mVp-p square wave @ 217 Hz, V_{DD} = 2.0 V (A-weighted)		-105		dBV(A)

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

FREQUENCY RESPONSE CURVE



REVISION HISTORY

rev.	description	date
1.0	initial release	12/17/2025

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

same sky

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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