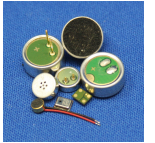


CM03M-03S42-MA-10

Rev. 0-2022
RoHS3 & REACH
Omni Directional Microphones


Operating Characteristics

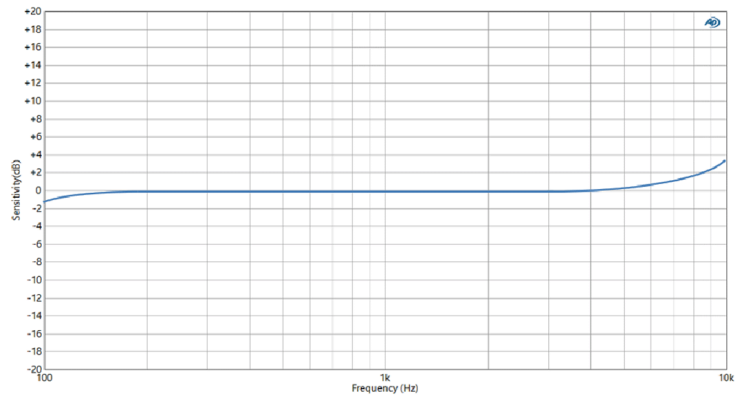
ELECTRICAL

Type	Analog
Rated Voltage	2.2 VDC
Operating Voltage	1.5 to 3.6 VDC
Capacitance	N/A
Max Current	0.1 mA
Impedance	300 Ω

ACOUSTIC @ 94dB; 1000 Hz; Rated Voltage

Technology	MEMS
Directionality	Omni Directional
Sensitivity	-42 \pm 1 dBV/Pa
Power Supply Rejection*	-101 dBv
Acoustic Overload Point	128 dB SPL
Total Harmonic Distortion	0.5% Max
Min S/N	59 dB

*Tested At 100mVpp 7/8 duty cycle rectangular wave @217Hz, A-Weight, 20kHz BW



Physical Characteristics

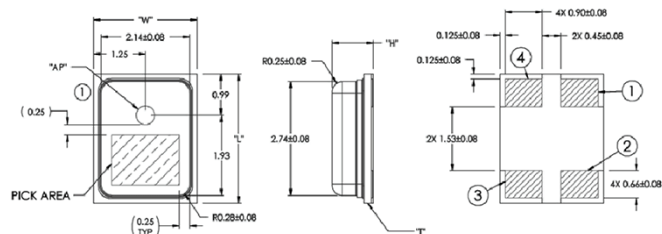
MATERIAL

Solder Pads	Gold Plated Copper
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TEMPERATURE RANGES

Operating	-40 to +100 $^{\circ}$ C
Storage	-40 to +100 $^{\circ}$ C

Weight	0.02 g
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Item	Dimension	Tolerance
Length(L)	3.10	\pm 0.10
Width(W)	2.50	\pm 0.10
Height(H)	1.00	\pm 0.10
Acoustic Port (AP)	\varnothing 0.45	\pm 0.05

Pin#	Pin Name	Description
1	OUTPUT	Output Signal
2	GND	GND
3	GND	GND
4	VDD	Power Supply

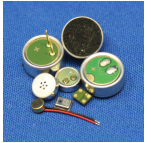
General tolerance = \pm 0.1 mm and all measurements in mm unless otherwise noted.

Revision	Description	By	Date
0-2022	Original Specification	CT	2022-09-27

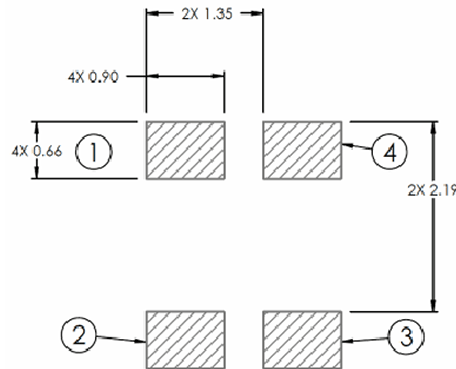
Warranty: For a period of one (1) year from date of shipping under normal operations conditions. This warranty does not apply to products damaged through misuse, abuse, improper installation, alteration, rework, or attempt to repair.

The information contained herein is believed to be correct, but no guarantee or warranty, express or implied, with respect to accuracy, completeness or results is extended and no liability is assumed. Challenge Electronics reserves the right to make changes in any specification, data or material contained herein.

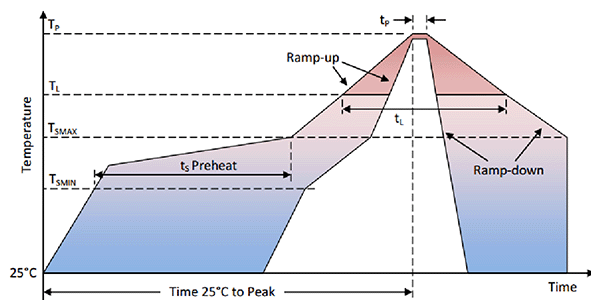
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Recommended Footprint



Recommended Reflow Profile

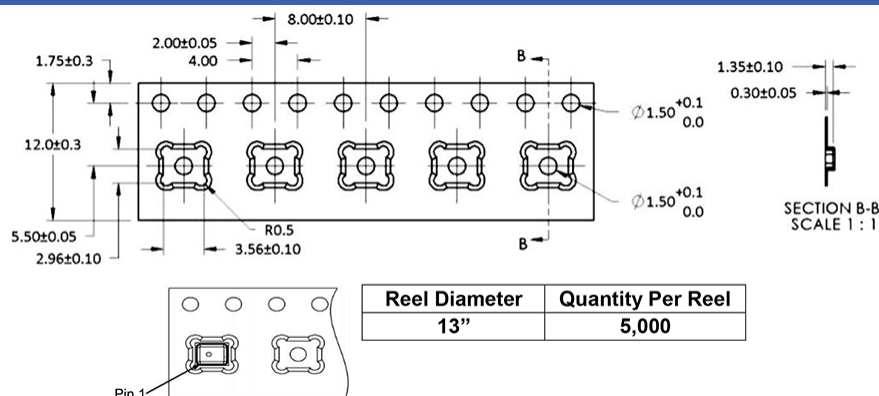


Profile Feature		Lead(Pb) Free Solder
Preheat	Temperature min.(T _{SMIN})	150°C
	Temperature max.(T _{SMAX})	200°C
	Time (t _s)	60-180 Seconds
Time maintained above	Temperature (T _L)	217°C
	Time (t _L)	60-150 Seconds
Peak	Temperature (T _P)	260°C
	Time within 5°C of actual peak temperature (t _p)	20-40 Seconds
Ramp up	Average ramp up rate T _{SMAX} to T _P	3°C / Second Max.
Ramp down	Average ramp down rate T _P to T _{SMAX}	6°C / Second Max.
Time 25°C to Peak temperature		8 Minutes Max.

Note:

All temperatures refer to topside of the package, measured on the package body surface.

Tape & Reel Packaging



Revision	Description	By	Date
0-2022	Original Specification	CT	2022-09-27

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