



Description: The RMIC-94-3.6-3729-NX-NS1 is a high-performance, low power, bottom port MEMS microphone with single-ended analog output.



Top View

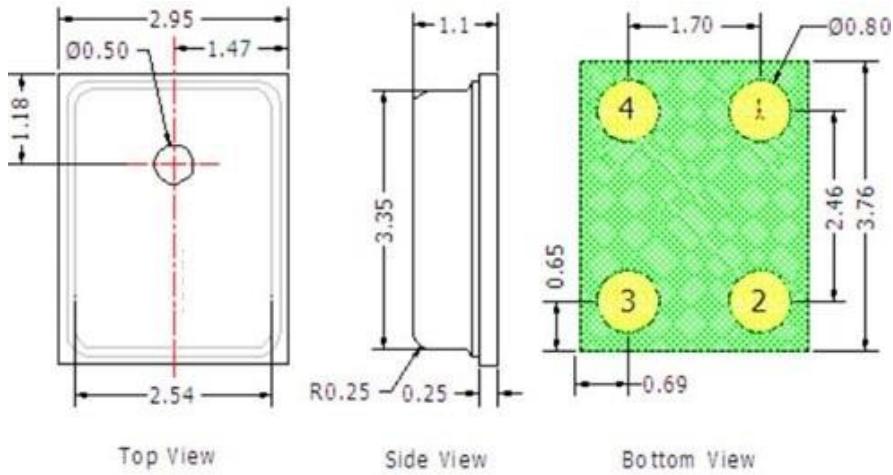
Bottom View

ACOUSTIC AND ELECTRICAL SPECIFICATIONS

Test Condition: VDD=2.0V, 23±2°C, 55±10%R.H., unless otherwise specified

Specification	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Directivity			Omni-directional			
Sensitivity Range	S	94dB SPL @1kHz	-43	-42	-41	dB
Output Impedance	Zout	Vdd=1.8V, f=1Kz		180	250	Ω
Operating Voltage	VDD		1.6	2	3.6	V
Current Consumption	I	1.6V to 3.6V		125	200	μA
S/N Ratio	SNR	94dB SPL @1kHz, A-Weighted		58		dB(A)
Total Harmonic Distortion	THD	94dB SPL @1kHz			0.5	%
Sensitivity vs Voltage	ΔS	94dB SPL @1kHz, Vdd=3.6V to 1.6V			0.5	dB
Acoustic Overload Point	AOP	THD=10% @1kHz		130		dB SPL
Power Supply Rejection	PSR	0.1Vpp Square wave @217Hz, A-weighted		-70		dB

DIMENSIONS



Item	Dimension	Tolerance(\pm)	Units
Length	3.76	0.1	mm
Width	2.95	0.1	mm
Height	1.10	0.1	mm
Acoustic Port	$\varnothing 0.50$	0.05	mm

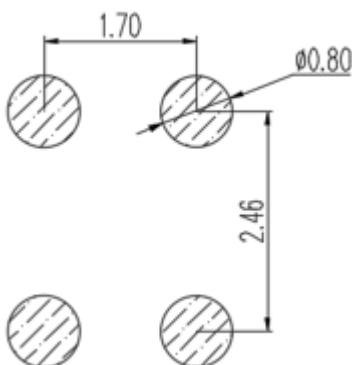
Pin #	Definition	Type	Description
1	Output	Signal	Output Signal
2	GND	Ground	Ground
3	GND	Ground	Ground
4	V _{DD}	Power	Power Supply

Notes: Dimensions are in mm unless otherwise specified.

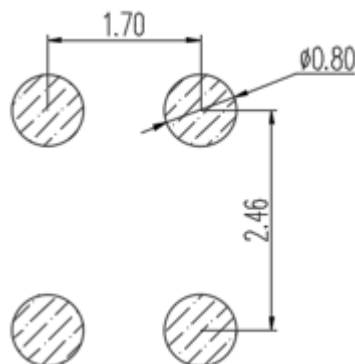
Tolerance is ± 0.10 mm unless otherwise specified

All Ground Pin must be connected to the ground in end application.

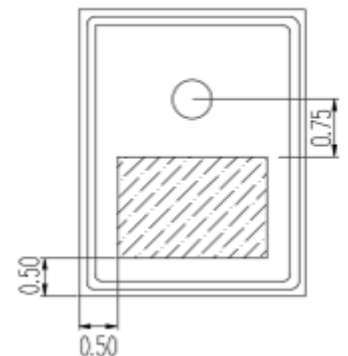
EXAMPLE LAND PATTERN



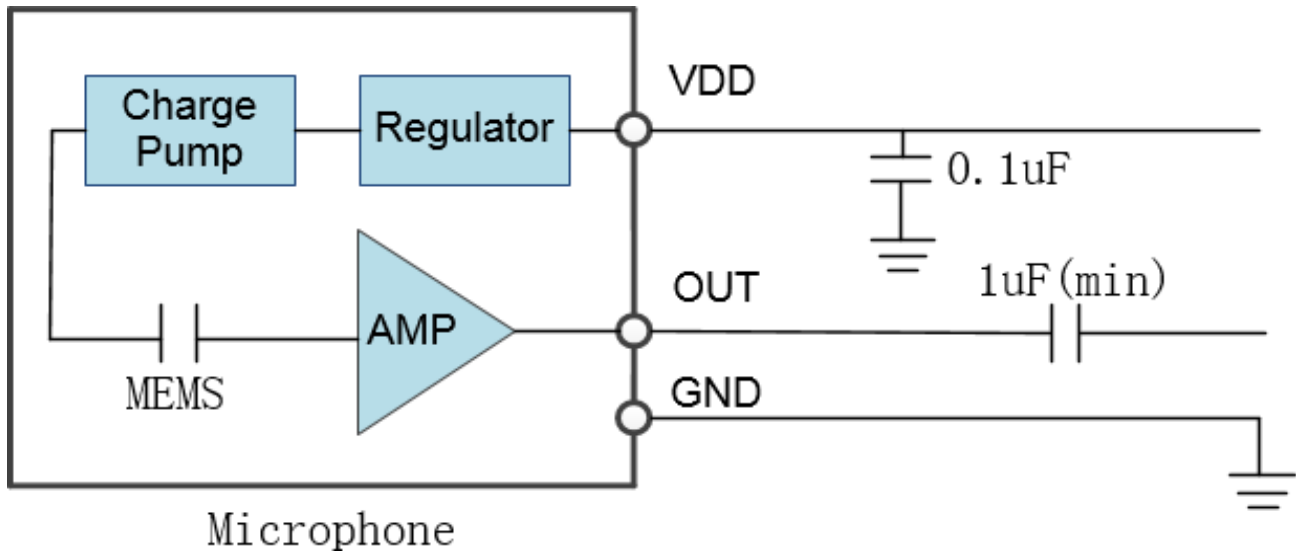
EXAMPLE SOLDER STENCIL PATTERN



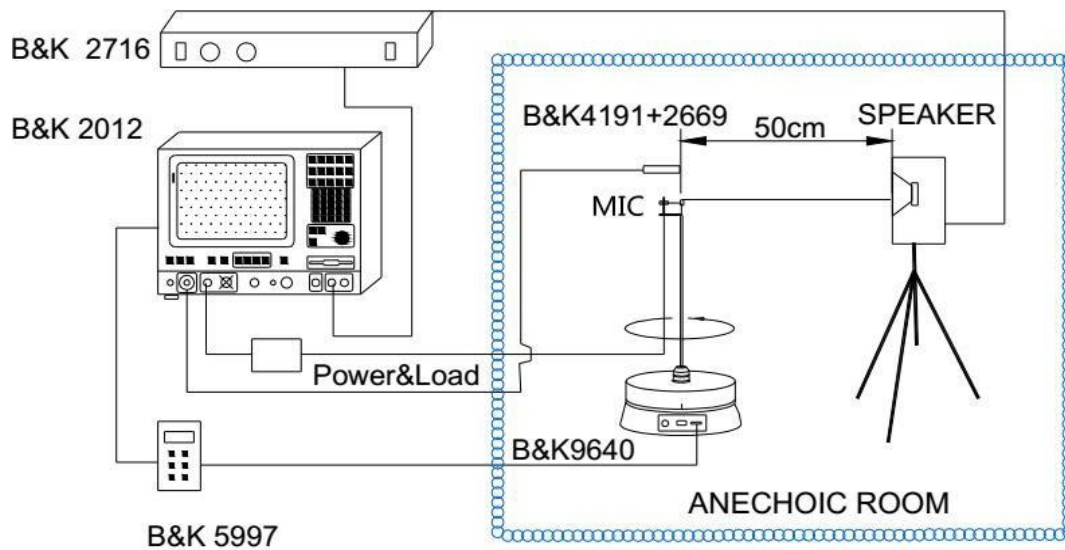
EXAMPLE PICK UP LOCATION



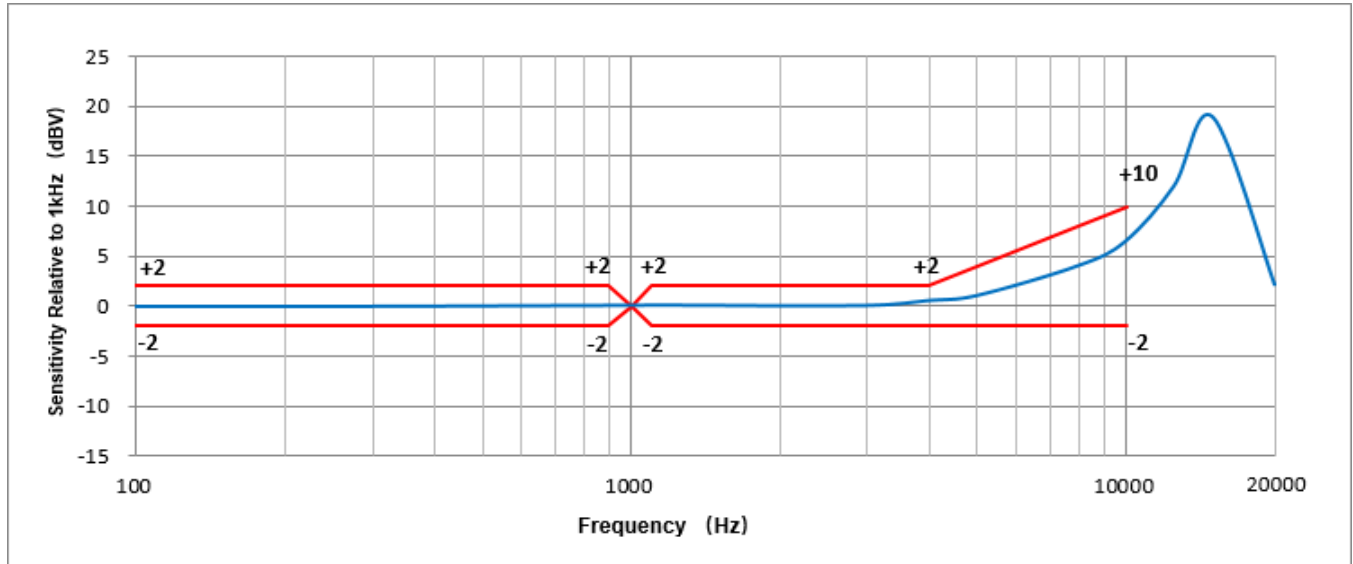
SCHEMATIC MEASURING DIAGRAM



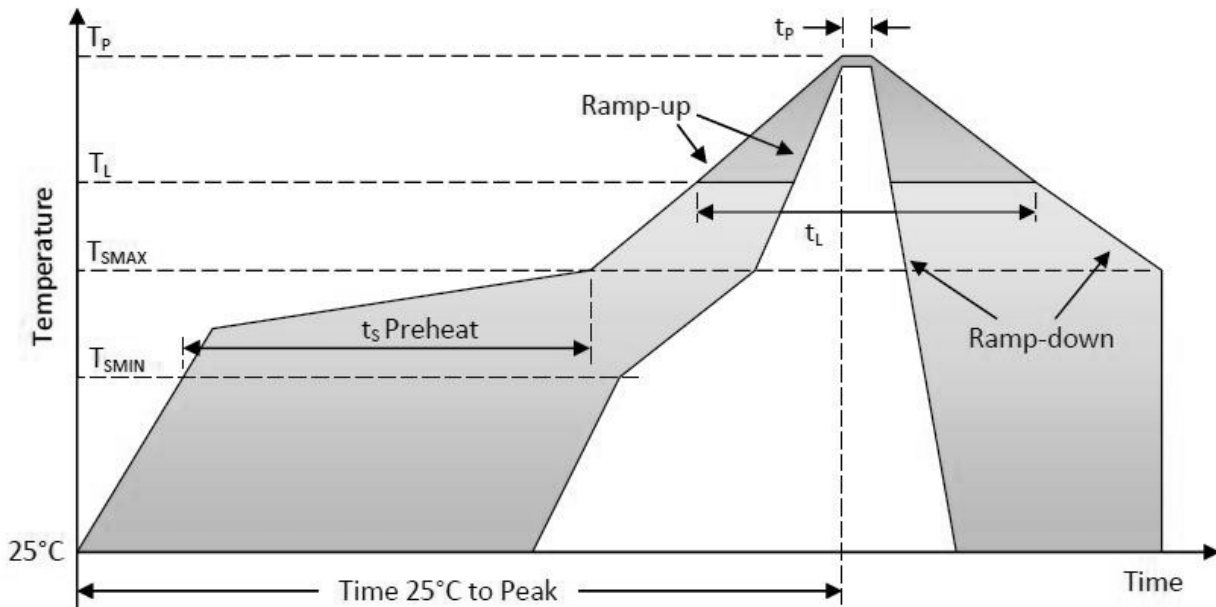
MEASUREMENT SYSTEM SETUP



FREQUENCY CHARACTERISTICS



REFLOW PROFILE



Parameter		Reference	Specification
Average Ramp-up Rate		T _L to T _P	3°C/sec max
Preheat	Minimum Temperature	T _S MIN	150°C
	Maximum Temperature	T _S MAX	200°C
	Time T _S MIN to T _S MAX	t _s	60 -180 sec
Ramp-up Rate		T _S MAX to T _L	1.25°C/sec
Time Maintained Above Liquidous		t _L	60-150 sec
Liquidous Temperature		T _L	217°C
Peak Temperature		T _P	260°C
Time Within +5°C of Actual Peak Temperature		t _P	20 -40 sec
Ramp-down Rate		T _P to T _S MAX	6°C/sec max
Time 25°C to Peak Temperature			8 min max

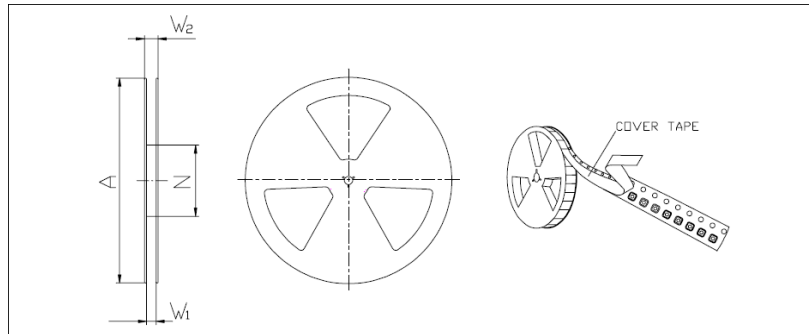
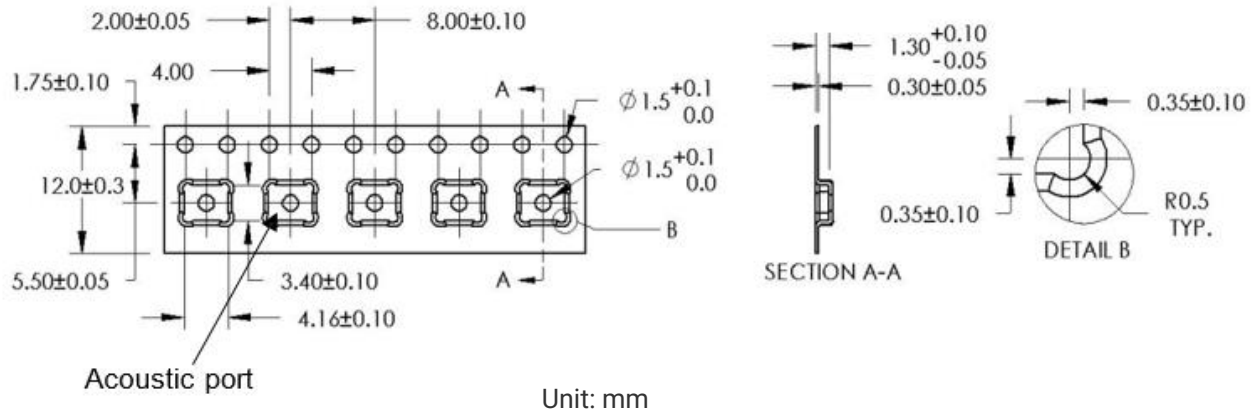
STORAGE CONDITION

Storage temperature range: -40 ~ +100°C, and humidity is less than 75%.

Operating temperature range: -40 ~ +100°C.

MSL (moisture sensitivity Level) is Class 1

PACKAGING



A	W1	W2	N	Quantity per Reel
$\phi 330$	12.4 ± 1.5	18.4 MAX	$\phi 100$	5000

APPROVAL

DRAWN BY	AR, January 13, 2024
APPROVED BY	CP, January 13, 2024
REVISION	A, Initial Release

Raltron Electronics / RAMI Technology USA, LLC, including its affiliates, employees, agents and other persons acting on its behalf (collectively Raltron/RAMI Tech), disclaim any and all liability for any errors or inaccuracies contained in this data sheet. While Raltron/RAMI Tech has made every reasonable effort ensure the accuracy of all product information, specifications and data contained herein, Raltron/RAMI Tech does not guarantee that the information is accurate, reliable or current. The product information is provided only for reference purposes only and is subject to change, correction or revision, at any time without notice. Raltron/RAMI Tech does not assume any liability arising out of an application or use of any product described herein and disclaims any warranties expressed or implied. The user of products in such applications shall assume all risks of such use and will agree to hold Raltron/RAMI Tech, harmless against all damages. Copyright © 2016, Raltron Electronics / RAMI Technology USA, LLC. All rights reserved. No part of this document may be reproduced in any form without the prior written permission of Raltron Electronics / RAMI Technology USA, LLC.