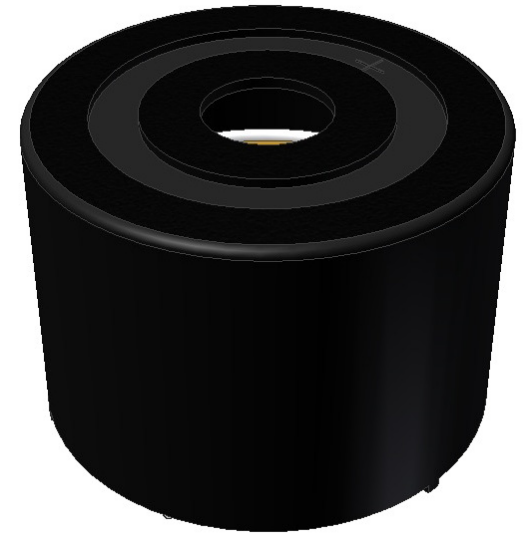




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## AI-2438-TT-R 24mm Indicator

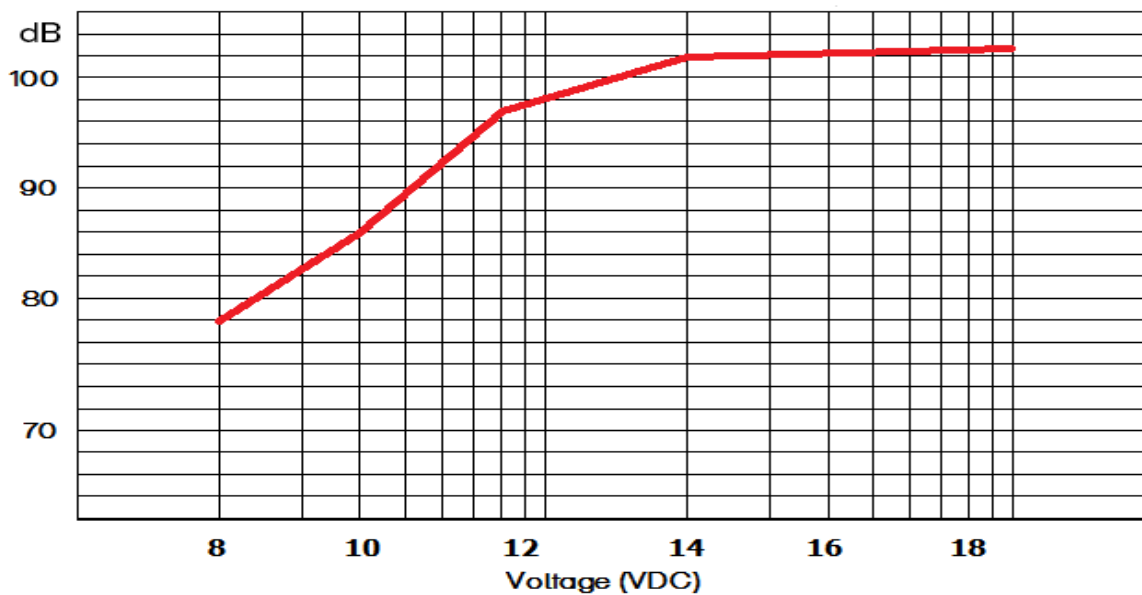


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### Product Overview

- 24mm diameter, 8-18 VDC self-drive indicator
- 95 dBA minimum output (12 VDC @ 10 cm) and 3,800 Hz continuous tone
- High-temp UL-94 ABS housing withstands Wave soldering temperatures
- Designed to be used in alert circuits

**SPL vs Voltage (measured @ 30 cm)**



RoHS Compliant





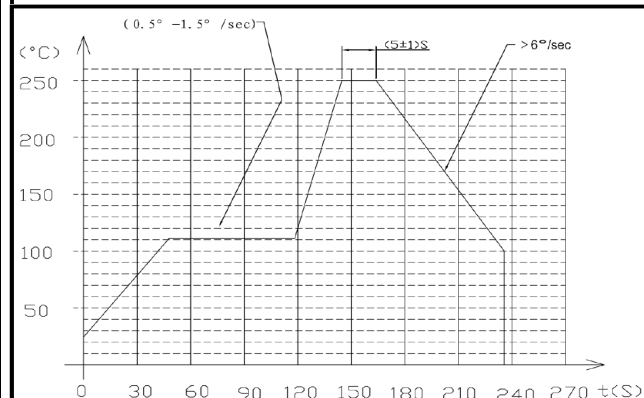
# AI-2438-TT-R 24mm Indicator

## Mechanical and Environment Testing

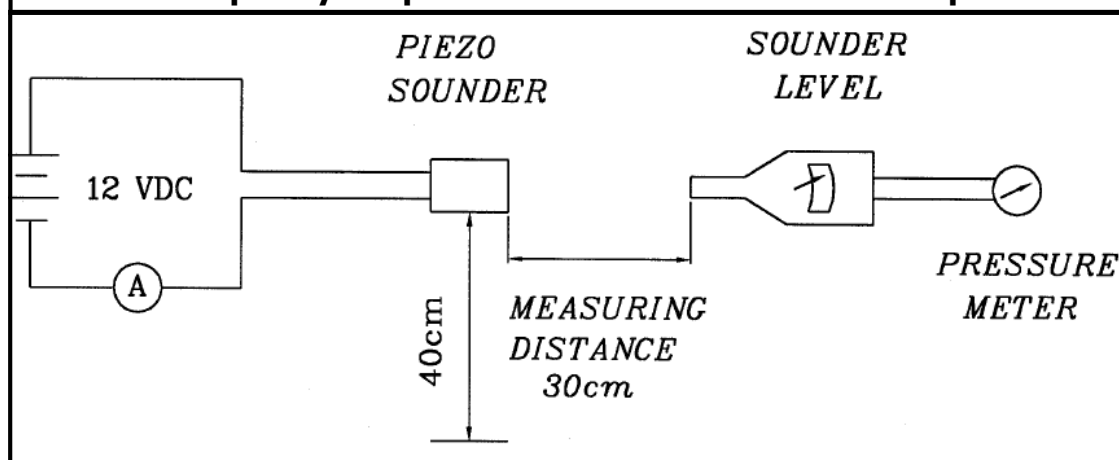
Test Description	Test Condition
High Temperature	95°C (±2°C) with random humidity for 96 hours
Low Temperature	-40°C (±2°C) with random humidity for 96 hours
Humidity	40°C (±2°C) with 90% to 95% relative humidity for 96 hours
Vibration	1.5 mm movement modulated at 10-55 Hz for 3 hours
Drop Test	75 cm free fall onto wood board, 9 cycles
Temperature Cycle Test	-40°C to 95°C, five 3 hour cycles

After tests, part shall rest for 2 hours. Parts are then tested for clean, pure tones.

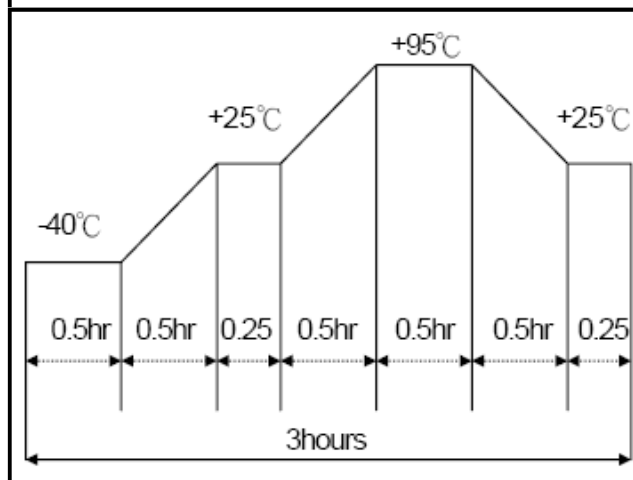
## Wave Solder Profile



## Frequency Response and SPL Measurement Setup



## Temperature Cycle Test Graph



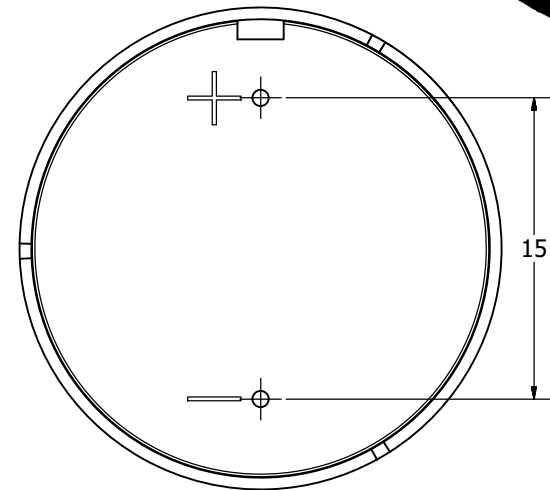
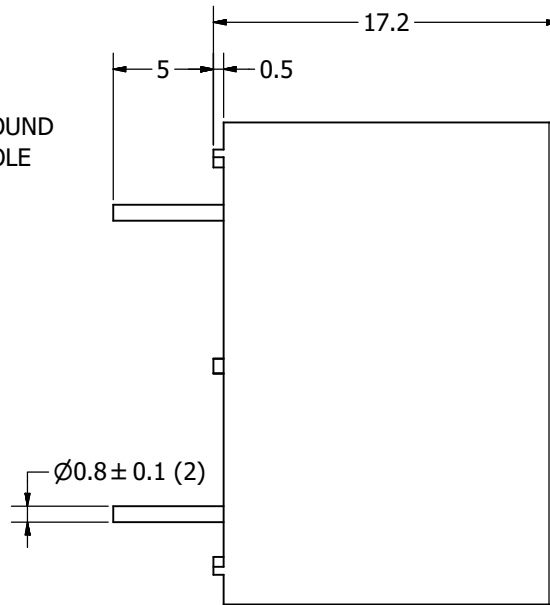
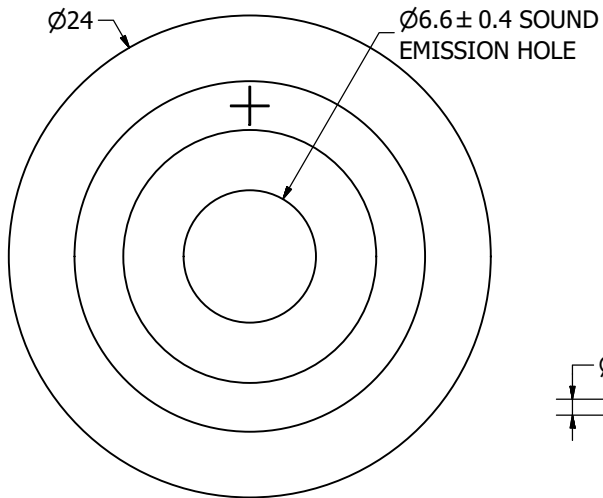
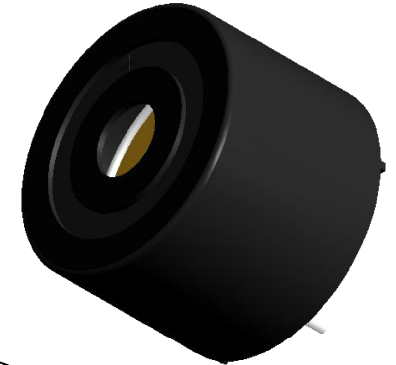
# SPECIFICATIONS

PARAMETERS	VALUES	UNITS
RATED VOLTAGE	12	Vdc
OPERATING VOLTAGE RANGE	8 ~ 18	Vdc
RATED CURRENT (MAX)	12	mA
MINIMUM SPL @ 10 CM	95	dBA
RESONANT FREQUENCY	3,800 ± 500	Hz
TONE OR PULSE RATE	CONTINUOUS	0 pulse/sec
OPERATING TEMPERATURE	-30 ~ +85	°C
STORAGE TEMPERATURE	-40 ~ +95	°C
HOUSING MATERIAL	ABS	-
TERMINAL MATERIAL	Sn PLATED BRONZE	-
WEIGHT	4	grams

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# REVISION HISTORY

LTR	DESCRIPTION	DATE	APPROVED
-	RELEASED FROM ENGINEERING	1/5/2006	
A	REVISED HEIGHT DIMENSION	10/25/2007	R.W.
B	REVISED TO INVENTOR 3-D DRAWING TEMPLATE & HEIGHT	1/29/2008	B.R.
C	REVISED RATED CURRENT	9/6/13	B.R.



### NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. SPECIFICATIONS SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.
3. THIS PART IS RoHS 2011/65/EU COMPLIANT.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS, TOLERANCES ARE ±0.5 AND ANGLES ARE ±3°.	SIZE	Designed by	Date	Checked by	Date	Approved by	Date	Drawn Date
	A3	J.A.F.	1/5/2006	E.P.	1/5/2006	B.R.	1/5/2006	1/29/2008
	AI-2438-TT-R.idw					AI-2438-TT-R		
	Indicator					Edition	Sheet	
						-	1 / 1	

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