

**MODEL:** CDMG13008L-02 | **DESCRIPTION:** SPEAKER**FEATURES**

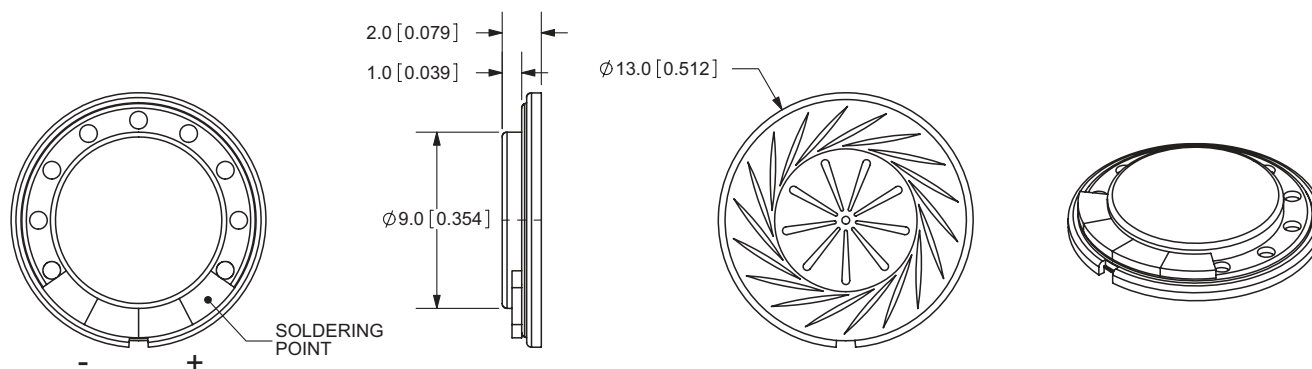
- metal frame
- PET cone

**SPECIFICATIONS**

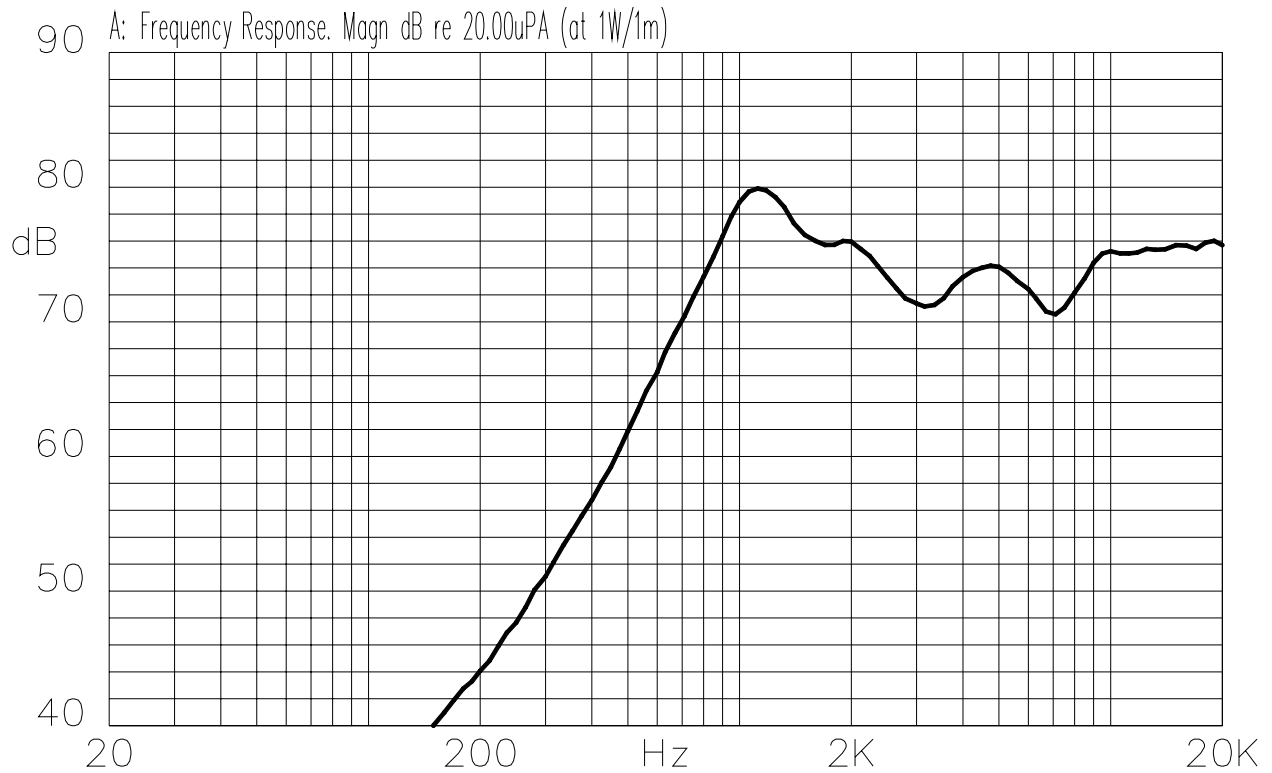
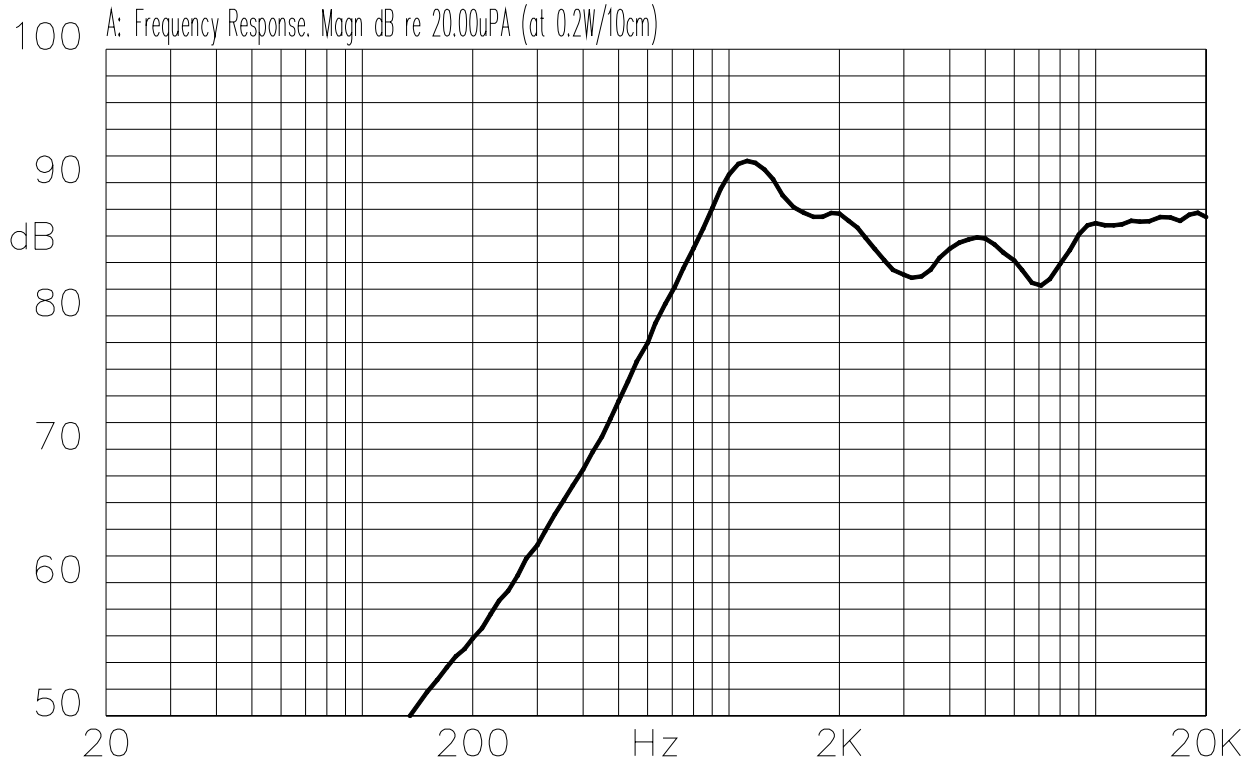
parameter	conditions/description	min	typ	max	units
dimension	∅13 x 2 mm				
input power	max. power: IEC-60268-5, filter 60 s on / 120 s off, 10 cycles at room temp		0.2	0.4	W
impedance	at 1.5 kHz, 1 V	6.8	8	9.2	Ω
resonant frequency	at 1 V	840	1,050	1,260	Hz
sound pressure level	0.2 W, 10 cm ave. at 1.5, 2, 2.5, 3.0 kHz 1 W, 1 m ave. at 1.5, 2, 2.5, 3.0 kHz	83 72	86 75	89 78	dB dB
response				20,000	Hz
distortion	at 1.5 kHz, 0.2 W			10	%
buzz, rattle, etc.	must be normal at sine wave 1.26 V				
magnet size	∅7 x 0.7 mm [Nd-Fe-B]				
operating temperature		-20		55	°C
weight			0.7		g
material	metal				
RoHS	yes				

**MECHANICAL DRAWING**

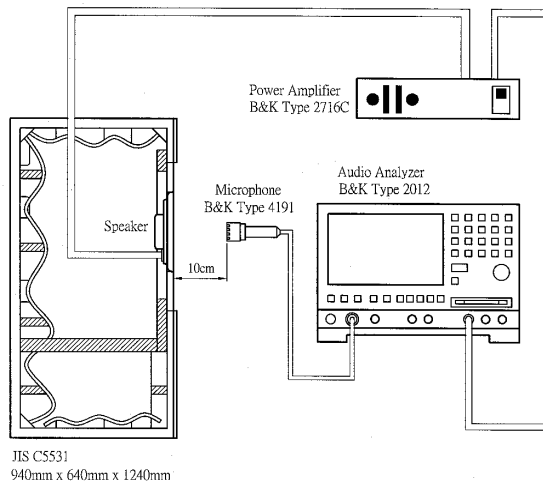
units: mm  
tolerance: ± 0.3mm



## FREQUENCY RESPONSE CURVE



## MEASUREMENT METHOD



## MECHANICAL CHARACTERISTICS

item	test condition	evaluation standard
PCB wire pull strength	The pull force will be applied to double lead wire: horizontal 3.0 N (0.306 kg) for 30 seconds	No damage or cutting off
vibration test	The speaker should be measured after a vibration amplitude of 1.5 mm with 10 ~ 55 Hz band of vibration frequency to each of the 3 perpendicular directions for 2 hours.	After the test, there will be no appearance or internal damage such as cracks, rust, or distortions that will affect normal speaker operation. There should be no audible sound distortion at 1.26 V sine wave between Fo ~ 20 KHz.
drop test	The speaker contained in normal box is subjected to 10 drops from the height of 75cm onto a 40mm thick wooden board.	

## ENVIRONMENT TEST

item	test condition	evaluation standard
high temperature test	After being placed in a chamber at +55°C for 96 hours.	The buzzer will be measured after being placed at +25°C for 6 hours. After the test, there will be no appearance or internal damage such as cracks, rust, or distortions that will affect normal speaker operation. There should be no audible sound distortion at 1.26 V sine wave between Fo ~ 20 KHz. The Fo should meet initial measurements. SPL should be within ±3dB compared to the initial measurements.
low temperature test	After being placed in a chamber at -20°C for 96 hours.	
humidity test	After being placed in a chamber at +40°C and 90 ±5% RH for 96 hours.	
temperature cycle test	The part will be subjected to 5 cycles. One cycle will consist of:	

The diagram illustrates a temperature cycle test profile. It starts at +55°C for 2 hours, followed by a 0.5-hour ramp down to +25°C. At +25°C, it stays for 1 hour, then another 0.5-hour ramp down to -20°C. Finally, it stays at -20°C for 2 hours. The total duration of one cycle is 6 hours.

## RECOMMENDED TEMPERATURE PROFILE FOR HAND SOLDERING

item	conditions/description
hand soldering	370 ±10°C for 3 ±1 seconds

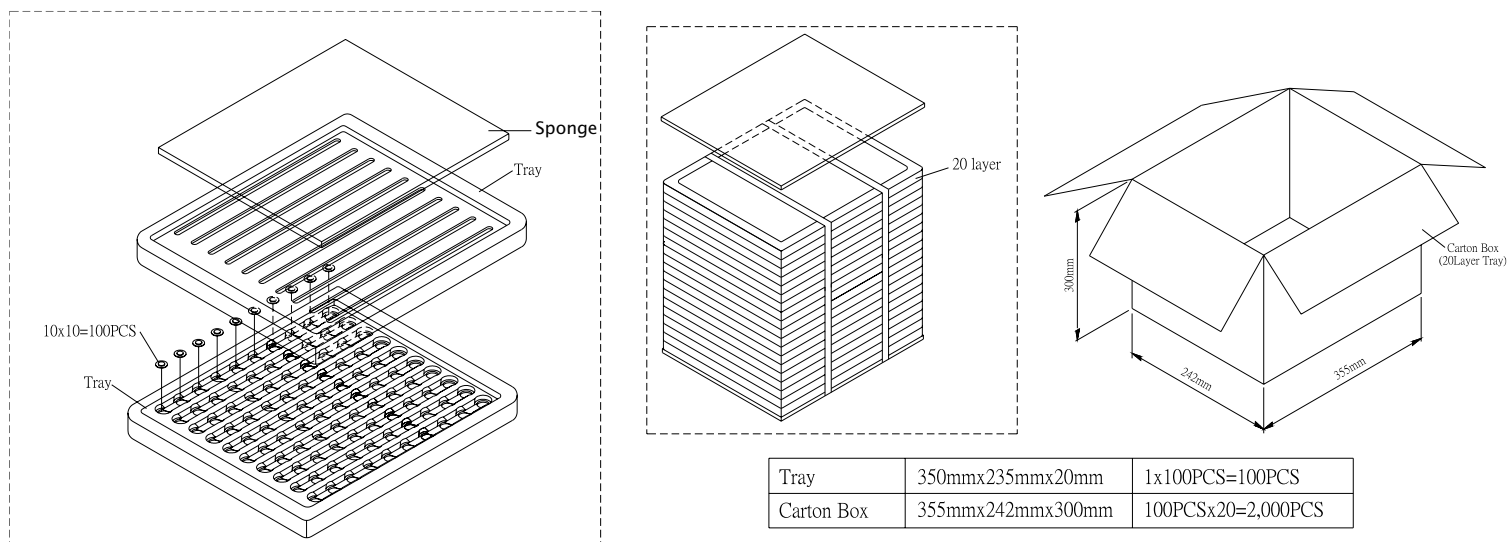
## RELIABILITY TEST

item	test condition	evaluation standard
operating (life test)	1. Load test: The part will be subjected to 96 hours of continuous white noise at 0.2 W at room temperature.	The buzzer will be measured after being placed at +25°C for 1 hours. After the test, there will be no appearance or internal damage such as cracks, rust, or distortions that will affect normal speaker operation. There should be no audible sound distortion at 1.26 V sine wave between Fo ~ 20 KHz. The Fo should meet initial measurements. SPL should be within ±3dB compared to the initial measurements.

## TEST CONDITIONS

standard test conditions	a) Temperature: +5 ~ +35°C	b) Humidity: 45 ~ 85%	c) Pressure: 860 ~ 1060 mbar
judgement test conditions	a) Temperature: +25 ±2°C	b) Humidity: 60 ~ 70%	c) Pressure: 860 ~ 1060 mbar

## PACKAGING



## REVISION HISTORY

rev.	description	date
1.0	initial release	10/18/2006
1.01	new spec template applied	10/26/2011
1.02	brand update	01/20/2020
1.03	logo, datasheet style update	08/05/2022

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



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