



**MODEL:** CLS0231MP-1 | **DESCRIPTION:** SPEAKER

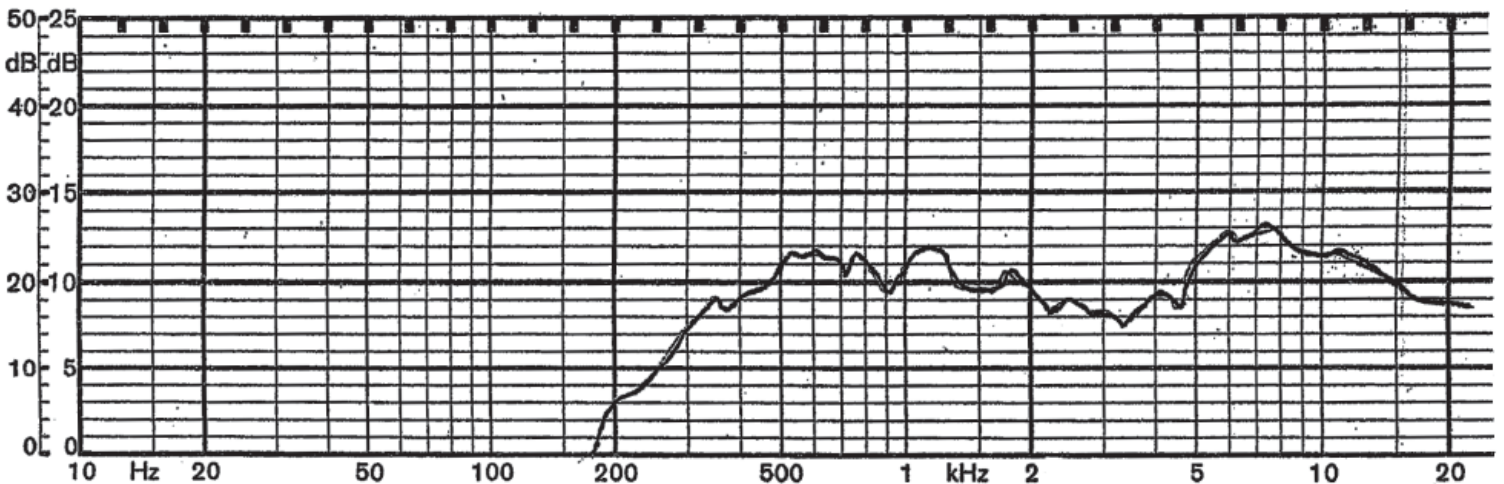


**SPECIFICATIONS**

parameter	conditions/description	min	typ	max	units
nominal size			23		mm
impedance	at 1.5 kHz, 0.9 V	6.8	8	9.2	$\Omega$
resonant frequency	at 0.9 V	384	480	576	Hz
sound pressure level	0.1 W, 50 cm ave., at 0.6, 0.8, 1, 1.2 kHz	69	72	75	dB
response	10 dB max.	Fo		20,000	Hz
input power			0.1	0.2	W
operation	must be normal at program source		0.1		W
buzz, rattle, etc.	must be normal at sine wave		0.9		Vdc
magnet	size: $\varnothing 9.5 \times 1.5$				mm
load test	5 hours of white noise at		0.1		W
heat test	20 ~ 50% RH for 5 hours	63	65	67	$^{\circ}\text{C}$
humidity test	90 ~ 95% RH for 5 hours	38	40	42	$^{\circ}\text{C}$
RoHS	yes				

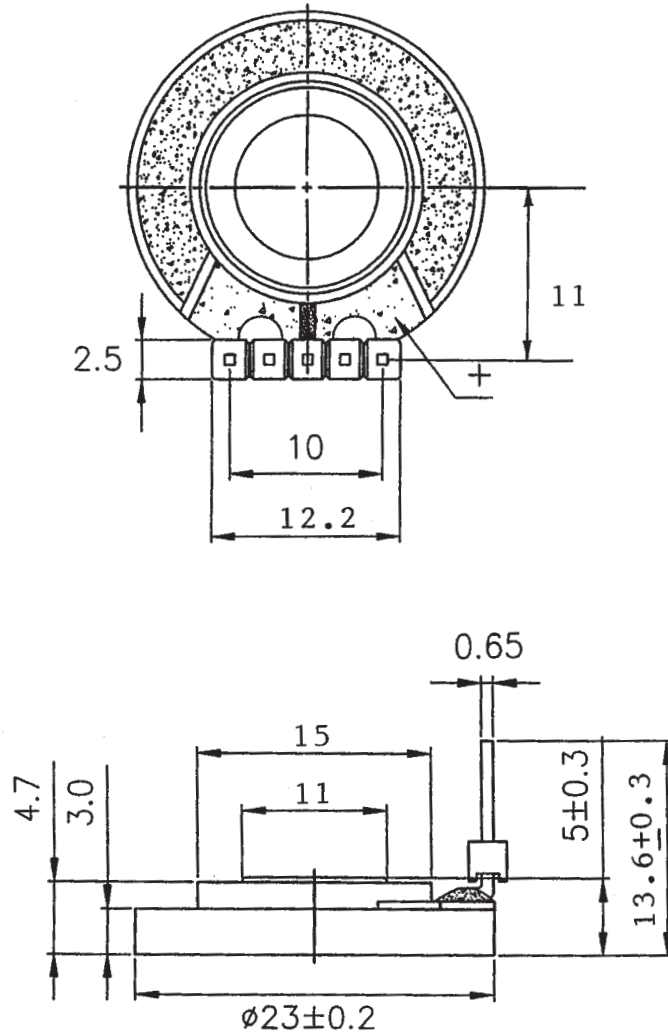
**FREQUENCY RESPONSE CURVE**

parameter	conditions/description
potentiometer range	50 dB
rectifier	RMS
lower limit frequency	20 Hz
wr. speed	100 mm/sec
zero level	50 dB

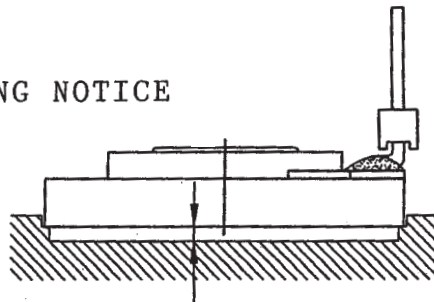


## MECHANICAL DRAWING

units: mm



### MOUNTING NOTICE



AT LEAST 0.8 M/M FOR  
DIAPHRAGM MOVING

## REVISION HISTORY

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rev.	description	date
1.0	initial release	07/03/2007
1.01	dimension updates	09/29/2009
1.02	dimension updates	04/13/2010
1.03	applied new spec template, corrected sound pressure level	09/30/2013

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



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