

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China









**date** 02/2010 page 1 of 2

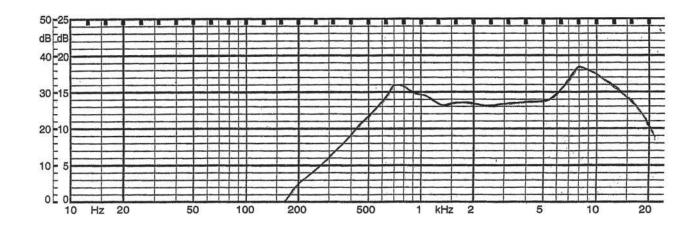
PART NUMBER: CLS0231MA-1-L152 **DESCRIPTION: SPEAKER** 

## **SPECIFICATIONS**

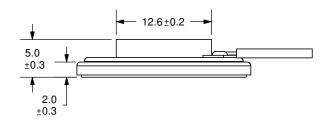
parameter	conditions/description	min	nom	max	units
nominal size	23 mm				
impedance	at 1 kHz, 1 V	6.8	8	9.2	Ω
resonant frequency	at 1 V	536	670	804	Hz
sound pressure level	1 W, 50 cm ave., at 0.8, 1, 1.2, 1.5 kHz	86	89	92	dB
response	10 dB max.	Fo		20,000	Hz
input power			0.5	1	W
operation	must be normal at program source		0.5		W
buzz, rattle, etc.	must be normal at sine wave		2		V dc
magnet	size: 9.5 x 1.5 mm				
load test	24 hours of white noise at		0.5		W
heat test	20 ~ 50% RH for 24 hours	53	55	57	°C
humidity test	90 ~ 95% RH for 24 hours	38	40	42	°C
RoHS	yes				

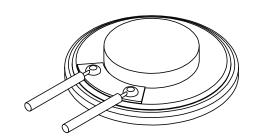
## FREQUENCY RESPONSE CURVE

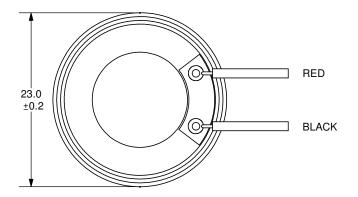
parameter	conditions/description
potentiometer range	50 dB
rectifier	RMS
lower limit frequency	20 Hz
wr. speed	100 mm/sec
zero level	60 dB



REV.	DESCRIPTION	DATE
Α	NEW DRAWING	7/3/2007







SPECIFICATIONS: WIRE: UL1007, #28AWG LENGTH: 152mm

TOLERANCE: ±0.5mm UNLESS OTHERWISE SPECIFIED





20050 SW 112th Ave. Tualatin, OR 97062 Phone: 503-612-2300 800-275-4899 Fax: 503-612-2383 Website: www.cui.com

TITLE: LOW PROFILE SPEAKER REV	/: A
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PART NO. CLS0231MA-1-L152 UNITS: MM [INCHES]

DRAWN BY: APPROVED BY: SCALE: 2:1

PC FILE NAME: CLS0231MA-1-L152

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