
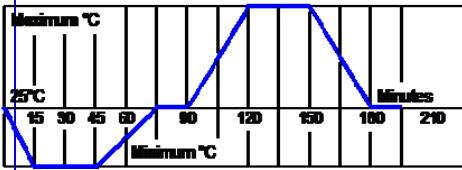




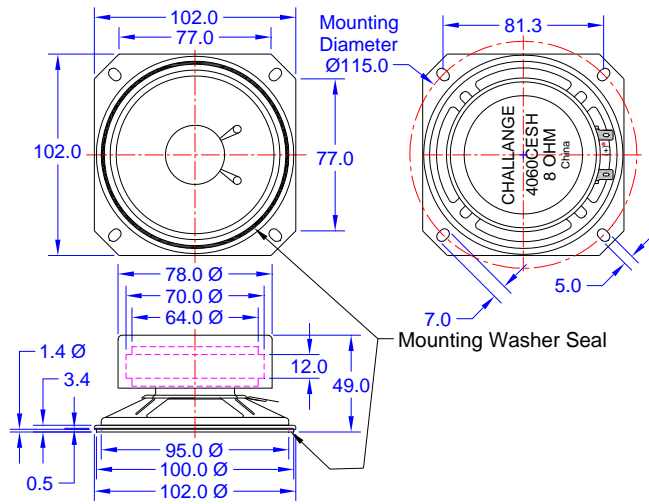
PRODUCT INFORMATION

PART #	4060CESH						Revision: 2-2012		
	4" SQUARE SPEAKER								
DESCRIPTION: Challenge Electronics Speaker, 102 mm Long, Square shape, 102 mm Wide, 49 mm High, KA = 10 W maximum power, 8 Ohm, Fe Steel Frame, Paper Cone, NdFeB Ferrite magnet, 241 Hz. (Fo) Resonant Frequency, Terminal Lugs Termination, SH with Shielding									
SPECIFICATIONS									
Shape	Square	Mounting	4 Holes, 7 mm Long, 5 mm Wide, 81.3 mm between holes Horizontal and Vertical						
Impedance	8 Ω ± 15%, at: 1,000 Hz. 1.0 V	DC Resistance	7.2 Ω ± 15%	Rated Power	5.0 W	Maximum Power	10.0 W		
Effective Frequency Band	180 Hz. to 18,000 Hz.		Resonant Frequency (Fo)		241 Hz. ± 20%, at 1.0 V				
Sound Pressure Level	88.6 ± 3.0 dB(A), at: 1 W, 1.0 m, Average 400, 600, 800, 1,000, and 1,500 (Hz), at 25°C, Baffle board (IEC)								
Operating Temperature	-20°C to +60°C			Storage Temperature		-30°C to +70°C			
Physical Dimensions	Length or Diameter (L/D)	102.0 mm	Width (W)	102.0 mm	Height (H)	49.0 mm			
Distortion	Less than 5% at 1,000 Hz. at 1.0 W.								
Buzz & Rattle	Not be audible at 4 V sine wave between 20 Hz and 10,000 Hz.								
Polarity	When a positive DC Current is applied to the voice coil terminal marked +or red, the diaphragm shall move forward								
Material	Magnet	Y20 NdFeB Ferrite, OD 70 mm Ø, ID 32 mm Ø, H 8 mm				Flux Density	± 10% Gauss		
	Frame	Plated Steel		Cone Material	Paper				
	Termination	Terminal Lugs for wire leads soldering. (Caution, overheating the terminal may damage connections of voice coil leads)							
	Optional Gasket	Yes, OD 100 mm Ø, ID 95 mm Ø, H 1.2 mm, Plastic							
Speaker Parameters	Qts	2.685	Vas	1.043	BL	2.38 T			
Approximate Weight	1,100 grams	Shielding	Yse	Compliance	Lead Free, RoHS				
Options									
RELIABILITY									
Maximum Power Test	With program White-Noise source Maximum Power , 1 minute on, 2 minutes off, 10 cycles , per (EIA) *								
Thermal Operating Temperature Test	96 hours continuous operation at Rated Power , at Maximum Rated Operating Temperature *								
	96 hours continuous operation at Rated Power , at Minimum Rated Operating Temperature *								
Thermal Storage Temperature Test	96 hours at Maximum Rated Storage Temperatures *								
	96 hours at Minimum Rated Storage Temperatures *								
Thermal Shock Test	5 cycles of Minimum and Maximum Operating Temperature . Each cycle shall be set per diagram below and is three (3) hours long *								
Humidity Test	96 Hours at +40°C±2°C. 90-95% RH *								
Operation Life Test	Must perform normal with program White-Noise source at Rated Power for 100 Hours per (EIA) *								
Insulation Test	A minimum of 1 MΩ, measured with 100 Vdc Insulation Resistance Meter, between the Electrical Terminals and the Transducer Case								
Vibration Test	15 minutes at 1.5 mm with 10 to 55 Hz. vibration frequency to each of 3 perpendicular directions *								
Termination Strength	Maximum of 9.8 N (1.0 Kg) load pull test, applied to each terminal in axial direction for 10 seconds								
Drop Test	Dropped naturally from 1 meter height onto the surface of 40 mm wooden board, 3 axes (X,Y,Z) directions, 3 times (6 times total) *								
Reliability Test Performance *	Parts should conform to original performance within ±5 dB tested with Rated Power, after 3 hours of recovery period.								
Warranty	For a period of one (1) year from date of shipping under normal operations conditions								

The information contained herein is believed to be correct, but no guarantee or warranty, express or implied, with respect to accuracy, completeness or results is extended and no liability is assumed. Challenge Electronics reserves the right to make changes in any specification, data or material contained herein.



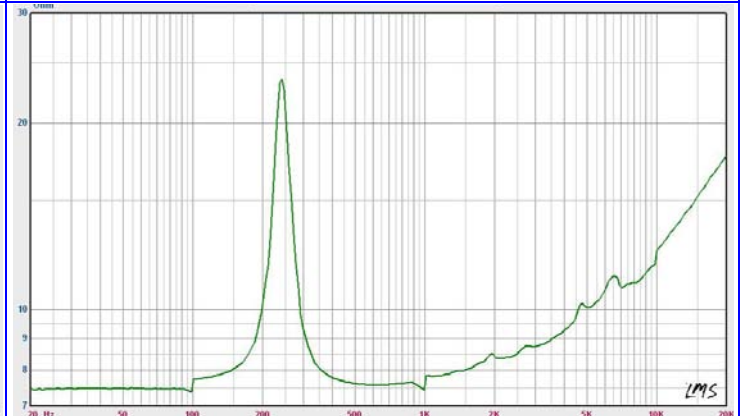
DIMENSIONS Units in: mm, Tolerance: ± 0.3 mm unless specified otherwise.



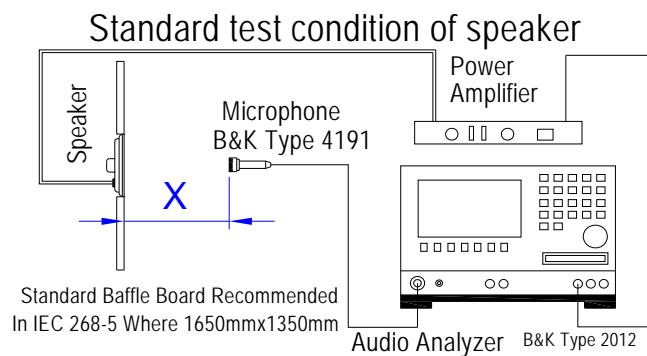
SPL vs. FREQUENCY RESPONSE



IMPEADANCE vs. FREQUENCY RESPONSE



TEST PROCESS



Test Condition

STANDARD
Temperature: 15 ~ 35°C
Relative humidity: 45% ~ 85%
Atmospheric pressure: 860 mbar to 1060mbar

JUDGEMENT
Temperature : 20 \pm 3°C
Relative humidity: 60% ~ 70%
Atmospheric pressure: 860mbar to 1060mbar

Standard Test Fixture

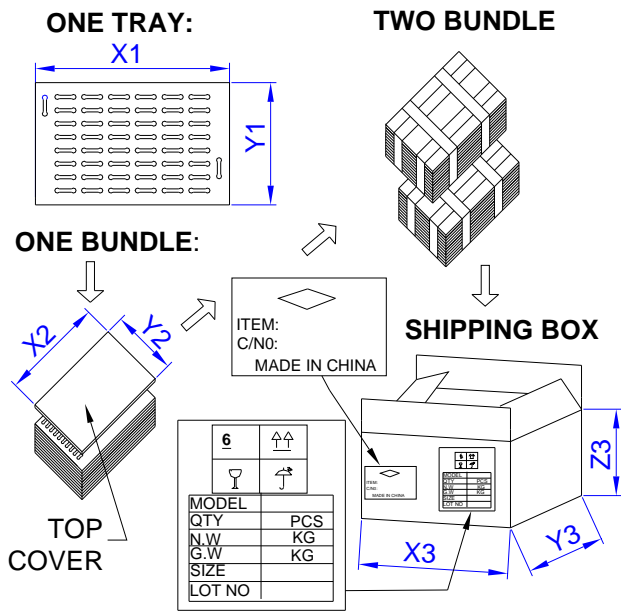
Input Power: 0.1W (0.89V)
Zero Level: -dB
Mode: TSR
potentiometer Range: 50dB
Sweep Time: 0.5sec

Microphone Distance:

X = 100 cm



PACKAGING



MARKING		TRAY	
Bundle	Dimensions	X1	cm
Customer PN		Y1	cm
Other PN if required		Z1	cm
Quantity	Quantity		
Lot and/or Date Code	BUNDLE		
Bundle Number	Dimensions	X2	cm
Shipping Box		Y2	cm
Customer Part Number		Z2	cm
Other PN (if required)	Quantity		
Quantity	SHIPPING BOX		
Lot and/or Date Code	Dimensions	X3	cm
PO Number		Y3	cm
Net Weight		Z3	cm
Gross Weighjt	Number of Bundles		
Box Number	Quantity		
of Number of Boxes	Approximate Weight		
Made in China			

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