
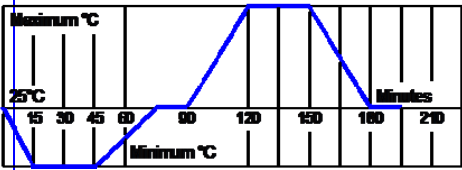


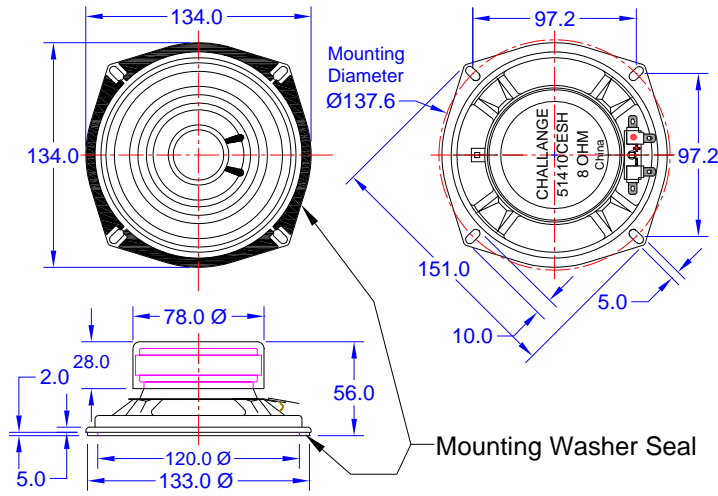


# PRODUCT INFORMATION

<b>PART #</b>	<b>51410CESH</b>										<b>Revision: 2-2012</b>			
	<b>5.25" SQUARE SPEAKER</b>													
<b>DESCRIPTION:</b> Challenge Electronics Speaker, 134 mm Long, Square shape, 134 mm Wide, 56 mm High, <b>KF</b> = 15 W maximum power, 8 Ohm, Fe Steel Frame, Paper Cone, NdFeB Ferrite magnet, 121 Hz. (Fo) Resonant Frequency, Terminal Lugs Termination, SH with Shielding														
<b>SPECIFICATIONS</b>														
Shape	Square	Mounting	4 Holes, 10 mm Long, 5 mm Wide, 97.2 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	8.0 W		Maximum Power	15.0 W			
Effective Frequency Band	110 Hz. to 18,000 Hz.				Resonant Frequency (Fo)		134.62Hz. ± 20%, at 1.0 V							
Sound Pressure Level <sub>86</sub>	90.5 ± 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)		134.0 mm		Width (W)		134.0 mm		Height (H)		56.0 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 10 mm Y20 NdFeB Ferrite, OD 60 mm Ø, ID 32 mm Ø, H 10 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 133 mm Ø, ID 120 mm Ø, H 2 mm, Plastic												
Speaker Parameters	Qts	2.395		Vas	4.343 m		Cms	338.9 u		M	M/N		BL	2.581T
Approximate Weight	1,300 grams		Shielding	Yes		Compliance	Lead Free, RoHS							
Options														
<b>RELIABILITY</b>														
Maximum Power Test	With program White-Noise source <b>Maximum Power</b> , 1 minute on, 2 minutes off, <b>10 cycles</b> , per (EIA) *													
Thermal Operating Temperature Test	<b>96 hours</b> continuous operation <b>at Rated Power</b> , at Maximum Rated Operating Temperature *													
	<b>96 hours</b> continuous operation <b>at Rated Power</b> , at Minimum Rated Operating Temperature *													
Thermal Storage Temperature Test	<b>96 hours</b> at Maximum Rated Storage Temperatures *													
	<b>96 hours</b> at Minimum Rated Storage Temperatures *													
Thermal Shock Test	5 cycles of <b>Minimum and Maximum Operating Temperature</b> . 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 <b>at Rated Power</b> for <b>100 Hours</b> 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 *	<b>Parts should conform to original performance within ±5 dB tested with Rated Power, after 3 hours of recovery period.</b>													
Warranty	For a period of one (1) year from date of shipping under normal operations conditions													



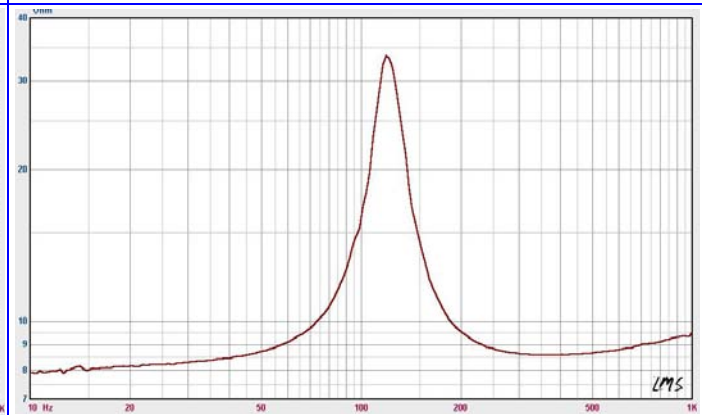
**DIMENSIONS** Units in: mm, Tolerance:  $\pm 0.3$  mm unless specified otherwise.



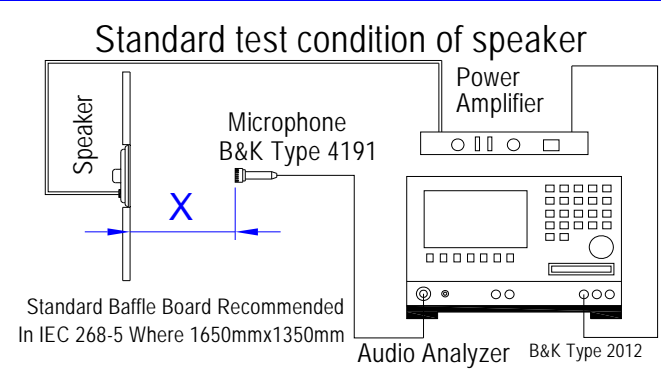
**SPL vs. FREQUENCY RESPONSE**



**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**

