

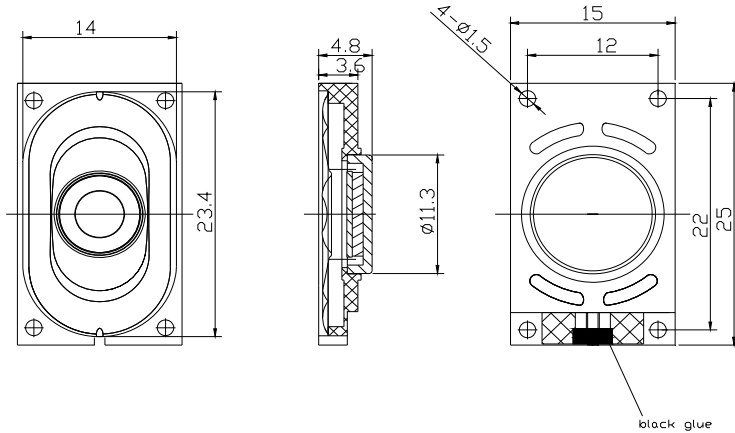


PRODUCT INFORMATION

PART #	CES250V048BA08PCN900UR							Revision: 2-2017							
	OVAL SPEAKER														
DESCRIPTION: Challenge Electronics Speaker; 25.0 mm Diameter; oval shape; 4.8 mm High; BA = 1.0 W maximum power; 8 Ohm; Plastic Frame; Cloth Cone; NdFeB magnet; 900 Hz. (Fo) Resonant Frequency; Solder Point (U) Termination; RoHS Lead Free Compliant															
SPECIFICATIONS															
Shape	Oval		Impedance	8±15% Ω /1KHz/1V			DC Resistance								
Rated Power	Sine Wave	0.5 W	Square Wave	W	Maximum Power	Sine Wave	1.0 W	Square Wave							
Effective Frequency Band	200 Hz ~ 13 KHz				Resonant Frequency (Fo)		900 ±20% Hz/1V								
Sound Pressure Level	82 ±3 dB at (AVG 0.6,0.8,1.0,1.2) KHz, 1W/0.5M, Baffle board (IEC)														
Operating Temperature	-20°C to + 60°C		Storage Temperature		-30°C to +70°C										
Physical Dimensions	Length (L)		25.0 mm	Width (W)		15.0 mm	Height (H)		4.8 mm						
Baffle Opening	Minimum Opening Recessed							3 mm							
Mounting															
Distortion	5% MAX. at 1KHz, 1V														
Buzz & Rattle	Should not be audible at 2.0 V sine wave between (200 Hz ~ 20KHz)														
Polarity	When a positive DC Current is applied to the voice coil terminal marked +or red, the diaphragm shall move forward.														
Material	Magnet	NdFeB φ8.0×1 t mm					Flux Density	1.0 T							
	Frame	Plastic Black ABS					Cone Material	Cloth							
	Termination	Solder Point													
	Gasket														
Speaker Parameters	Qms		Qes		Qts		Vas		Cms		M		M/N		BL
Approximate Weight	5.0 grams		Shielding	No		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 storage at Maximum Rated Storage Temperatures *														
	96 hours storage 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 96 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	Parts in Shipping Container are subjected to 15minutes of at 0.75 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	Parts in Shipping Container are subjected to dropped naturally from 1 meter height onto the surface of 40 mm wooden board, 3 axes (X,Y,Z) directions, 3 times (9 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 This warranty does not apply to products damaged through misuse, abuse, improper installation, alteration, rework, or attempt to repair														



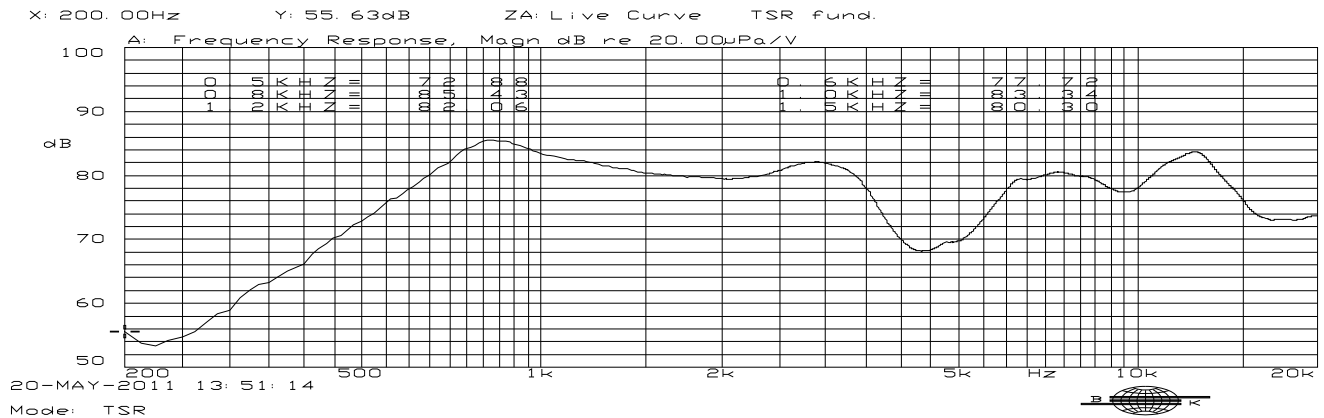
DIMENSIONS Units in: mm, Tolerance: ± 0.5 mm unless specified otherwise



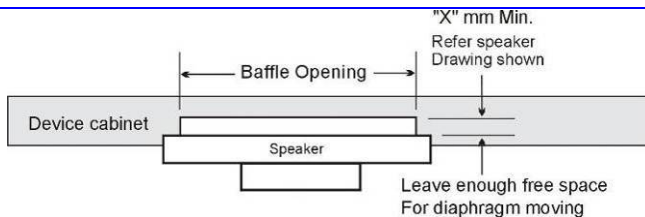
MATERIALS

7	PCB	1	
6	Plate	1	0.8t
5	Magnet	1	NdFeB
4	Voice coil	1	
3	Yoke	1	
2	Diaphragm	1	Cloth
1	Frame	1	BLACK ABS
#	PART NAME	Q'TY	MATERIAL

SPL vs. FREQUENCY RESPONSE

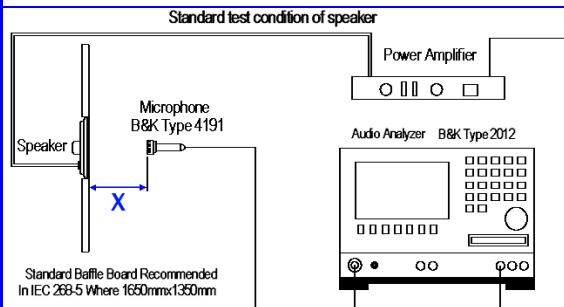


MOUNTING PRECAUTION



The speaker must be mounted so that the diaphragm can move freely without mechanical interference from the baffle, enclosure or other parts. The required clearance (if specified) will be given in the mechanical drawing and/or detailed specifications above.

TEST PROCESS



Test Condition	
STANDARD	Temperature: 15 ~ 35°C
	Relative humidity: 45% ~ 85%
	Atmospheric pressure: 860 mbar to 1060 mbar
JUDGEMENT	Temperature: 20±3°C
	Relative humidity: 60% ~ 70%
	Atmospheric pressure: 860 mbar to 1060 mbar

Standard Test Fixture	
Zero Level:	-dB
Mode:	TSR
potentiometer Range:	50 dB
Sweep Time:	0.5 sec
Input Power: 1 W	
Microphone Distance: X = 50 cm	

SUBSTANCE OF VERY HIGH CONCERN (SVHC)

This product does NOT contain any of the REACH Substances of Very High Concern (SVHC), and is in compliance with European Union REACH Regulation No.1907/2006 regarding chemical substances which must be registered or disclosed.

Revision	Description	By	Date
1-2012	Modified Spec	EZ	2012-09-27
2-2017	Updated various test conditions. Changed effective frequency range. Added material details (table). Added SVHC Compliance. Removed packaging detail.	WS	2017-04-03