



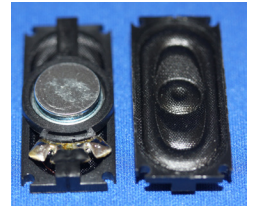
PRODUCT INFORMATION

PART #	CES350V058CA08PCN670UR	Revision: 0-2014
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OVAL SPEAKER

DESCRIPTION: Challenge Electronics Speaker; 35.0 mm Long; OVAL shape; 16.0 mm Wide; 5.8 mm High; CA = 2.0 W maximum power; 8 Ohm, Plated Plastic Frame; Cloth Cone; NdFeB Ferrite magnet; 670 Hz. (Fo) Resonant Frequency; U= PCB solder points connection; RoHS Lead Free, and REACH Compliant



SPECIFICATIONS

Shape	Oval	Impedance	8 Ω ± 15%, at 2,000 Hz, 1.0 V				DC Resistance								
Rated Power	Sine Wave	1.0 W	Square Wave	W	Maximum Power	Sine Wave	2.0 W	Square Wave							
Effective Frequency Band	670 Hz. to 20,000 Hz.				Resonant Frequency (Fo)	670 Hz. ± 20%, at 1.0 V									
Sound Pressure Level	83 ± 3.0 dB (A), at 1.0 W, 0.5 m, Average 600, 800, 1,000, 1,200, (Hz), at 25°C., Baffle board (IEC) 87 ± 3.0 dB (A), at 0.1 W, 0.1 m, Average 600, 800, 1,000, 1,200, (Hz), at 25°C., Baffle board (IEC)														
Operating Temperature	-20°C to + 60°C		Storage Temperature	-20°C to + 60°C											
Physical Dimensions	Length (L)	35.0 mm	Width (W)	16.0 mm	Height (H)	5.8 mm									
Baffle Opening	Length or Diameter (L/D)		Width (W)		Minimum Opening Recessed	2.0mm									
Mounting	Pins Spacing Length (L)	32.0 mm	Pins Spacing (Width)	13.0 mm	Hole Size	2.0 mm Ø	Pins #	4							
Distortion	Less than 5% at 1,000 Hz. at 1.0 V														
Buzz & Rattle	Not be audible at 2 V sine wave between 500 Hz and 6,000 Hz.														
Polarity	When a positive DC Current is applied to the voice coil terminal marked +or red, the diaphragm shall move forward.														
Material	Magnet	Ferrite, NdFeB, 8 mm Ø, 2.0 mm High				Flux Density	T								
	Frame	Plastic, Black			Cone Material	Cloth									
	Termination	Solder Points													
	Optional Gasket	Black Paper Gasket OD 26.7 mm, ID 25.2 mm													
Speaker Parameters	Qms		Qes		Qts		Vas		Cms		M		M/N		BL
Approximate Weight	7.5 grams		Shielding	No		Compliance	RoHS, Lead Free, and REACH								

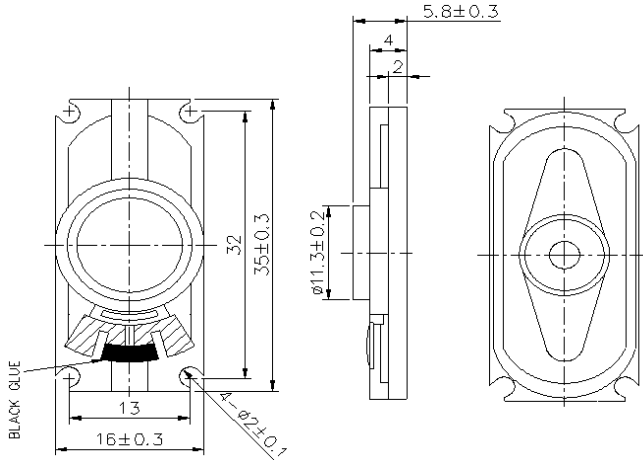
RELIABILITY

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	<p>5 cycles of Minimum and Maximum Operating Temperature</p> <p>Each cycle shall be set per diagram below and is three (3) hours long *</p>
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.

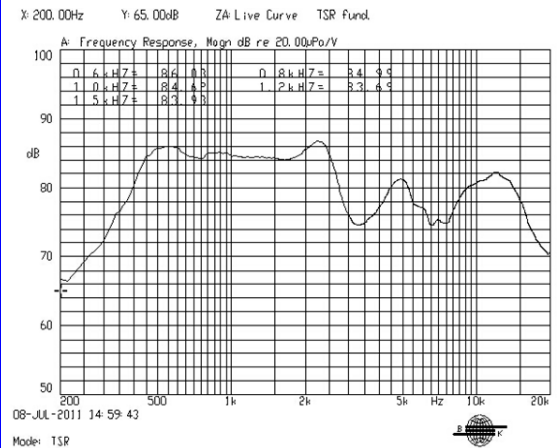
Warranty	For a period of one (1) year from date of shipping under normal operations conditions This warranty does not apply to products damaged through misuse, abuse, improper installation, alteration, rework, or attempt to repair
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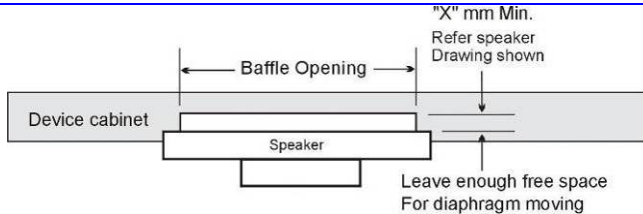
DIMENSIONS Units in: mm, Tolerance: ± 0.3mm unless specified otherwise



SPL vs. FREQUENCY RESPONSE

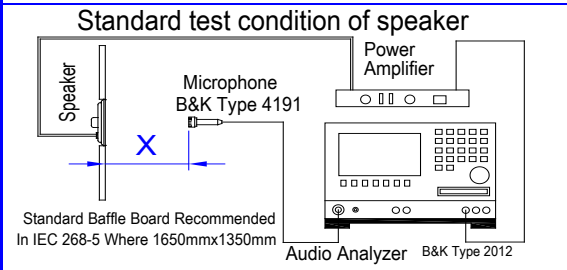


MOUNTING PRECAUTION



In order to keep speaker work normally, there shall leave enough free space for diaphragm moving, minimum distance required is marked in speaker mechanical drawing.

TEST PROCESS



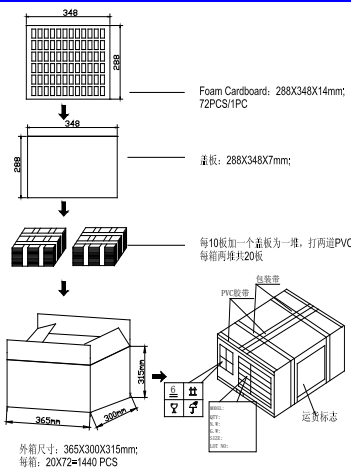
Test Condition	
STANDARD	
Temperature:	15 ~ 35°C
Relative humidity:	45% ~ 85%
Atmospheric pressure:	860 mbar to 1060 mbar
JUDGEMENT	
Temperature:	20±3°C
Relative humidity:	60% ~ 70%
Atmospheric pressure:	860 mbar to 1060 mbar

Standard Test Fixture	
Zero Level:	-dB
Mode:	TSR
potentiometer Range:	50 dB
Sweep Time:	0.5 sec
Input Power:	1W (2.83V)
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.

PACKAGING



MARKING	TRAY	
	Bundle	Dimensions
Part Number		Y1 28.8cm
Quantity	Quantity	72
Lot and/or Date Code	BUNDLE	
Bundle Number	Dimensions	X2 34.8 cm
Shipping Box		Y2 30.0 cm
Other PN (if required)	Quantity	720
Quantity	SHIPPING BOX	
Lot and/or Date Code	Dimensions	36.5 cm 62 cm
PO Number		30.0 cm 40 cm
Net Weight		31.5 cm 40 cm
Gross Weight	Number of Bundles	2
Box Number of Boxes	Quantity	1,440
Made in China	Approximate Weight	9.0 kgs

Revision	Description	By	Date