



PRODUCT INFORMATION

PART #	CES400S120CA08PCN380STR	Revision: 0-2010
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OVAL SPEAKER

DESCRIPTION: Oval Speaker 40 X 28.3 X 12 H, 80hm, Cloth edged paper cone, F0 = 380Hz, Solder tabs, RoHS Lead Free Compliant.

SPECIFICATIONS

Shape	Rectangle					
DC Impedance	8 Ω ±15%, at 1,000 Hz., at 1.0 V		Rated Power:	1.0 W	Maximum Power:	2.0 W
Effective Frequency Band	380 Hz. to 20,000 Hz.		Resonant Frequency (Fo):	380 Hz. ±20%, at 1.0 V		
Sound Pressure Level	84 ± 3.0 dB (A), at 1.0 W, 0.5 m, Average 800, 1,000, 1,200, 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)	40.0 mm	Width (W)	28.3 mm	Height (H)	12.0 mm
Distortion	Less than 5% at 1,000 Hz. at 1.0 W.					
Buzz & Rattle	Not be audible at 2.83 V sine wave between 20 Hz and 2,200 Hz.					
Polarity	When a positive DC Current is applied to the voice coil terminal marked +or red, the diaphragm shall move forward.					
Magnet	Ferrite, NdFeB, mm Ø X mm t				Flux Density:	T
Termination	Solder Tabs					
Housing Material	Plastic, ABS		Cone Material	Cloth edged paper cone		
Options						
Approximate Weight	7.6 grams	Shielding	None	Compliance	Lead Free, RoHS	

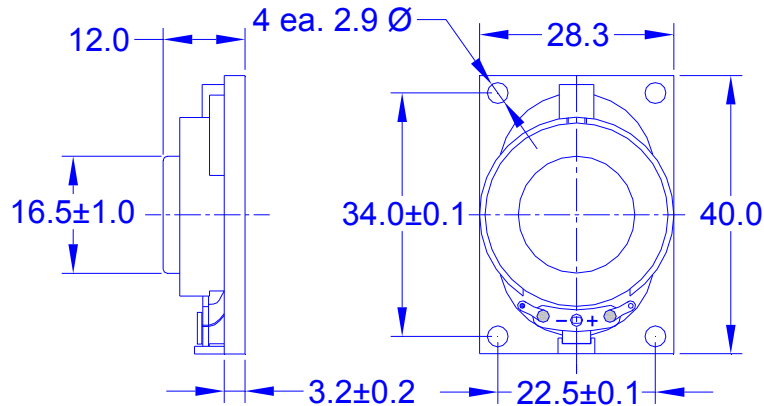
RELIABILITY

Max. Power Test	With program White-Noise source Maximum Power , 1 minute on, 2 minutes off, 10 cycles, per (EIA) *
Thermal Operating Temperature Test	50 hours continuous operation at Rated Power , at Maximum Rated Operating Temperature *
	50 hours continuous operation at Rated Power , at Minimum Rated Operating Temperature *
Thermal Storage Temperature Test	After parts are subjected to 96 hours storage at Maximum Rated Storage Temperatures *
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Thermal Shock Test	After parts are subjected to five (5) cycles of Minimum and Maximum Operating Temperature. Each cycle shall be set per diagram below and is three (3) hours long *
Humidity Test	After parts are subjected to 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	After parts are subjected to 15minutes of 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	After parts 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 (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

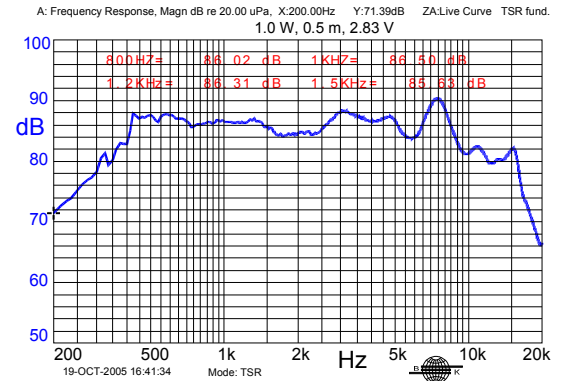


DIMENSIONS

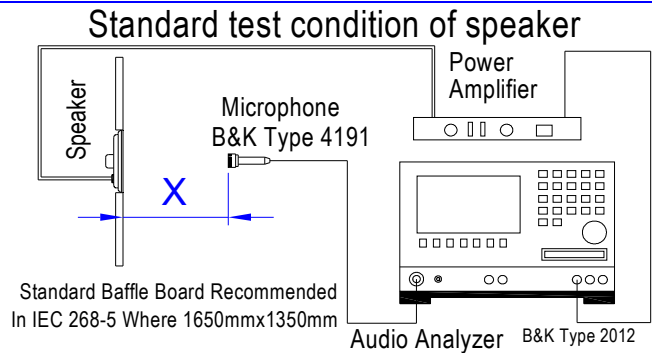
Units in: mm, Tolerance: ± 0.3mm unless specified otherwise.



SPL vs. FREQUENCY RESPONSE



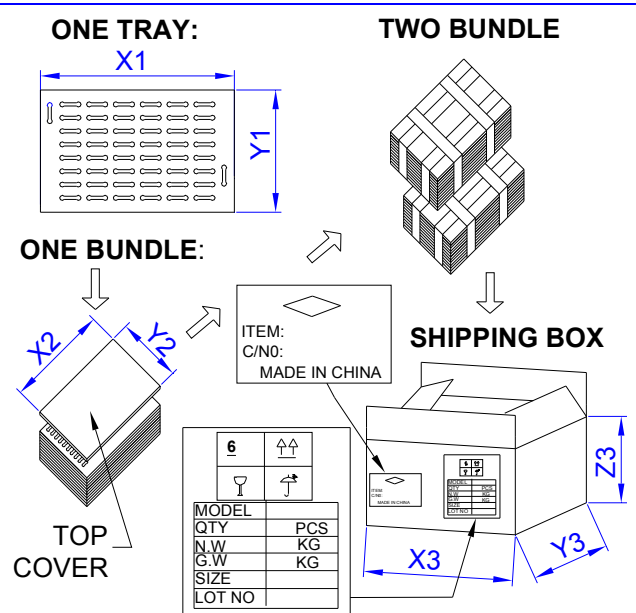
TEST PROCESS



Test Condition	
STANDARD	
Temperature:	15 ~ 35°C
Relative humidity:	45% ~ 85%
Atmospheric pressure:	860 mbar to 1060mbar
JUDGEMENT	
Temperature :	20±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 = 50 cm	

PACKAGING



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