
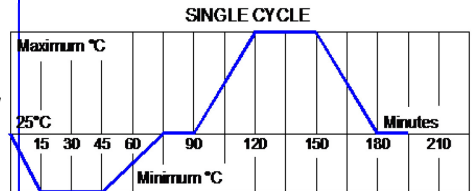




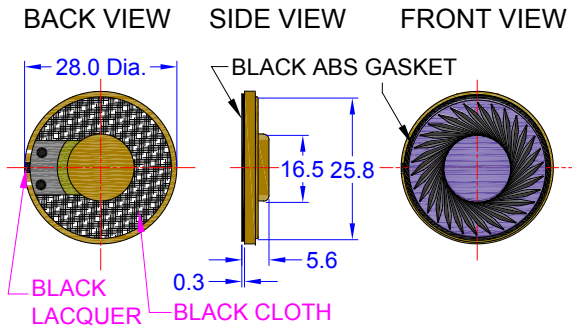
PRODUCT INFORMATION

PART #	CE-2808B36						Revision: 2-2013
	ROUND MICRO SPEAKER						
DESCRIPTION: Challenge Electronics Speaker, 28.0 mm diameter, Round shape, 5.6 mm High, CA = 2.0 W maximum power, 8 Ohm, Fe Steel Plated Frame, Mylar Cone, NdFeB Ferrite magnet, 580 Hz. (Fo) Resonant Frequency, PCB Solder Points Termination, RoHS, Lead Free Compliant.							
SPECIFICATIONS							
Shape	Round	Mounting					
DC Impedance	8 Ω ± 15%, at: 1,000 Hz. 1.0 V		Rated Power	1.5 W	Maximum Power	2.0 W	
Effective Frequency Band	550 Hz. to 5,000 Hz.		Resonant Frequency (Fo)	580 Hz. ± 20%, at 1.0 V			
Sound Pressure Level	92 ± 3.0 dB(A), at: 0.5 W, 10 cm, Average 800, 1,000, 1,200, and 1,500 (Hz), at 25°C, Baffle board (IEC)						
Operating Temperature	-20°C to + 60°C		Storage Temperature	-20°C to +70°C			
Physical Dimensions	Length or Diameter (L /D)	28.0 mm Ø	Width (W)		Height (H)	5.6 mm	
Baffle Opening	Length or Diameter (L /D)	26.0 mm Ø	Width (W)		Minimum Opening Recessed	2.0 mm	
Mounting	Length or Diameter (L /D)		Width (W)		Holes size		
Distortion	Less than 5% at 1,000 Hz. at 0.1 W.						
Buzz & Rattle	Not be audible at 3.46 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	Neodymium Iron Boron, NdFeB Ferrite, 12.5 mm Ø X 2.0 mm t			Flux Density	1,200 Gauss	
	Frame	Steel, Zinc plated		Cone Material	Mylar		
	Termination	PCB with Solder Points					
	Optional Gasket	With ABS Gasket					
Speaker Parameters	Qms		Qes		Qts		
Approximate Weight	grams	Shielding	None	Compliance	Lead Free, RoHS		
Options	Flange Mounting						
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	<p>5 cycles of Minimum and Maximum Operating Temperature. 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 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						

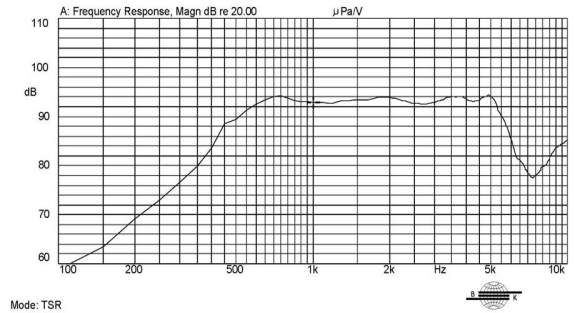


DIMENSIONS

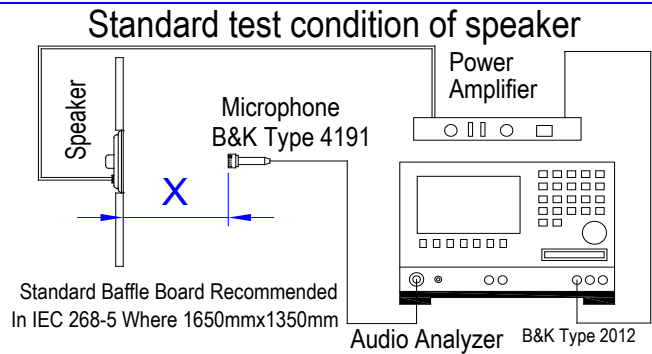
Units in: mm, Tolerance: ± 0.3 mm unless specified otherwise.



SPL vs. FREQUENCY RESPONSE



TEST PROCESS



Test Condition

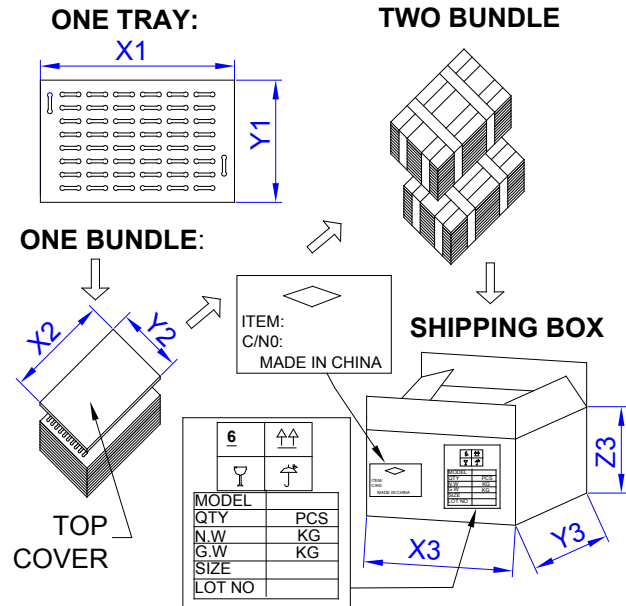
STANDARD
 Temperature: 15 ~ 35°C
 Relative humidity: 45% ~ 85%
 Atmospheric pressure: 860 mbar to 1060mbar

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

Standard Test Fixture
 Input Power: 0.1W (3.46)
 Zero Level: -dB
 Mode: TSR
 potentiometer Range: 50dB
 Sweep Time: 0.5sec

Microphone Distance:
X = 0.1 m

PACKAGING



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

Revision	Description	By	Date
2-2013	Corrected diameter in Description	W.Sargent	10/28/2013

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