



PRODUCT INFORMATION

PART #	CLS50R17-8F2-T600R	Revision: 2-2012
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ROUND SPEAKER

DESCRIPTION: Challenge Electronics Speaker, 50.0 mm diameter, Round shape, 17.0 mm High, DA = 3.0 W maximum power, 8 Ohm, Fe Steel Plated Frame, Mylar Cone, NdFeB Ferrite magnet, 600 Hz. (Fo) Resonant Frequency, Tabs for wire soldering Connector Termination, RoHS, Lead Free Compliant.



SPECIFICATIONS

Shape	Round	Mounting	
DC Impedance	8 Ω ± 15%, at: 1,000 Hz. 1.0 V	Rated Power	2.0 W
		Maximum Power	3.0 W
Effective Frequency Band	600 Hz. to 5,000 Hz. within 10 dB maximum Deviations	Resonant Frequency (Fo)	600 Hz. ± 20%, at 1.0 V
Sound Pressure Level	90 ± 3.0 dB(A), at: 2.0 W, 1 m, 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	-30°C to +70°C
Physical Dimensions	Length or Diameter (L/D)	50.0 mm Ø	Width (W)
			Height (H)
Baffle Opening	Length or Diameter (L/D)	45.0 mm Ø	Width (W)
			Minimum Opening Recessed
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 0.89 V sine wave between 20 Hz and 5,000 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, 35.0 mm Ø X mm t	Flux Density
	Frame	Steel, Zinc plated	Cone Material
	Termination	Soldering Tabs for wires solder connections	
	Optional Gasket	ABS Gasket	
Speaker Parameters	Qms	Qes	Qts
		Vas	Cms
		M	M/N
			BL
Approximate Weight	grams	Shielding	None
		Compliance	Lead Free, RoHS
Options	Flange Mounting		

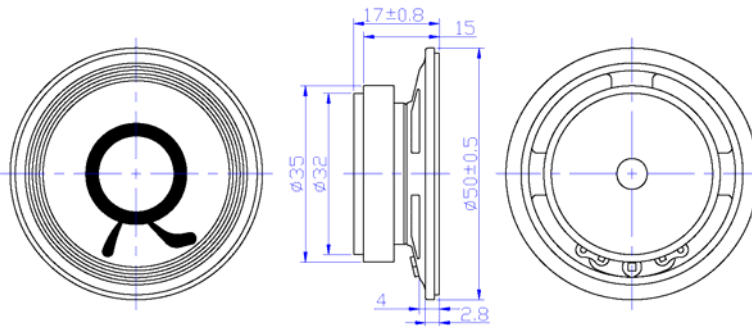
RELIABILITY

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

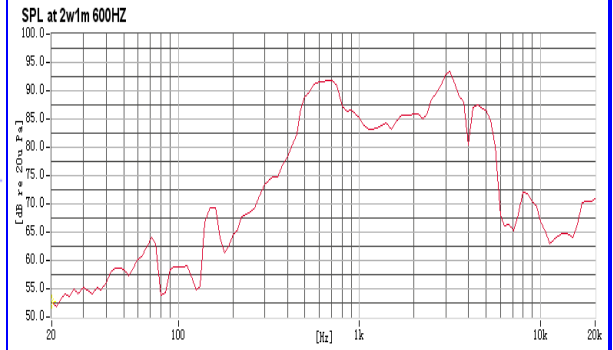


DIMENSIONS

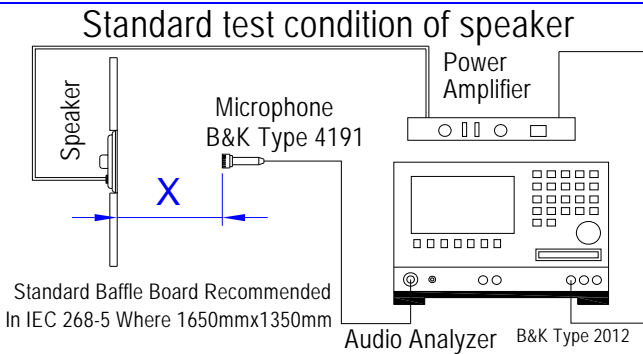
Units in: mm, Tolerance: ± 0.3 mm unless specified otherwise.



SPL vs. FREQUENCY RESPONSE



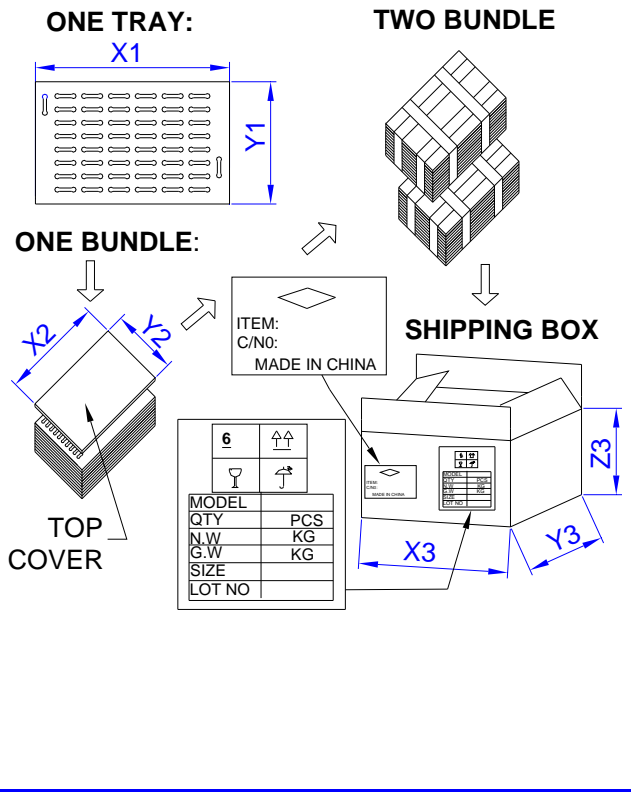
TEST PROCESS



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 (0.89V)
Zero Level:	-dB
Mode:	TSR
potentiometer Range:	50dB
Sweep Time:	0.5sec
Microphone Distance:	
X = 1.0 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 Weight		Number of Bundles
Box Number	Quantity	
of Number of Boxes	Approximate Weight	
Made in China		