



PRODUCT INFORMATION

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| PART # | 5412PX | Revision: 2-2012 |
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5.25" SQUARE SPEAKER

DESCRIPTION: Challenge Electronics Speaker, 134.2 mm Long, Square shape, 134.2 mm Wide, 55 mm High, CA = 30 W maximum power, 4 Ohm, Steel Plated Frame, Paper Cloth edged cone, NdFeB Ferrite magnet, 75 Hz. (Fo) Resonant Frequency, Tabs solder Points Termination, RoHS Lead Free Compliant

SPECIFICATIONS

| | | | | | | | | | | | | | | | |
|---------------------------------|--|----------------------|--|------------------------|----------------------|-------------------|-----------------|--|------------|--|----------|--|------------|--|-----------|
| Shape | Rectangle Rounded | Mounting | 4 Holes, 10.5mm long, 6.0mm wide, 96.9mm between holes Horizontal and Vertical | | | | | | | | | | | | |
| DC Impedance | 4 Ω ± 15%, at 1,000 Hz., at 1.0 V | | Rated Power: | 15.0 W | Maximum Power | 30.0 W | | | | | | | | | |
| Effective Frequency Band | 75 Hz. to 10,000 Hz. | | Resonant Frequency (Fo) | 75 Hz. ± 20%, at 1.0 V | | | | | | | | | | | |
| Sound Pressure Level | 100 ± 3.0 dB (A), at: 1.0 W, 1.0 m, Average 800, 1,000, 1,200, 1,500 (Hz), 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) | 134.2 mm | Width (W) | 134.2 mm | Height (H) | 55.0 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. | | | | | | | | | | | | | | |
| Material | Housing | Steel Plated | Cone | Cloth edged paper cone | | | | | | | | | | | |
| | Magnet | Ferrite, mm Ø X mm t | Flux Density | T | | | | | | | | | | | |
| | Termination | Solder Tabs | | | | | | | | | | | | | |
| | Optional Gasket | | | | | | | | | | | | | | |
| Speaker Parameters | Qms | | Qes | | Qts | | Vas | | Cms | | M | | M/N | | BL |
| Approximate Weight | 630 grams | | Shielding | None | | Compliance | Lead Free, RoHS | | | | | | | | |
| Options | | | | | | | | | | | | | | | |

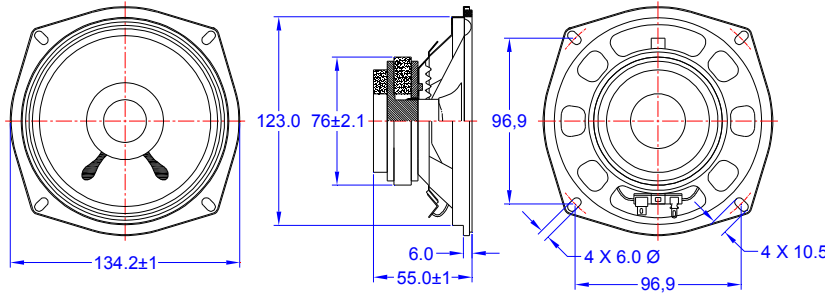
RELIABILITY

| | |
|---|---|
| Max. Power Test | With program White-Noise source Maximum Power , 1 minute on, 2 minutes off, 10 cycles, per (EIA) * |
| Thermal Operating Temperature Test | 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 | After parts are subjected to 48 hours storage at Maximum Rated Storage Temperatures * |
| | After parts are subjected to 48 hours storage at Minimum Rated Storage Temperatures * |
| 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 |
| Termination Strength | Maximum of 9.8 N (1.0 Kg) load pull test, applied to each terminal in axial direction for 10 seconds |
| Vibration Test | Parts in shipping Container are subjected to 15minutes of at 1.5 mm with 10 to 55 Hz. vibration frequency to each of 3 perpendicular directions * |
| 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 (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 |

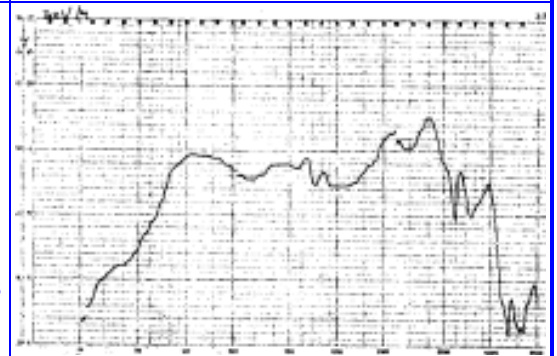


DIMENSIONS

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

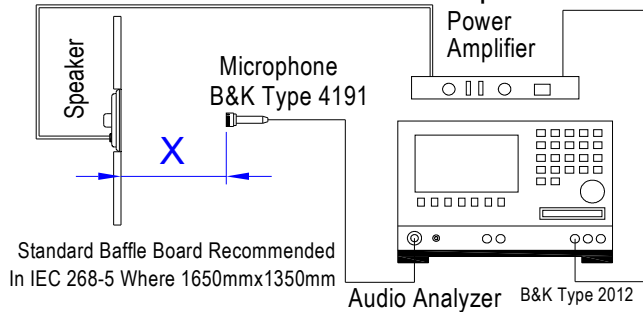


SPL vs. FREQUENCY RESPONSE



TEST PROCESS

Standard test condition of speaker

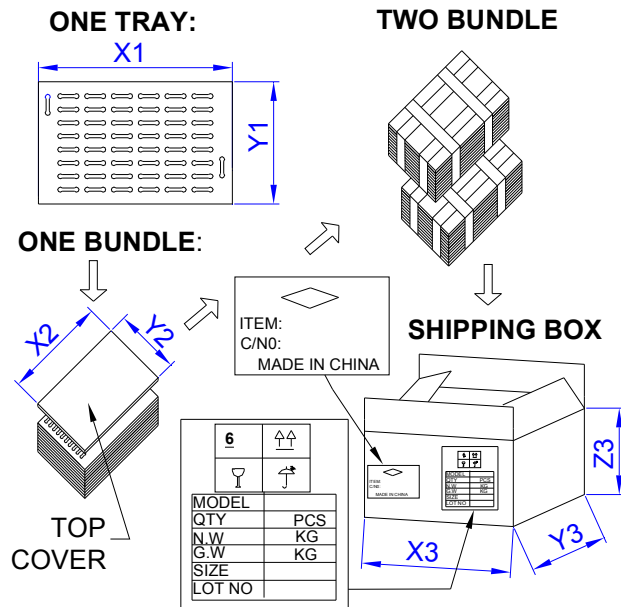


| Test Condition | |
|-----------------------|----------------------|
| STANDARD | |
| Temperature: | 15 ~ 35°C |
| Relative humidity: | 45% ~ 85% |
| Atmospheric pressure: | 860 mbar to 1060mbar |
| JUDGEMENT | |
| Temperature : | 20±3°C |
| Relative humidity: | 60% ~ 70% |
| Atmospheric pressure: | 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 = 100 cm

PACKAGING



| MARKING | TRAY | |
|------------------------|--------------------|------------|
| | Bundle | Dimensions |
| 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) | | X3 cm |
| Quantity | Dimensions | 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 | | |