



PRODUCT INFORMATION

PART #	CES200S095EA8PYR530TW							Revision: 0-2013							
	SQUARE SPEAKER														
DESCRIPTION: Challenge Electronics Speaker; 20.0 mm Long; Square shape; 20.0 mm Wide, 9.5 mm High; EA= 4 W maximum power; Impedance 8 Ohm; Plastic Frame; POLYURETHANE Cone; Rare Earth magnet; 530 Hz. (Fo) Resonant Frequency; Solder Terminal Lugs Termination; RoHS Lead Free Compliant, Water Proof															
SPECIFICATIONS															
Shape	Square		Impedance	8 Ω ± 15%, at: 1,000 Hz. 1.0 V			DC Resistance								
Rated Power	Sine Wave	2 W	Square Wave	W	Maximum Power	Sine Wave	4 W	Square Wave	W						
Effective Frequency Band	320 Hz. to 20,000 Hz. SPL within 10 dB Average				Resonant Frequency (Fo)	530 Hz. ± 20%, at 1.0 V									
Sound Pressure Level ₈₆	74 ± 3.0 dB(A), at: 1.0 W, 1.0 m, Average 600, 800, 1,000, 1,200, Hz, at 25°C, Baffle board (IEC)														
Operating Temperature	-25°C to + 60°C		Storage Temperature	-40°C to +70°C											
Physical Dimensions	Length or Diameter (L /D)	20.0 mm		Width (W)	20.0 mm		Height (H)	9.5 mm							
Baffle Opening	Diameter (D)	18.0 mm Ø		Width (W)			Minimum Opening Recessed	3 mm							
Mounting	Length or Diameter (L /D)	16.0 mm		Width (W)	16.0 mm		Mounting Holes	4	Holes size	1.6 mm Ø					
Distortion	Less than 5% at 1,000 Hz. at 2.0 W.														
Buzz & Rattle	Not be audible at 4 V sine wave between Fo to 20,000 Hz.														
Polarity	When a positive DC Current is applied to the voice coil terminal marked + or red, the diaphragm shall move forward														
Material	Magnet	Rare Earth, NdFeB, OD 11.2 mm, H 3.3 mm				Flux Density	± 10% Gauss								
	Frame	Plastic, ABS			Cone Material	Polyurethane									
	Termination	Terminal Lugs for wire leads soldering. (Caution, overheating the terminal may damage connections of voice coil leads)													
	Optional Gasket														
Speaker Parameters	Qms		Qes		Qts		Vas		Mmd		M		M/N		BL
Approximate Weight	6.5 grams		Shielding	No		Compliance	RoHS Lead Free								
Options															
RELIABILITY															
Maximum Load Test	24 hours continuous operation with program White-Noise source, weighted Filter, 4 V _{RMS} , 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	5 cycles of Minimum and Maximum Operating Temperature Each cycle shall be set per diagram below and is three (3) hours long *														
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	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 (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.														
Note	Manufactured and tested to CNS4784 and CNS4785 standards.														
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														



<p>DIMENSIONS Units in: mm; Tolerance: ± 0.5 mm unless specified otherwise</p>	<p>SPL vs. FREQUENCY RESPONSE</p>
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<p>MOUNTING PRECAUTION</p> <p>In order to keep speaker working normally, there allow enough free space for diaphragm movements, Minimum distance required is marked in page # 1 under Baffle Opening.</p>	<p>IMPEDANCE vs. FREQUENCY RESPONSE</p>
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<p>TEST PROCESS</p> <p>Standard test condition of speaker</p> <p>Standard Baffle Board Recommended In IEC 268-5 Where 1650mmx1350mm</p>	<p>Test Condition</p> <p>STANDARD Temperature: 15 ~ 35°C Relative humidity: 45% ~ 85% Atmospheric pressure: 860 mbar to 1060 mbar</p> <p>JUDGEMENT Temperature : 20±3°C Relative humidity: 60% ~ 70% Atmospheric pressure: 860mbar to 1060 mbar</p>	<p>Standard Test Fixture</p> <p>Zero Level: -dB Mode: TSR potentiometer Range: 50 dB Sweep Time: 0.5 sec</p> <p>Input Power: 1.0 W</p> <p>Microphone Distance: X = 100 cm</p>
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<p>PACKAGING</p> <p>ONE TRAY: X1, Y1</p> <p>TWO BUNDLE</p> <p>ONE BUNDLE: X2, Y2</p> <p>SHIPPING BOX: X3, Y3, Z3</p> <p>ITEM: C/NO: MADE IN CHINA</p> <p>TOP COVER</p> <table border="1" style="font-size: small;"> <tr><td>MODEL</td><td>PCS</td></tr> <tr><td>QTY</td><td>PCS</td></tr> <tr><td>N.W</td><td>KG</td></tr> <tr><td>G.W</td><td>KG</td></tr> <tr><td>SIZE</td><td></td></tr> <tr><td>LOT NO</td><td></td></tr> </table>	MODEL	PCS	QTY	PCS	N.W	KG	G.W	KG	SIZE		LOT NO		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">MARKING</th> <th colspan="2">TRAY</th> </tr> <tr> <td>Bundle</td> <td>X1</td> <td>cm</td> </tr> <tr> <td>Part Number</td> <td rowspan="2">Dimensions</td> <td>Y1</td> </tr> <tr> <td>Other PN if required</td> <td>Z1</td> </tr> <tr> <td>Quantity</td> <td colspan="2">Quantity</td> </tr> <tr> <td>Lot and/or Date Code</td> <td colspan="2" style="text-align: center;">BUNDLE</td> </tr> <tr> <td>Bundle Number</td> <td>X2</td> <td>cm</td> </tr> <tr> <td>Shipping Box</td> <td rowspan="2">Dimensions</td> <td>Y2</td> </tr> <tr> <td>Part Number</td> <td>Z2</td> </tr> <tr> <td>Other PN (if required)</td> <td colspan="2">Quantity</td> </tr> <tr> <td>Quantity</td> <td colspan="2" style="text-align: center;">SHIPPING BOX</td> </tr> <tr> <td>Lot and/or Date Code</td> <td>X3</td> <td>cm</td> </tr> <tr> <td>PO Number</td> <td rowspan="2">Dimensions</td> <td>Y3</td> </tr> <tr> <td>Net Weight</td> <td>Z3</td> </tr> <tr> <td>Gross Weight</td> <td colspan="2">Number of Bundles</td> </tr> <tr> <td>Box Number of Boxes</td> <td colspan="2">Quantity</td> </tr> <tr> <td>Made in China</td> <td>Approximate Weight</td> <td>Kg.</td> </tr> </table>	MARKING	TRAY		Bundle	X1	cm	Part Number	Dimensions	Y1	Other PN if required	Z1	Quantity	Quantity		Lot and/or Date Code	BUNDLE		Bundle Number	X2	cm	Shipping Box	Dimensions	Y2	Part Number	Z2	Other PN (if required)	Quantity		Quantity	SHIPPING BOX		Lot and/or Date Code	X3	cm	PO Number	Dimensions	Y3	Net Weight	Z3	Gross Weight	Number of Bundles		Box Number of Boxes	Quantity		Made in China	Approximate Weight	Kg.
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