

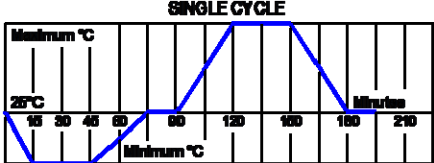




PRODUCT INFORMATION

PART #	CPT22EM03-2.0-P3.5R						Revision: 3-2016		
	Piezoelectric Sound Transducer								
DESCRIPTION				FEATURES					
Challenge Electronics Piezoelectric Sound Transducer, with a TOP Sound Port, 22.0 mm Diameter x 11.8 mm Height. 3 V Rated Voltage. Resonant Frequency of 2,000 Hz., 1 to 25 Vpp operation, with a minimum output of 80 dB(A) at 3 Vpp,10cm. Pin Termination: 2 Spring pins 3.5 length. RoHS, Lead Free and REACH Compliance				<ul style="list-style-type: none"> • High Temperature • UL Flame Retardant Plastic • RoHS Lead Free • REACH Compliance • ISO 9001 					
SPECIFICATIONS									
Operating Voltage	1 - 25 Vpp		Nominal Rated Voltage	3 Vpp		Resonant Frequency	2,000 ± 500 Hz.		
Sound Pressure Level	80 dB(A), at: Rated Voltage, Fo, Square Wave, 50% Duty Cycle 10 cm								
Operating Current	2 mA, at: Rated Voltage, Fo, Square Wave, 50% Duty Cycle								
Capacitance	22,000 ± 30% pF at 100 Hz. 1 Vrms								
Operating Temperature	-40°C to + 125°C			Storage Temperature	-40°C to +125°C				
Termination	Two (2) Spring Pins, Tin plated								
Material	Case	Plastic, MPPO with 20% glass fiber housing, PPS bottom UL Flame Retardant							
	Diaphragm	Brass Disc							
	Encapsulation	Plastic Cap PPS							
Physical Dimensions	Diameter (D)	22.0 mm Ø		Width (W)		Height (H)	11.8 mm	Pins Spacing	10.0 mm
Approximate Weight	2.5 grams	Removable Washing Label	No	Compliance	RoHS Lead Free, REACH				
RELIABILITY									
Thermal Operating Temperature Test	250 hours continuous operation at Rated Voltage, at Maximum Rated Operating Temperature 250 hours continuous operation at Rated Voltage, at Minimum Rated Operating Temperature								
Thermal Storage Temperature Test	After parts are subjected to 250 hours storage at Maximum Rated Storage Temperatures After parts are subjected to 250 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 240 Hours at +40°C±2°C. 90-95% RH								
Operation Life Test	Intermittent	Two hundred fifty (250) hours of continuous operation, at Rated Voltage, each at Minimum & Maximum Rated Operating Temperatures							
	Continuous	One thousand (1,000) hours of: 1 minute ON 4 minutes OFF cycle, at Room Temperature, and Rated Voltage.							
Insulation Test	A minimum of 10 MΩ, measured with 100 Vdc Insulation Resistance Meter, between the Electrical Terminals and the Transducer Case								
Vibration Test	After parts are subjected to 2 Hours 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 750 mm height onto the surface of 40 mm wooden board, 3 axes (X,Y,Z) directions, 3 times (6 times total)								
Solderability	Terminal leads are immersed in rosin for 5 seconds and then immersed in solder-bath of +270°C for 3±1 seconds								
Soldering Heat Resistance	Terminal leads are immersed, up to 1.5 mm from part case, in rosin for 5 seconds and then immersed in solder-bath of +350±5°C for 3±0.5 seconds or +260±5°C for 10±1 seconds								
Reliability Test Performance	Parts should conform to original performance within ±3dB, after 3 hours of recovery period.								
Warranty	For a period of one (1) year from date of shipping under normal operations conditions								

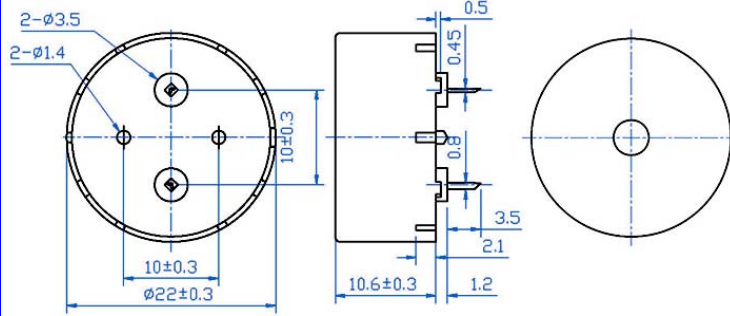
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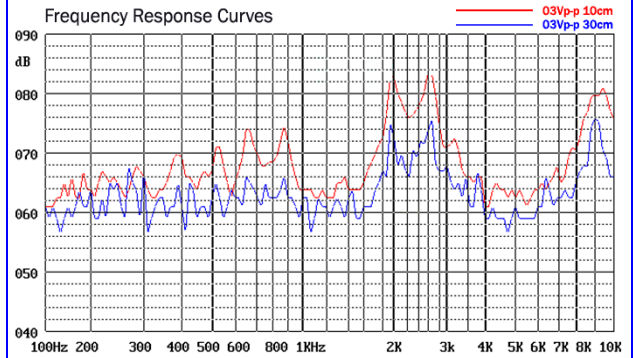


DIMENSIONS

Units in: mm, Tolerance: ± 0.5mm unless specified otherwise.



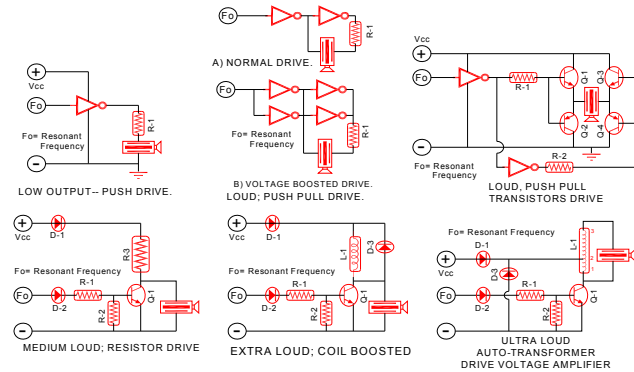
SPL vs. FREQUENCY RESPONSE



STORAGE

- Shelf life: Twelve (12) months when devices are to be stored in factory supplied unopened ESD moisture sensitive bag under maximum environmental conditions of 30°C, 70% R.H.
- Exposure: Devices should not be exposed to high humidity high temperature environment. MSL (moisture sensitivity level) Class 2

RECOMMENDED DRIVE CIRCUITS



SUBSTANCE OF VERY HIGH CONCERN

This product does NOT contain any of the REACH Substances of Very High Concern (SVHC), and is in compliance with European Union REACH Regulation No.1907/2006 regarding chemical substances which must be registered or disclosed.

PACKAGING

		MARKING		TRAY	
Bundle				X3	32.0 cm
Customer PN				Y3	17.0 cm
Other PN if required				Z3	2.0 cm
Quantity		Quantity		50	
Lot and/or Date Code					
Bundle Number					
Shipping Box					
Customer Part Number					
Other PN (if required)				SHIPPING BOX	
Quantity				X3	66.0 cm
Lot and/or Date Code		Dimensions		Y3	36.0 cm
PO Number				Z3	26.0 cm
Net Weight		Number of Trays		40	
Gross Weight		Quantity		2000	
Box Number		Approximate Weight		6.5 Kg	
of Number of Boxes					
Made in China					

Revision	Description	By	Date
2-2012	Changed rated voltage from 12v to 3v.	Ely Zofan	2012
3-2016	Changed capacitance from 19,000 to 22,000 pF. Updated frequency response chart. Corrected resonant frequency from 2400 to 2000 Hz. Added REACH compliance.	Sargent	2016-01-28

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