




PRODUCT INFORMATION

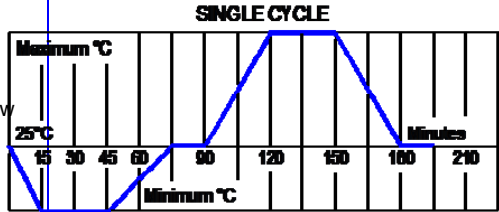
PART #	CEPT120Q030-125-20MR	Revision: 0-2011
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SMD Piezoelectric Sound Transducer

DESCRIPTION	FEATURES	
Challenge Electronics Piezoelectric Transducer, 12.0 mm Long, Square, Q style case(Square, Side Sound Port), 3.0 mm High, 1 to 25 Vpp Operating Voltage, 2,000 Hz. Resonant Frequency, minimum output of 65 dB(A) at 10 cm at Rated Voltage, SMD Termination, RoHS Compliance	<ul style="list-style-type: none"> • RoHS • ISO 9001 	

SPECIFICATIONS									
Operating Voltage	1 - 25 Vpp	Rated Voltage	3.0 Vpp, Square Wave, 50% Duty Cycle						
Resonant Frequency	2,000 ± 500 Hz.	Sound Pressure Level	65 dB(A), at: 10 cm, Rated Voltage, Resonant Frequency						
Operating Current	3 mA, at: Rated Voltage, Resonant Frequency					Capacitance	16,000 pFD ± 30%		
Operating Temperature	-20°C to + 70°C			Storage Temperature	-30°C to +80°C				
Termination	SMD								
Material	Case	LCP, Plastic				Sound Port Direction	Side		
	Diaphragm								
	Encapsulation								
Physical Dimensions	Length or Diameter (L/D)	12.0 mm	Width (W)	12.0 mm	Height (H)	3.0 mm	Pins Spacing	mm	
Approximate Weight	0.3 grams	Removable Washing Label	No	Compliance	RoHS				
Options									

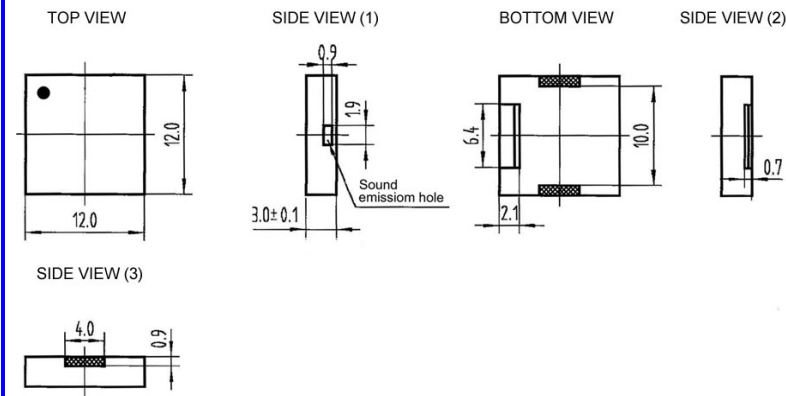
RELIABILITY		
Thermal Operating Temperature Test	240 hours continuous operation at Rated Voltage , at Maximum Rated Operating Temperature *	
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Thermal Storage Temperature Test	240 hours storage at Maximum Rated Storage Temperatures *	
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Thermal 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> <div style="text-align: center;">  <p>SINGLE CYCLE</p> </div>	
Humidity Test	240 Hours at +40°C±2°C. 90-95% RH *	
Insulation Test	A minimum of 10 MΩ, measured with 100 Vdc Insulation Resistance Meter, between the Electrical Terminals and the Transducer Case	
Vibration Test	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	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	
Operation Life Test	Continuous	Two hundred fifty (250) hours of continuous operation, at Nominal Voltage, each at Minimum & Maximum Rated Operating Temperatures
	Intermittent	One thousand (1,000) hours of: 1 minute ON 4 minutes OFF cycle, at Room Temperature, and Maximum Rated Voltage
Warranty	For a period of one (1) year from date of shipping under normal operations conditions	



DIMENSIONS

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

SPL vs. FREQUENCY RESPONSE

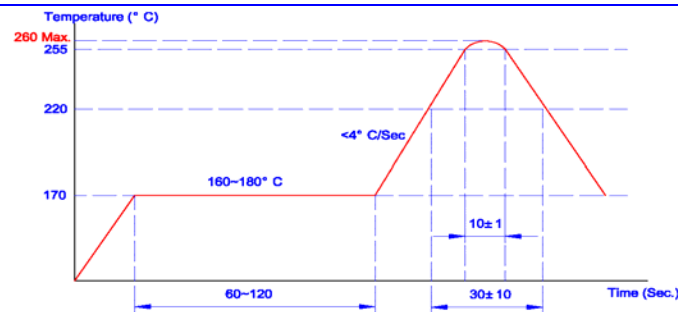


Recommended Land Pattern

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

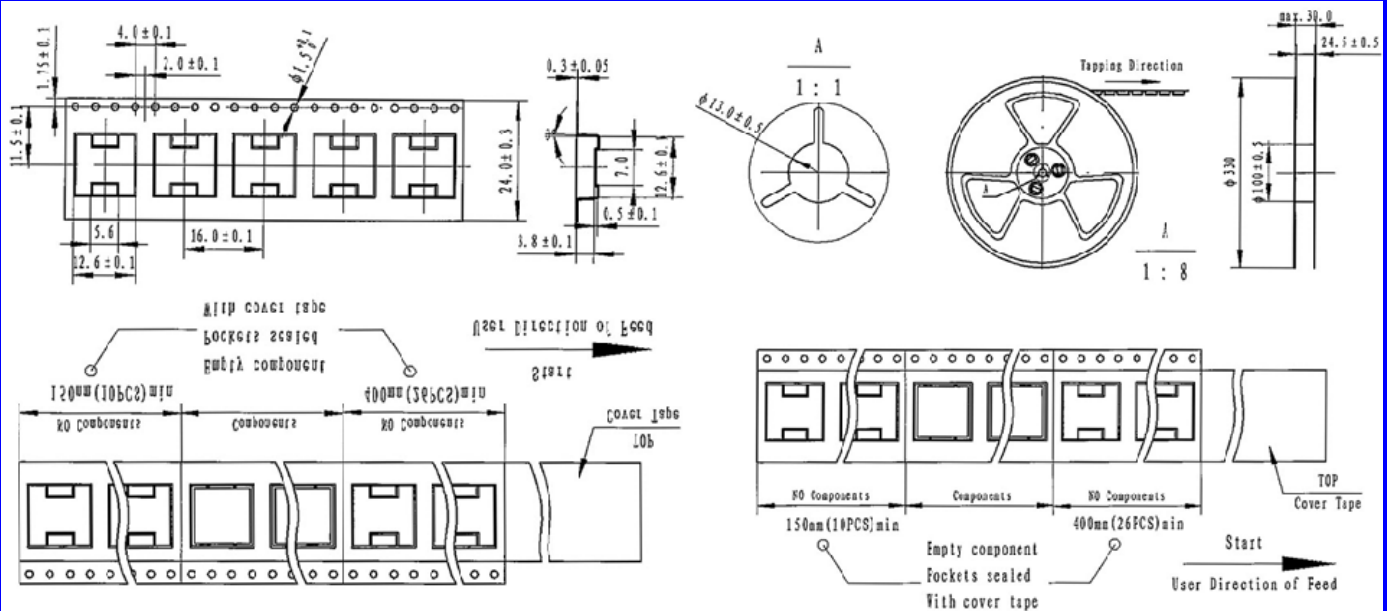
Solder Reflow Profile



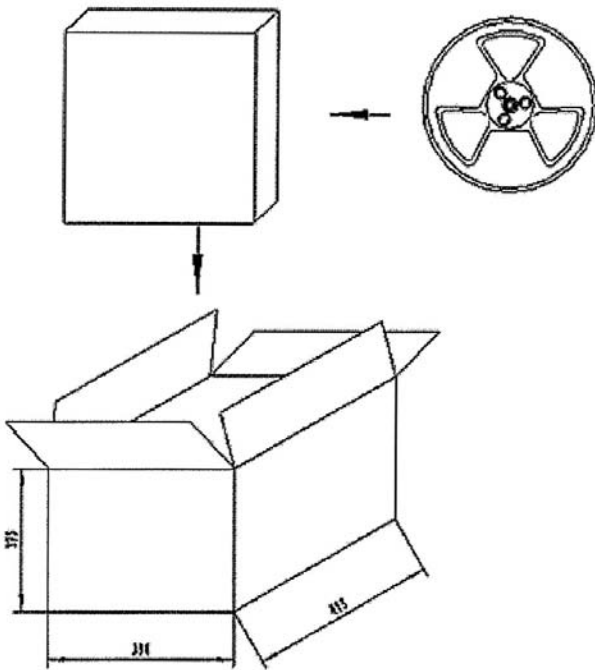
Stage	Temperature Profile	Maximum Time
Pre-heat	170~230°C	120 sec
Solder Melt	Above 230°C	100 sec
Peak	260°C Maximum	
Cool Down		100 sec
Total Duration Period		6 Minutes Maximum



TAPE and REEL INFORMATION



PACKAGING



MARKING		TRAY	
Bundle		X1	
Customer PN	Dimensions	Y1	
Other PN if required		Z1	
Quantity	Quantity		1,000
Lot and/or Date Code			
Bundle Number		X2	
Shipping Box	Dimensions	Y2	
Customer Part Number		Z2	
Other PN (if required)	Quantity		
Quantity	SHIPPING BOX		
Lot and/or Date Code		X3	41.5 cm
PO Number	Dimensions	Y3	39 cm
Net Weight		Z3	37.5 cm
Gross Weight	Number of Trays		10
Box Number	Quantity		10,000
of Number of Boxes	Approximate Weight		
Made in China			