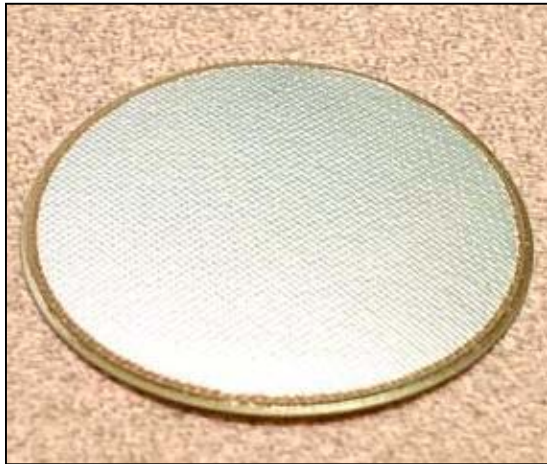


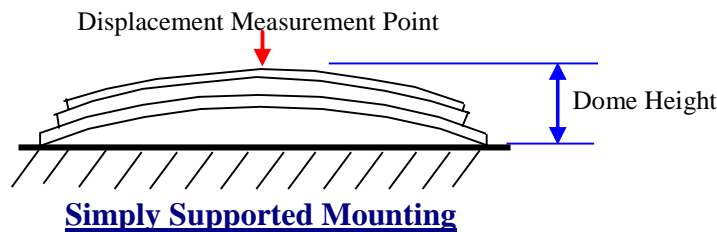


THUNDER[®] TH-5C Data Sheet



TH-5C Dimensions & Physical Properties	
Mass	0.00572 lbs
	2.6 g
Footprint Dia. (domed) ¹	1.285"
	32.64 mm
Footprint Dia. (flat) ²	1.29"
	32.77 mm
Piezo Thickness	0.007"
	0.18 mm
Total Thickness	0.016"
	0.41 mm
Dome Height ³	0.051"
	1.30 mm

TH-5C Specifications: Electrical and Mechanical Properties					
Capacitance	Max. Voltage ⁴			Typical Maximum Displacement (Simply Supported)	Block Force
	+	-	Peak to Peak (Zero DC offset)		
39 nF	420 V	210 V	+/-210 V	0.005"	6 lbf
				0.127 mm	27 N



¹ **Footprint Dia. (domed):** Diameter of the Thunder after manufacturing and attaining the domed shape. This diameter is always slightly less than the diameter of the stainless steel substrate before manufacturing.

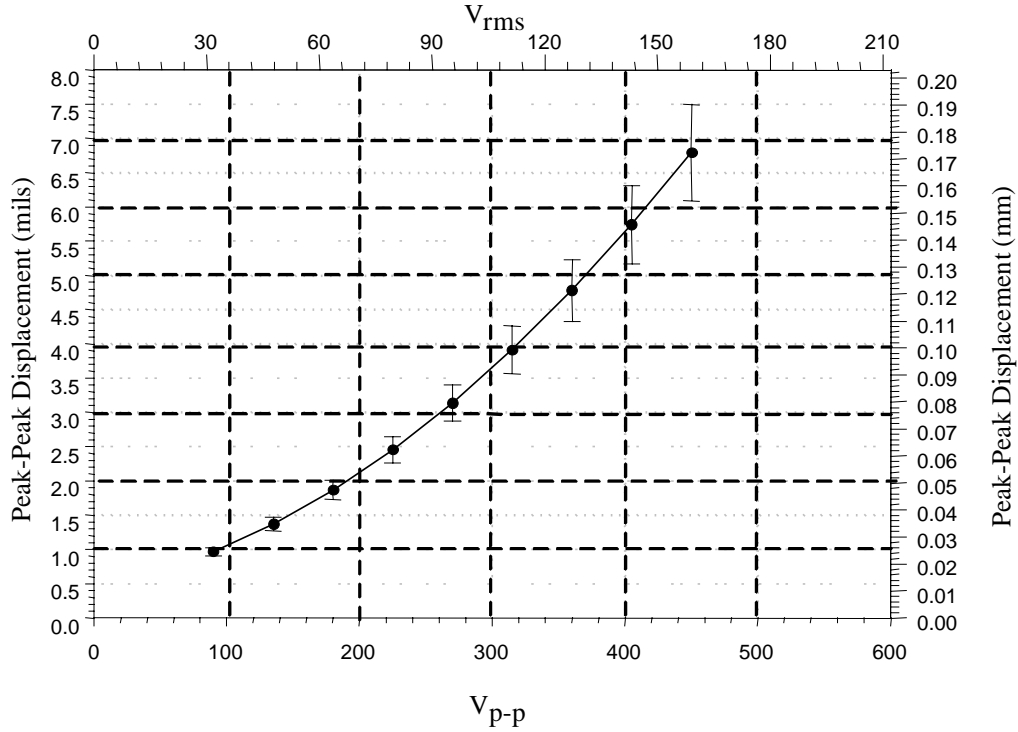
² **Footprint Dia. (flat):** Diameter of the stainless steel substrate before the manufacturing process.

³ **Dome Height:** Distance between the flat surface on which the Thunder rests in simply supported condition and the highest point on the Thunder.

⁴ **Max. Voltage:** The maximum voltage that can be applied to the Thunder is governed by the thickness of the piezoceramic layer. For the grade of piezoceramic used in Thunder manufacturing, the maximum applicable electric field is +60V/mils (2362 V/mm) and -30V/mils (1181 V/mm). So the maximum positive and negative voltage applicable is the product of the piezo thickness and the electric field. Consequently, the amplitude of the periodic voltage (without DC offset) that the Thunder can be subjected to is limited by the maximum negative voltage.

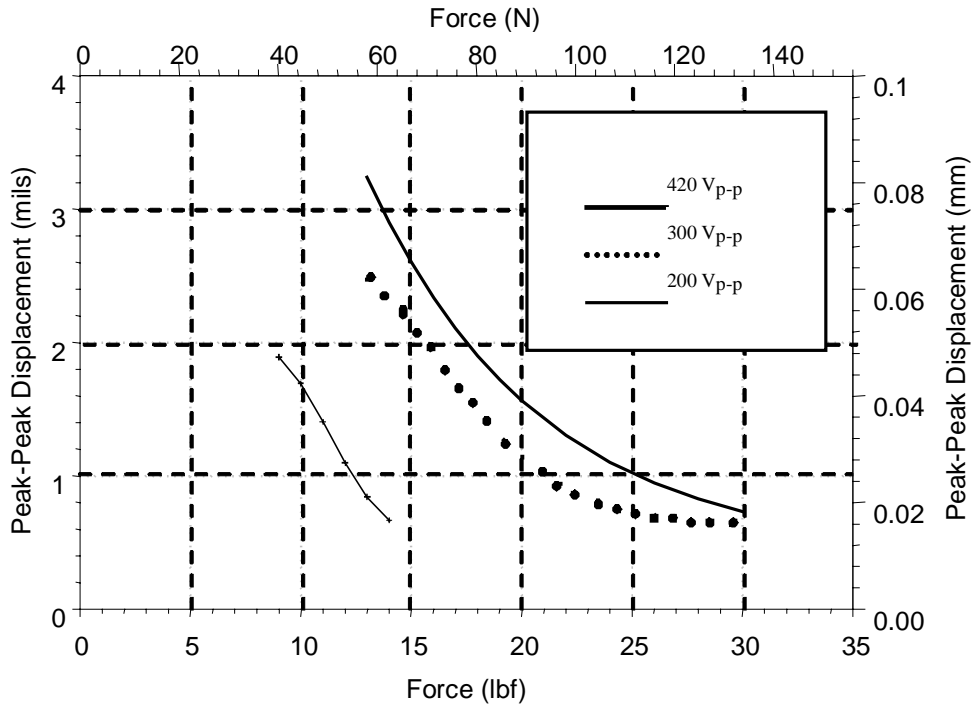
Displacement vs. Voltage : Simply Supported

Typical Performance at 1 Hz Sinusoidal Drive, No Load



Displacement vs. Force : Simply Supported

Typical Performance at 1 Hz Sinusoidal Drive





Displacement vs. Force Simply Supported

Typical Performance at 60 Hz

