

ABSTRACT

In the present day of technology, the product is actuator combined with piezoelectric are widely used on the market. For example: printer inkjet actuators, piezoelectric speaker, and etc. At the same time, the characteristics of piezoelectric be going to taken seriously. So how to improve is certain to carry weight. This paper mainly discusses the affect of characteristics by different polarization electric field and temperature on the piezoelectric. The thickness of experimental piezoelectric film have four types: 200 μ m, 400 μ m, 600 μ m and 800 μ m. The experimental results obtained in the polarization temperature of 100 . The polarization electric field in 0.5v/ μ m piezoelectric film thickness of 200 μ m, the is 401.6(pm/v), the relative dielectric constant of 3316.235, and the electromechanical coupling factor of 0.55. The polarization electric field in 1v/ μ m piezoelectric film thickness of 400 μ m, the is 464.6(pm/v), the relative dielectric constant of 3784.683, and the electromechanical coupling coefficient of 0.50. The polarization electric field in 1.09v/ μ m piezoelectric film thickness of 600 μ m, the is 505.6(pm/v), the relative dielectric constant of 3450.904, and the electromechanical coupling coefficient of 0.51. The polarization electric field in 1.33v/ μ m piezoelectric film thickness of 800 μ m, the is 520.3(pm/v), the relative dielectric constant of 3276.913, and the electromechanical coupling coefficient of 0.51.

Keywords : piezoelectric、 the relative dielectric constant、 piezoelectric coefficient、 polarization

Table of Contents

封面內頁 簽名頁 中文摘要.....	iii	英文摘要.....	iv	誌謝.....	v
目錄.....	vi	圖目錄.....	viii	表目錄.....	xi
第一章 緒論.....	1	1.1 壓電性材料簡介.....	1	第二章 壓電理論及實驗架構.....	6
2.1 壓電性質.....	6	2.2 壓電理論.....	8	第三章 實驗室量測架構.....	18
3.1 鐵電量測量測.....	18	3.2 試片極化.....	22	3.3 特性量測.....	25
第四章 實驗結果.....	26	4.1 溫度對PE的影響.....	26	4.2 溫度對壓電特性的影響.....	35
4.3 溫度對介電係數的影響.....	44	4.4 極化溫度對機電耦合係數的影響.....	52	第五章 結論.....	66
參考文獻.....	67				

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