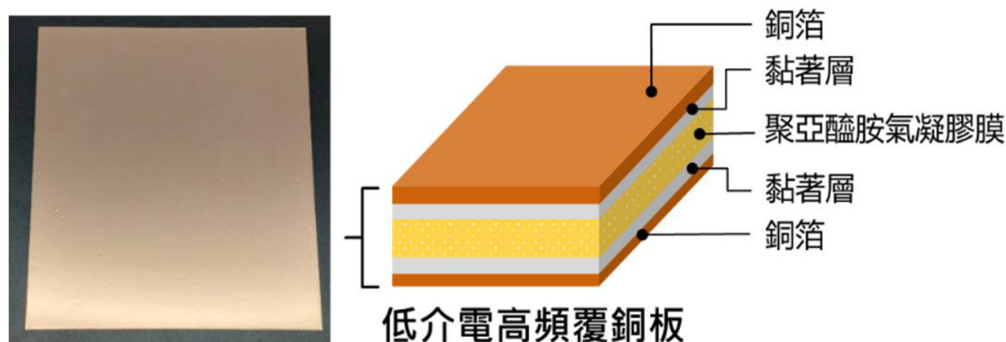
低介電高頻覆銅板

工業技術研究院
Industrial Technology
Research Institute

技術特色

近年來，隨著超大型積體電路的尺寸不斷縮小，為了克服訊號傳輸延遲以及介電損失而導致功耗增加的問題，急需具備更低介電常數的材料來應對，以滿足訊號傳遞的高速化需求。此覆銅板具有優異的介電特性，並且符合印刷電路板其他特性需求，例如：高耐熱、高尺寸安定性及高接著性等，解決過去印刷電路板材料無法滿足超低介電的要求(Dk<2.0)、難以承受250℃以上銲錫操作的痛點。

In recent years, as the dimensions of ultra-large integrated circuits have continued to decrease, there has been a pressing demand for materials possessing lower dielectric constants. This necessity arises from the need to address issues related to signal transmission delays and heightened power consumption attributable to dielectric losses. This requirement is crucial to accommodate the demands of high-speed signal transmission. This copper-clad laminate exhibits exceptional dielectric properties while also satisfying the stringent criteria for other essential characteristics of printed circuit boards. These attributes encompass high heat resistance, superior dimensional stability, and outstanding adhesion, among others. Importantly, this laminate effectively resolves the challenges associated with previous PCB materials, which were unable to meet the stringent requirements of ultra-low dielectric constants (Dk<2.0) and were incapable of withstanding soldering operations conducted at temperatures exceeding 250° C.



		覆銅板
總厚度 (μm)		~180
介電特性	Dk@10GHz	1.68
	Df@10GHz	0.00632
聚亞醯胺氣凝膠膜之熱裂解溫度 (℃)		>500 (T_d 5%)
接著強度 (N/cm)		17.7
回焊耐熱性 (260℃ 焊錫浴30秒)		Pass

聯絡窗口： 鄭志龍 經理 03-5914140 A-long@itri.org.tw