

Test Report of DBC/DCB Substrate AL2O3 Yellowing



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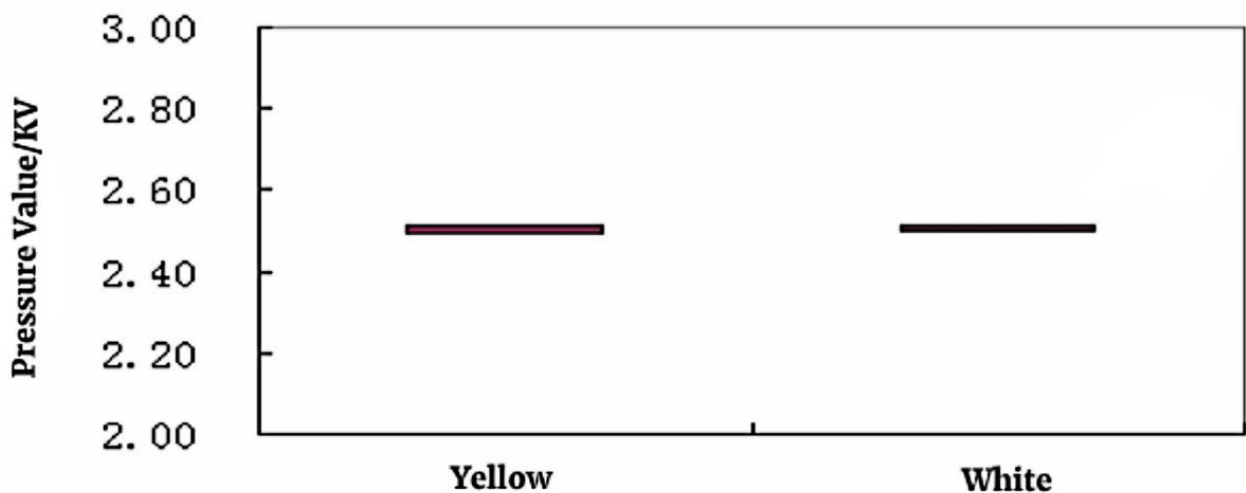
1. The Test Report of Yellowing Ceramic

1) The Impact of Yellowing Ceramic

In addition to appearance, the biggest impact of performance is the product pressure resistance.

Pressure Test Results							
Items	Q'ty	Press 60 sec	Limit pressure value(KV)				
Yellowing	10	OK	2.5	2.51	2.52	2.48	2.51
			2.49	2.50	2.49	2.48	2.52
Normal	10	OK	2.51	2.48	2.52	2.48	2.52
			2.50	2.51	2.48	2.52	2.51

The Effect of Ceramic Surface Color on Electric Pressure



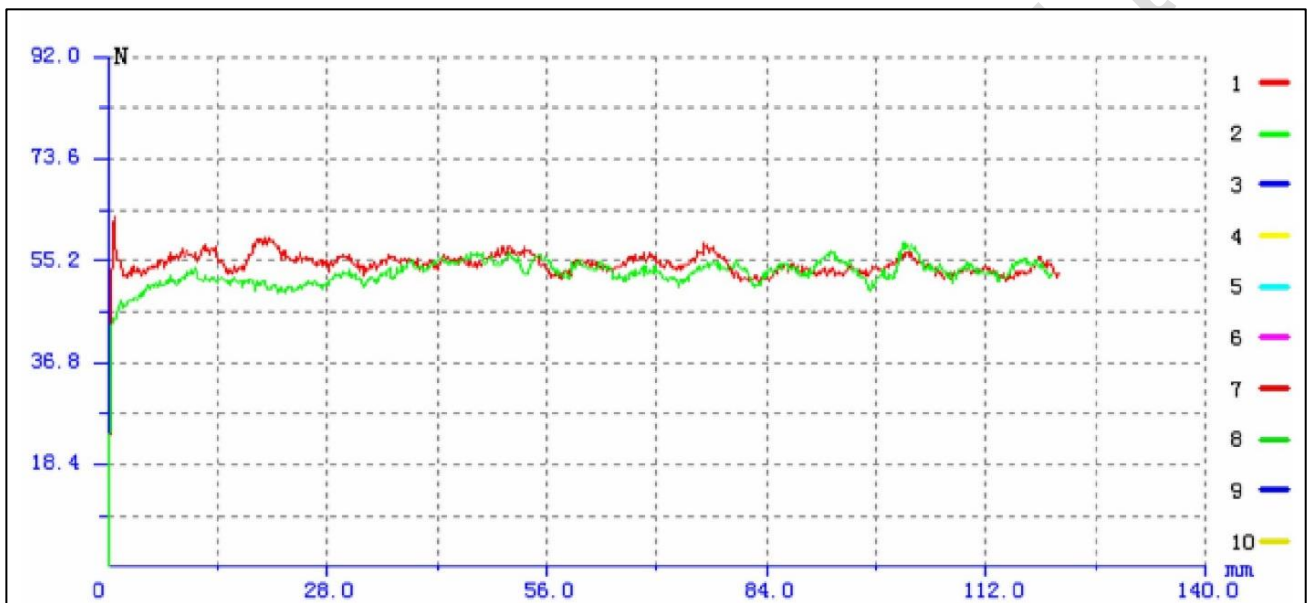
Conclusion: There is no difference between them.

2) Peel Force Comparison

Yellowing Ceramic

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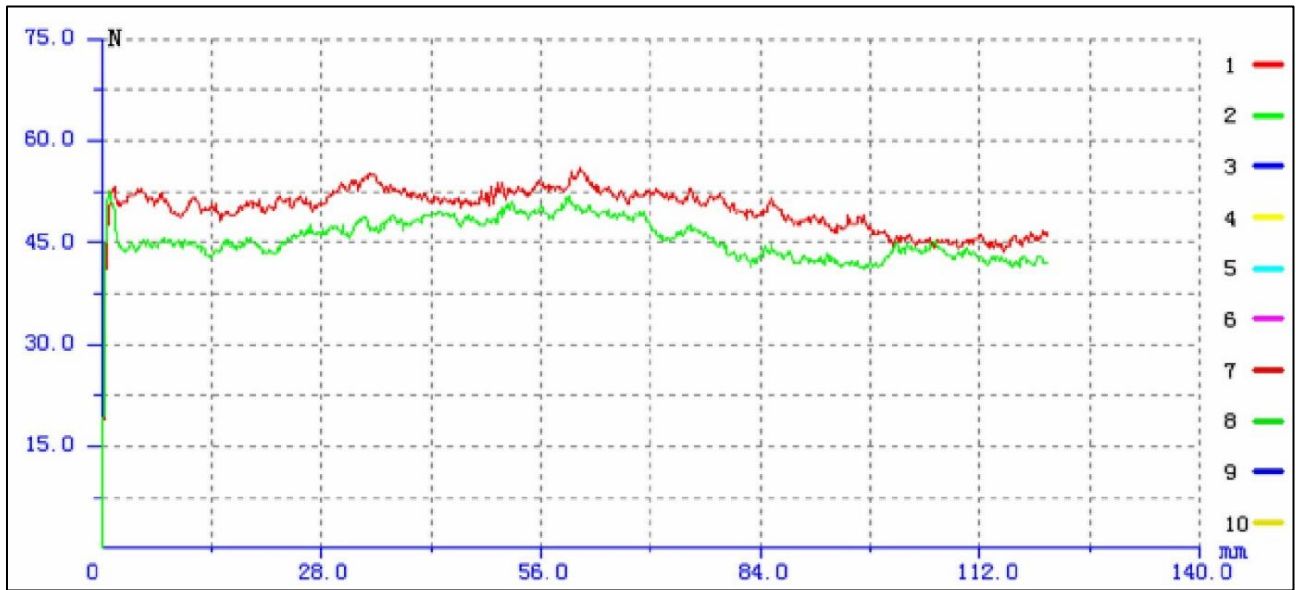
Sample	Max Release Force (N)	Min Release Force (N)	Average Release Force (N)	Average Release Strength (N/mm)
1	59.4000	51.4400	54.7600	10.9500
2	58.5900	49.3400	53.3300	10.6700
Average	59.0000	50.3900	54.0400	10.8100



Peel force curve

Ceramic Without Yellowing (Normal)

Sample	Max Release Force (N)	Min Release Force (N)	Average Release Force (N)	Average Release Strength (N/mm)
1	56.1000	44.2400	50.5000	10.1000
2	51.7000	41.1800	45.9700	9.1900
Average	53.9000	42.7100	48.2300	9.6500



Peel force curve

3) Comparison of Through-Furnace Tolerance

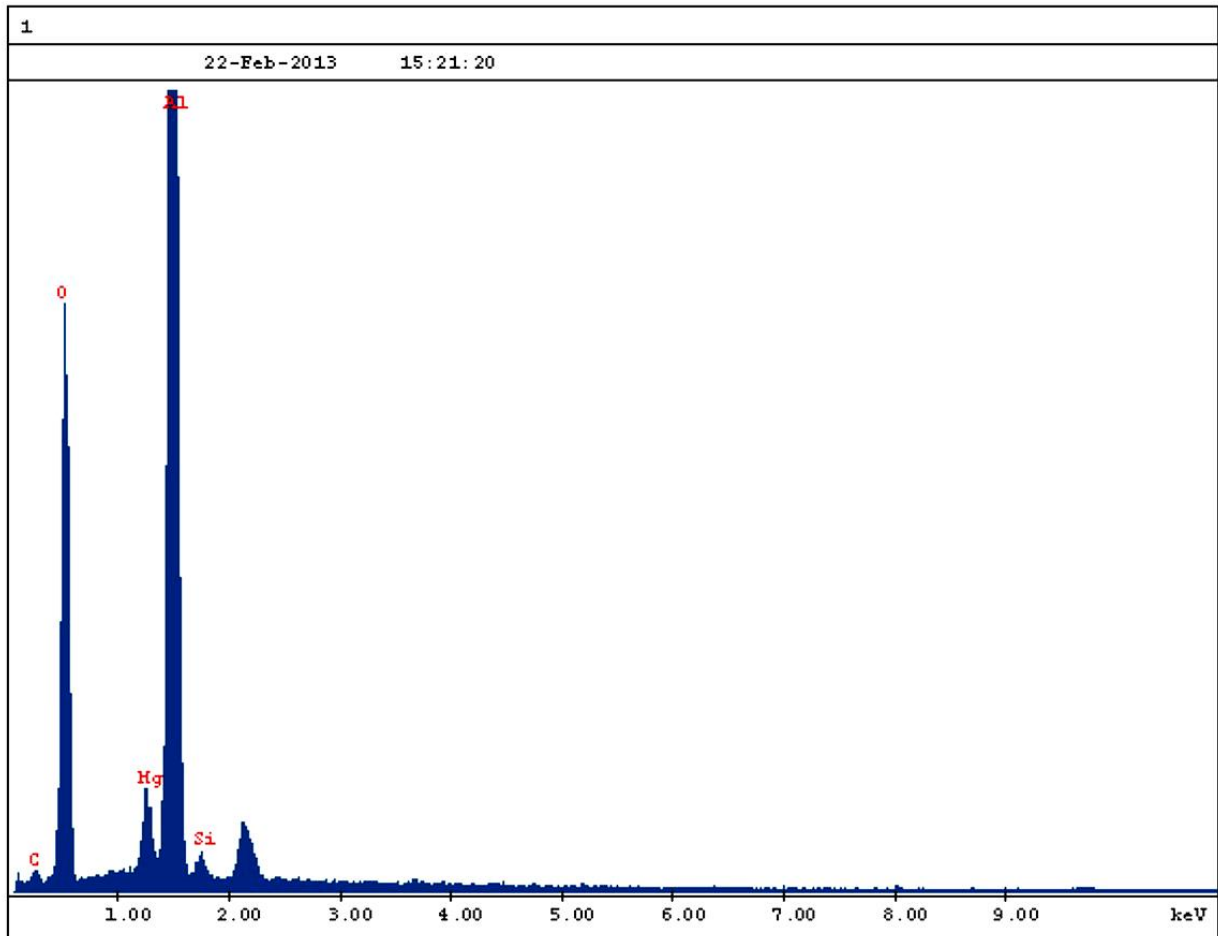
Yellowing [ceramic substrate](#)

Test five pieces of product: 5pcs, 7 times crack

No yellowing ceramic substrate(Normal)

Test five pieces of product: 5pcs, 7 times crack

Analysis of surface of yellowing ceramic, the content of oxygen goes up, it is consistent with our deduction: A lot of oxygen element involved in the reaction and formed a bonding intermediate.



Conclusion:

The yellowing of the ceramic is caused by the reaction of oxygen atoms during the sintering process. It is the concomitant phenomenon in manufacturing. There's no any adverse effect on the quality of the product itself and service life of the yellowing [DCB/DBC](#) ceramic substrate made under the same manufacturing process condition.

As a professional [DCB/DBC ceramic PCB](#) manufacturer, [Best Technology](#) always provides customers ceramic boards with excellent quality. [Contact us](#) if you have any questions, or comments for that [DCB/DBC ceramic board](#).

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