



**TAOGLAS**®

Application Note

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# Silver Oxidation and Antenna Performance

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## Application Note

### Silver oxidation and antenna performance

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# Silver oxidation and antenna performance

Silver is easily oxidized and discolored in everyday life. This change does not affect antenna performance.

You can refer to our example test results here for confirmation that antenna performance is not affected by silver oxidation.

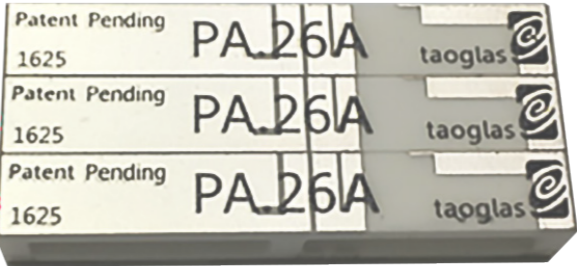
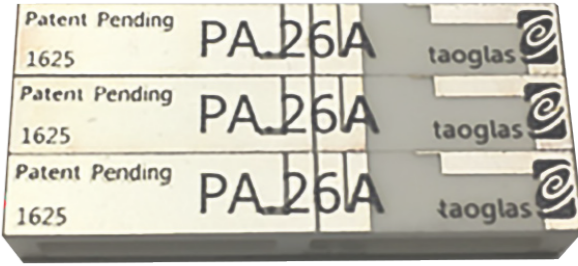
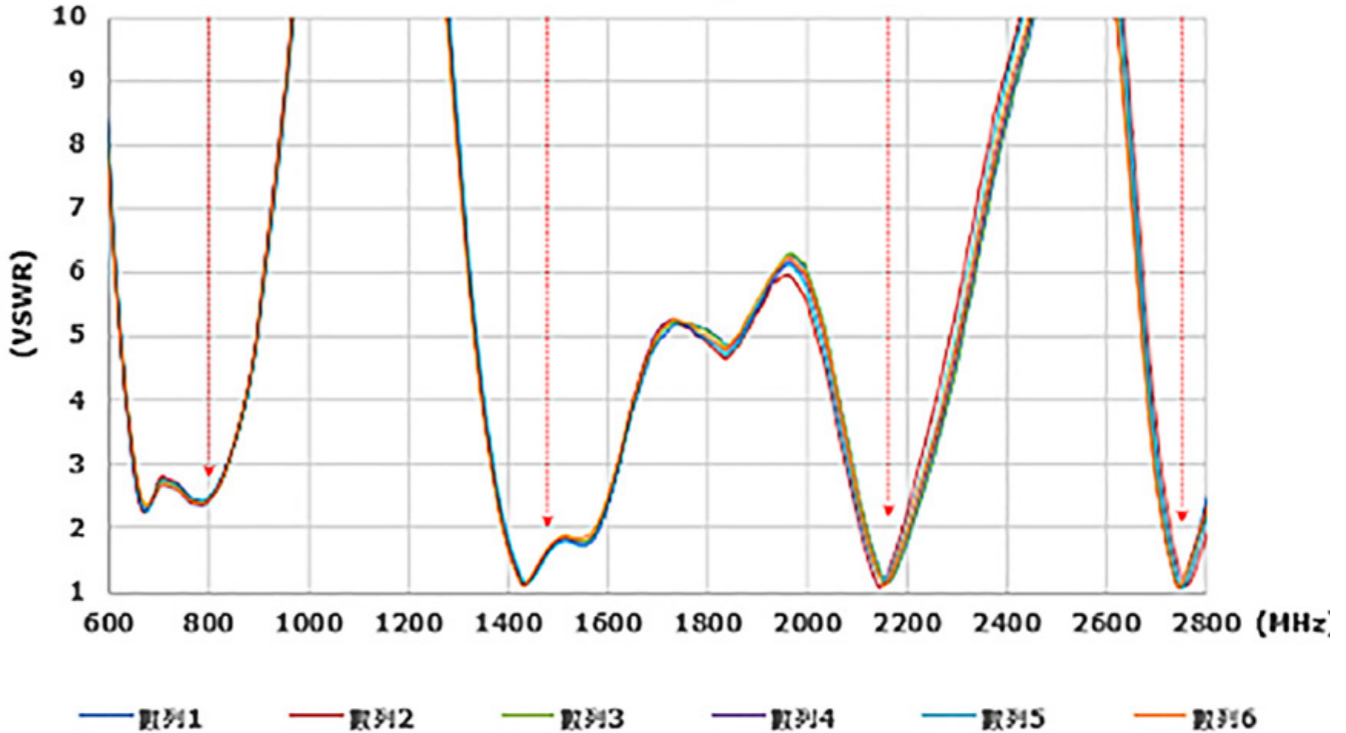
## Silver oxidation and antenna performance test method

1. We prepared two new sets of examples of the same antennas.
2. We verified the electrical characteristics of the example antennas.
3. We applied an oxidation process to one set of example antennas

Temperature:	+ 28 ± 2° C indoors
Humidity:	55 ± 5%
Duration:	168 hours
Appearance after process:	Slightly oxidized and discolored surface



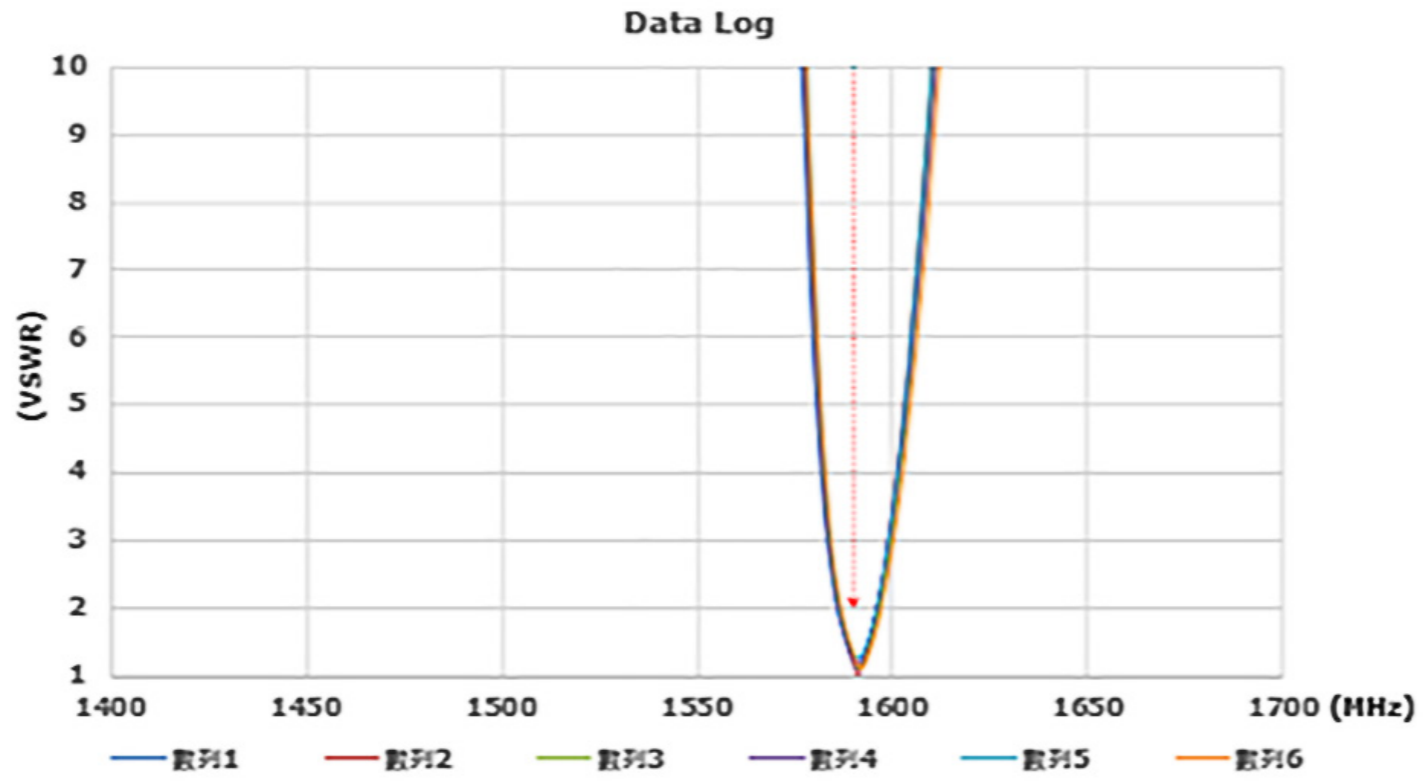
4. We compared the electrical characteristics of the non oxidized and oxidized antenna sets.
5. The results in each case show that there was **no adverse effect in antenna performance**.

## Take PA.26A as an example

PA.26A	Before oxidation	After oxidation
Exterior		
Electrical Characteristics (VSWR)	<p>Data Log</p> 	
Result	Pass	



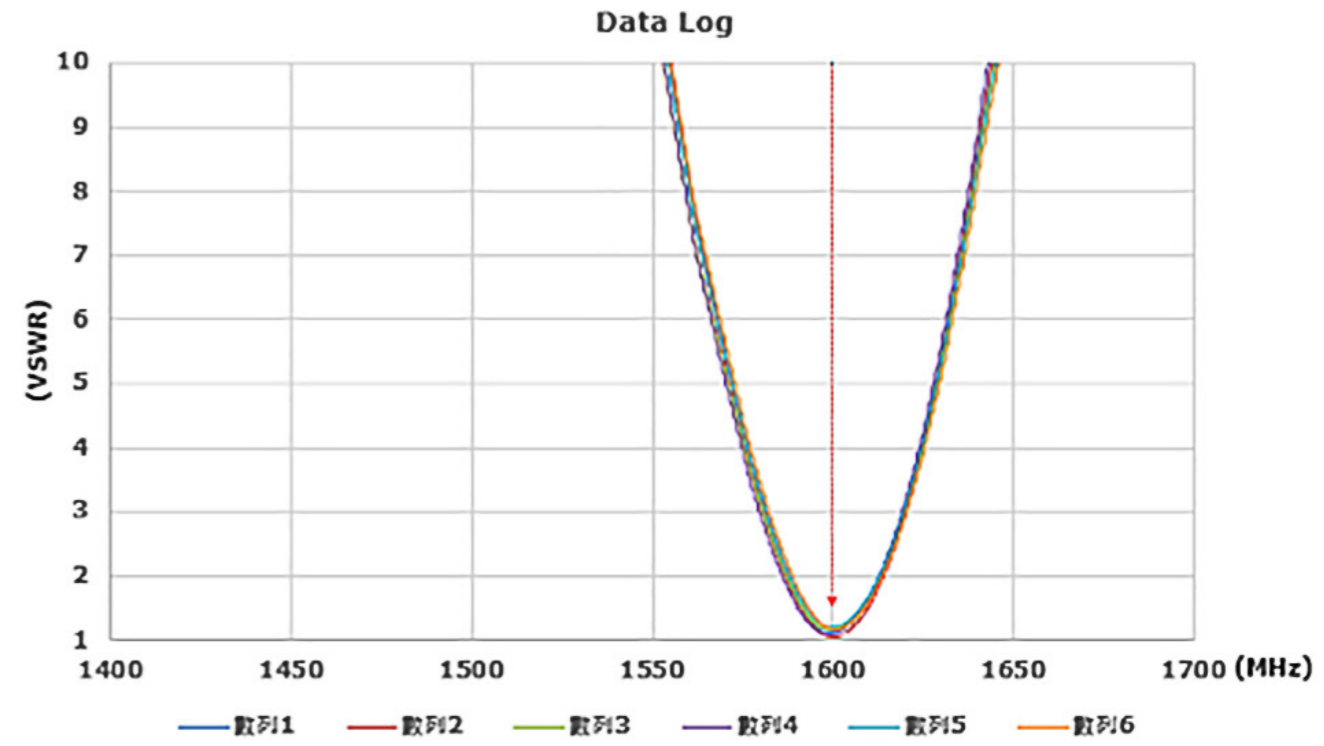
The result is **Pass**. After the oxidation process, the electrical characteristics still follow the product specifications.

### Take SGGP.12.A.02 as an example

SGGP.12.A.02	Before oxidation	After oxidation
Exterior		
	1      2      3	4      5      6
Electrical Characteristics (VSWR)		
Result	Pass	

The result is **Pass**. After the oxidation process, the electrical characteristics still follow the product specifications.

### Take CGGP.25.4.A.02 as an example

CGGP.25.4.A.02	Before oxidation	After oxidation
Exterior		
	1      2      3	4      5      6
Electrical Characteristics (VSWR)		
Result	Pass	

The result is **Pass**. After the oxidation process, the electrical characteristics still follow the product specifications.

## Conclusion

**Ceramic patch series product, if exposed to air and humidity for over 24 hours, will accelerate the surface oxidation rate.**

Therefore, it is recommended that after the vacuum packaging is disassembled, it should be stored in vacuum immediately when not in use. to prevent surface oxidation from occurring. (as shown below)

Suggest Storage Temp: 25+/-5°C





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