D5810 WIFI Antenna

# Specification Summary

| A. Electrical Characteristics | |
|---|---|
| **Frequency** | **2400MHz ~2500MHz** |
| **VSWR** | **<2.0** |
| **Efficiency** | **>40%** |
| **Peak Gain** | **2.46 dbi** |
| **Impedance** | **50 Ohm** |
| **Polarization** | **Line** |
| | |
| B. Material & Mechanical Characteristics | |
| **Material of Radiator** | **NA** |
| **Cable Type** | **NA** |
| **Connector Type** | **NA** |
| **Dimension** | At Attachment |
| **Heat-durability** | **280±5°C，10sec.** |
| C. Environmental Characteristics | |
| **Operation Temperature** | **- 20 °C ~ + 80 °C** |
| **Storage Temperature** | **- 30 °C ~ + 85 °C** |
| | |

R & D Center：Room D 5th Floor Building L,Block E ,71 Baocheng District ,Baoan District ,Shenzhen
Factory：6 Floor,GangHuaXing Industrial Park,Rongshu Road 2nd ,Fuyong,Baoan ,shenzhen
Email:damoncui@tllskylink.com

# Test Equipment & Conditions

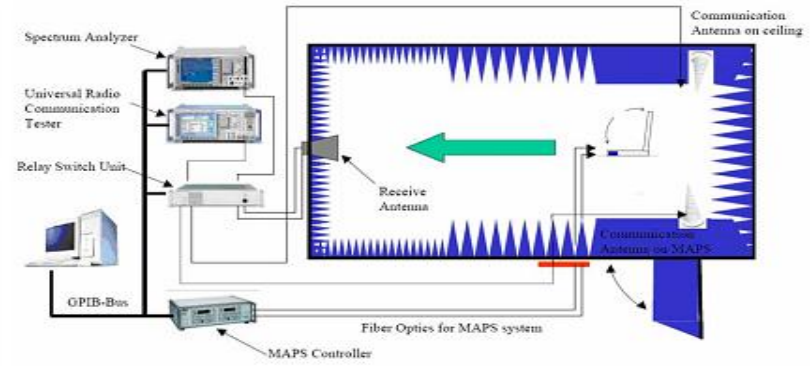
## 1. Network Analyzers :

Agilent 8753D 5071B

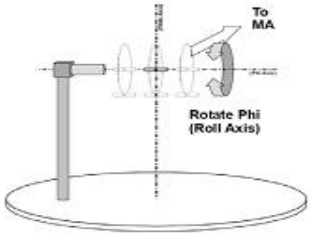
**Communications Test Set:**

Agilent E5515C CMW500

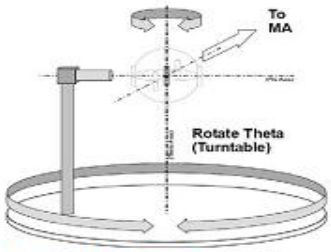
## 2. 3D Chamber Test System



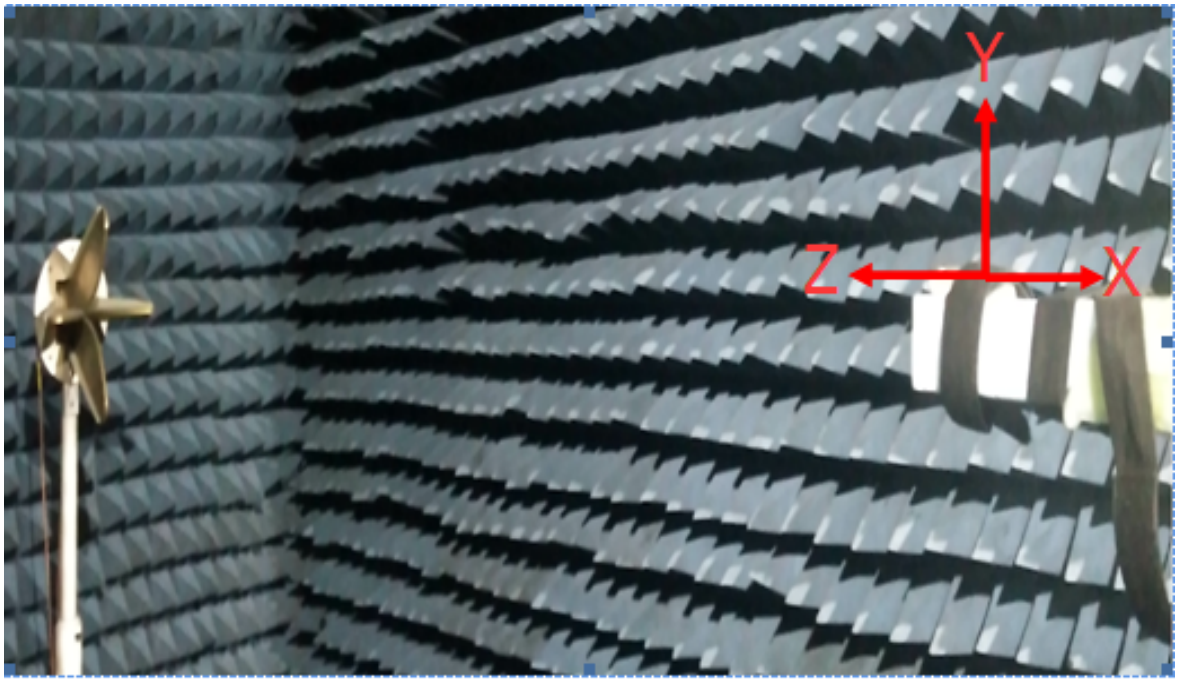

(Testing by 3D anechoic chamber)




Phi axis test




Theta axis test

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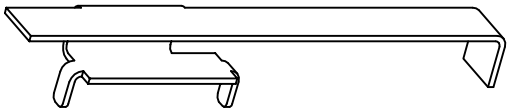
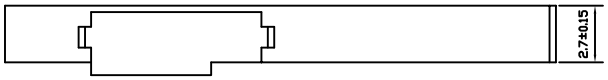
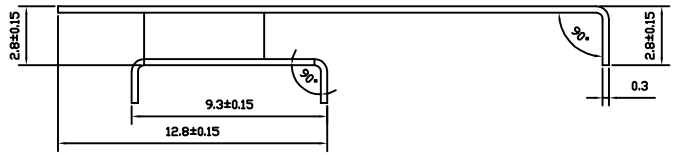
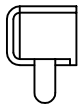
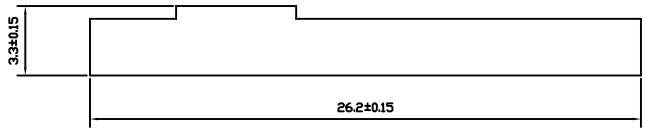
RoHS
Compliant
G P








| Rev | Description | Date | Remark |
|---|---|---|---|
| A | New drawing | | |

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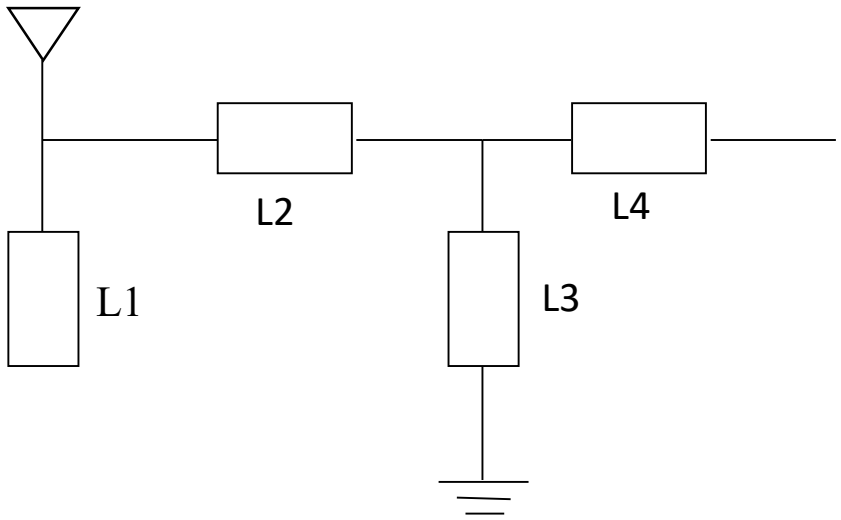
SHEN ZHEN SKYLink CO.,LTD

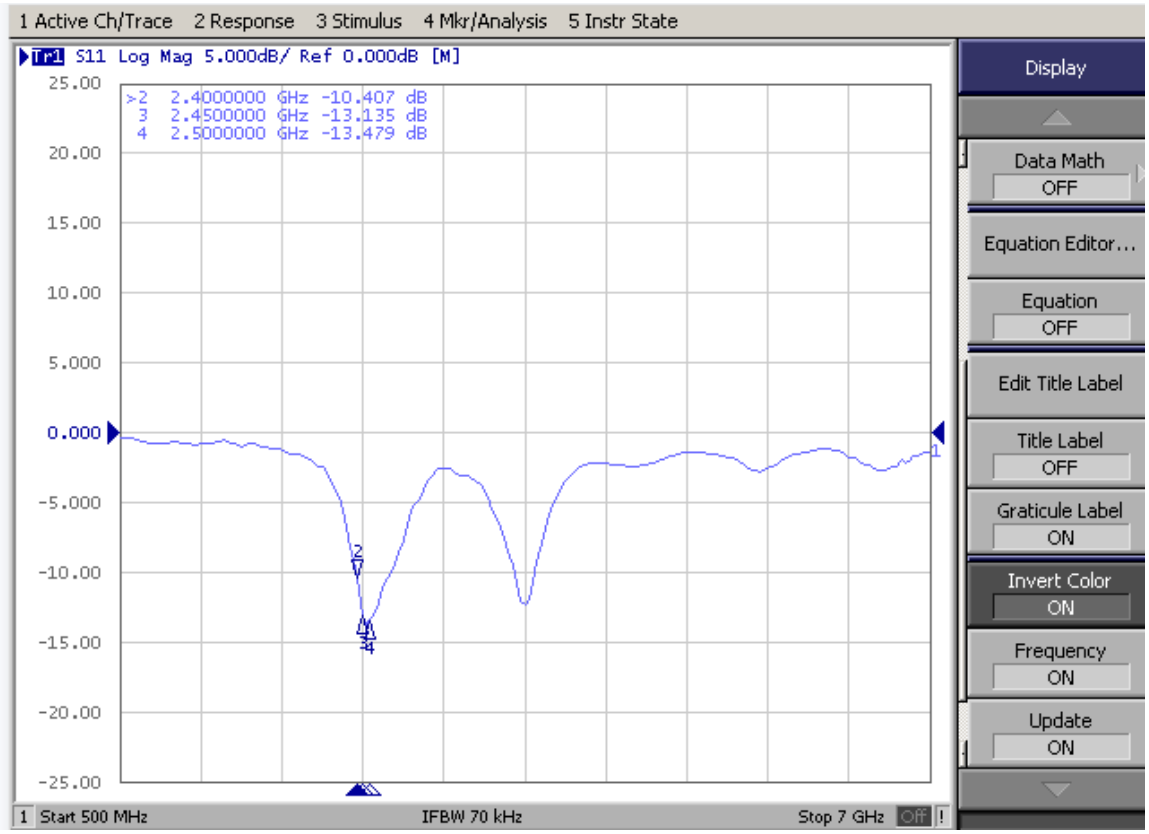
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Third Angle | | | | Project | | Date | 2021-07-20 |
| 0～10 | ±0.05 | ○ | 0.02 | Part Name | | Designed by | |
| 10～18 | ±0.10 | ◎ | ⌀0.03 | Part No. | TY03 | Checked by | MD |
| 18～30 | ±0.12 | ⊥ | 0.02 | Material | | | RF |
| 30～40 | ±0.15 | ▱ | 0.04 | DWG No. | | Approved by | |
| 40～ | ±0.20 | Angle | ±0.5° | | | Unit mm | Scale 1:1 Rev A |
| Location | | | | | | | |

## 匹配电路 （matching circuit）

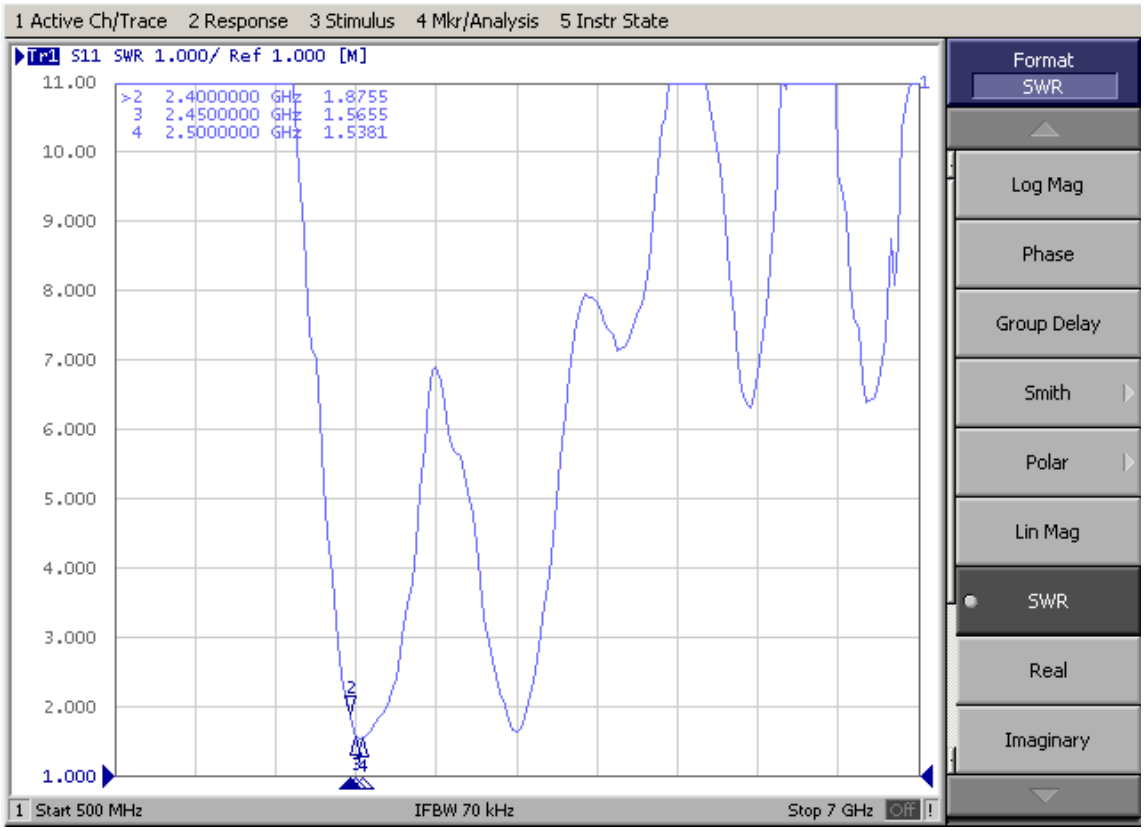



| | |
|---|---|
| L1 | 1.2PF |
| L2 | 3.9NH |
| L3 | / |
| L4 | 0 |

## Return Loss




## VSWR

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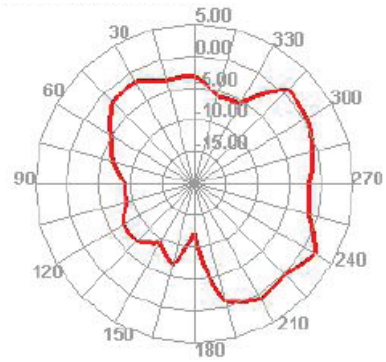
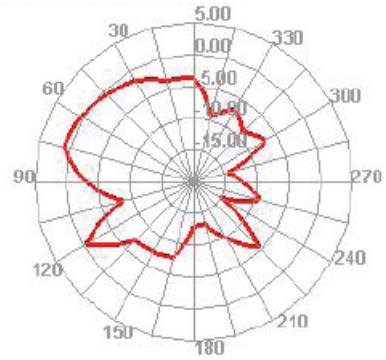
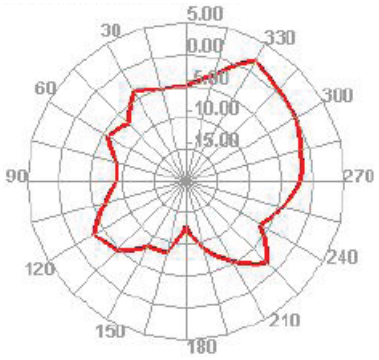
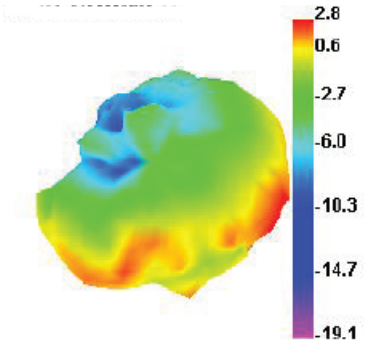
# Gain & Efficiency




| Freq (MHz) | Effi (%) | Gain (dBi) |
|---|---|---|
| 2400 | 42.66 | 1.42 |
| 2410 | 42.21 | 1.48 |
| 2420 | 42.06 | 1.54 |
| 2430 | 42.75 | 1.75 |
| 2440 | 44 | 1.86 |
| 2450 | 45.4 | 2.05 |
| 2460 | 46.25 | 2.26 |
| 2470 | 46.39 | 2.46 |
| 2480 | 47.23 | 2.36 |
| 2490 | 48.99 | 2.21 |
| 2500 | 49.95 | 2.12 |

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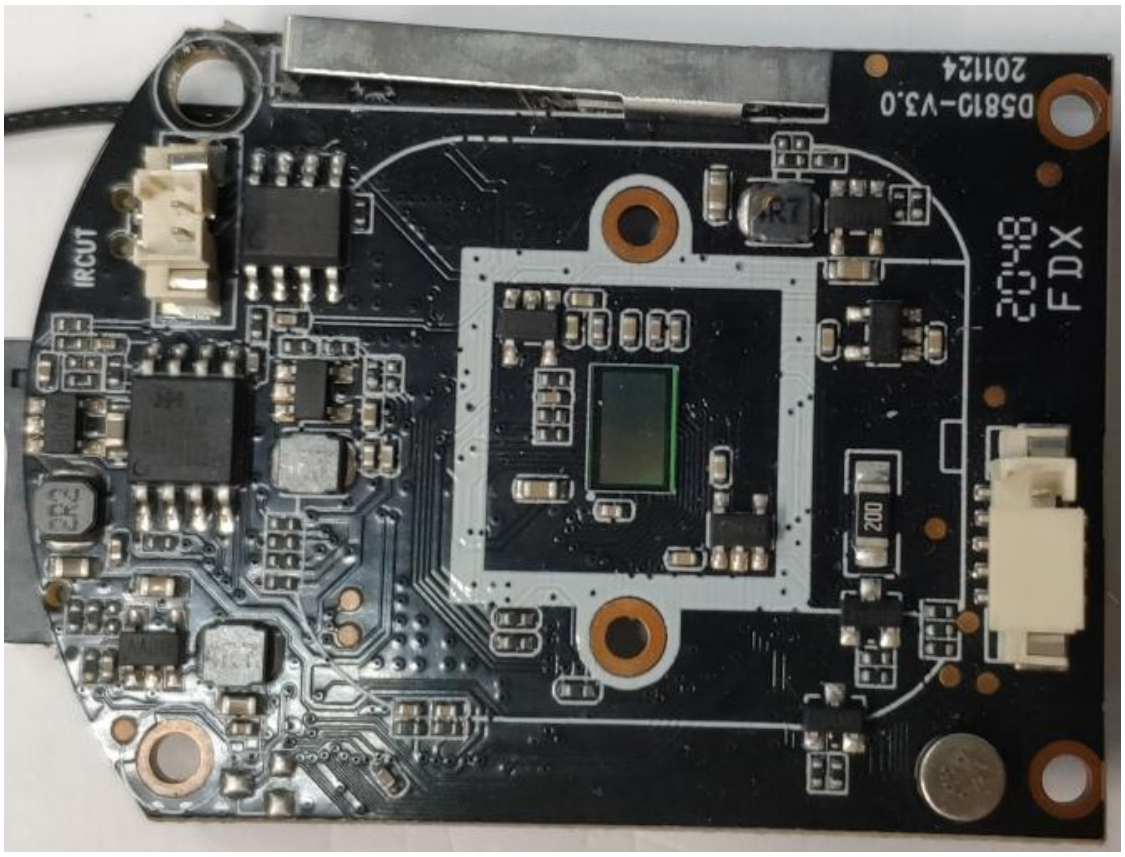


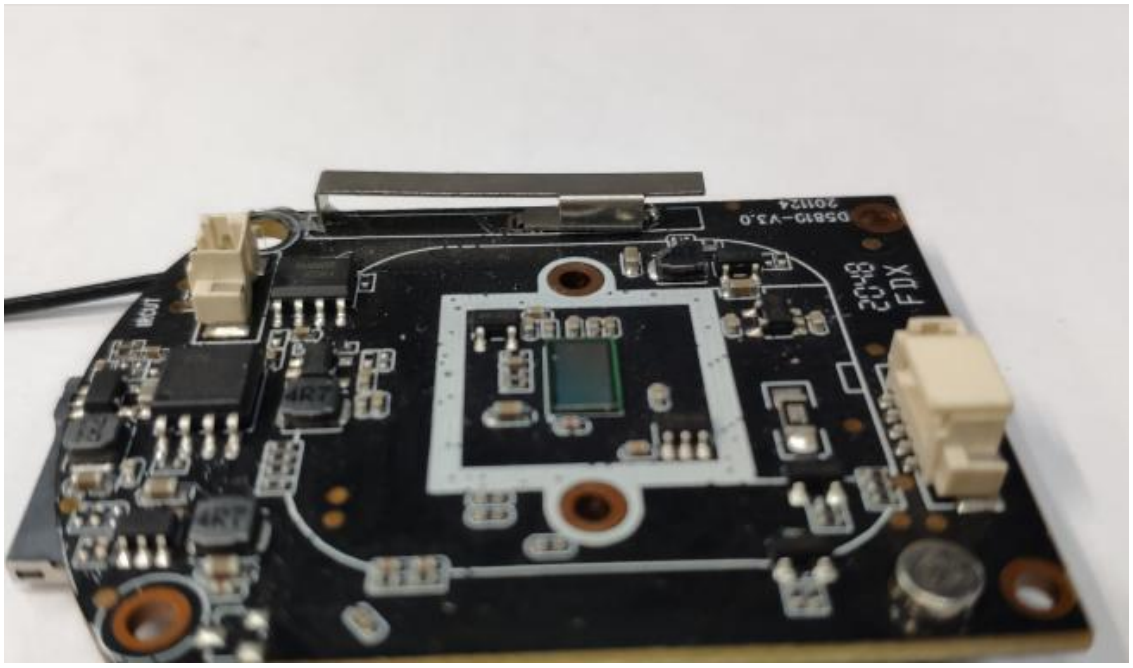


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# Reliability Test

| Test Item | | Test condition | Equipment | Specification | Result |
|---|---|---|---|---|---|
| 1 | Low Temp. Storage Test | Temperature: -30℃， Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-down the temp. to -30℃ in one hour, store antenna for 44 hours; step-up temp to 25℃,test antenna after 2 hours. | Temp.&Humi. Tester | No material deformation is allowed. Electronic Performance is ok . | PASS |
| 2 | High Temp./High Humid Storage Test | Temperature: 85℃ Humidity: 85% RH Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-up the temp. to 80℃ and the humidity up to 85% in one hour, store antenna for 44 hours; step-down temp to 25℃,test antenna after 2 hours. | Temp.&Humi. Tester | No material deformation is allowed. Electronic Performance is ok . | PASS |
| 3 | Salt-Spray 6 pray Test | Placing antenna in the Salt-Spray Tester ,set the test condition ， Temp: 35±2℃ Humidity: 85% NaCl salt spray :5 ±1 %.PH value :6.5~7.2 Test time:24hours | Salt-Spray Tester | No color change No appear rusting | PASS |

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