



大塚資訊集團

EFD

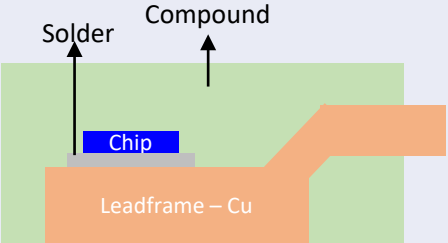
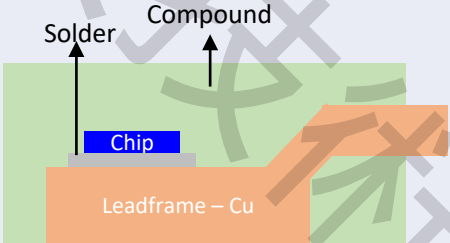
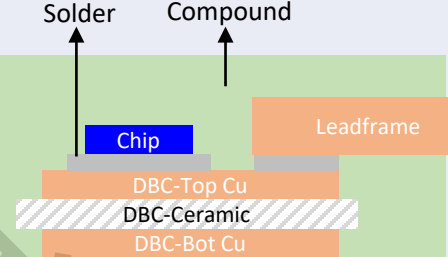
易富迪科技股份有限公司

# 不同封裝層的熱阻量測分析案例

# Device Description

相同封裝，不同晶片

不同封裝，相同晶片

	Sample 1	Sample 2	Sample 3
Package	TO247-4L	TO247-4L	TO247-4L
Drain – Source Voltage (V)	650	650	650
Max. Continuous Drain Current (A)	60	107	107
Structure			

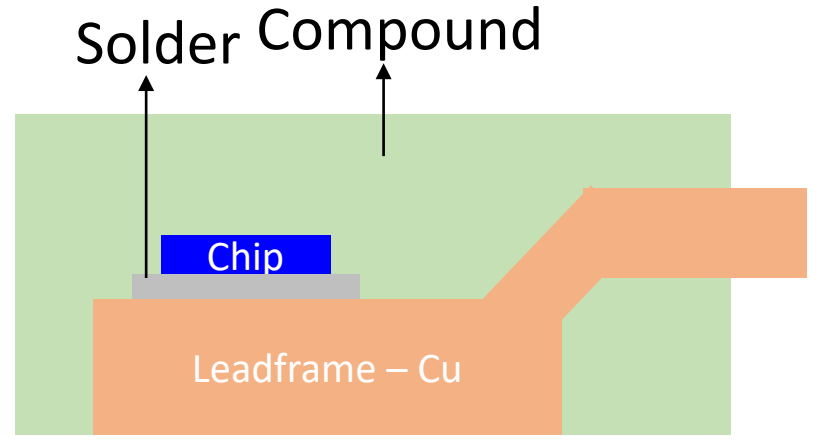
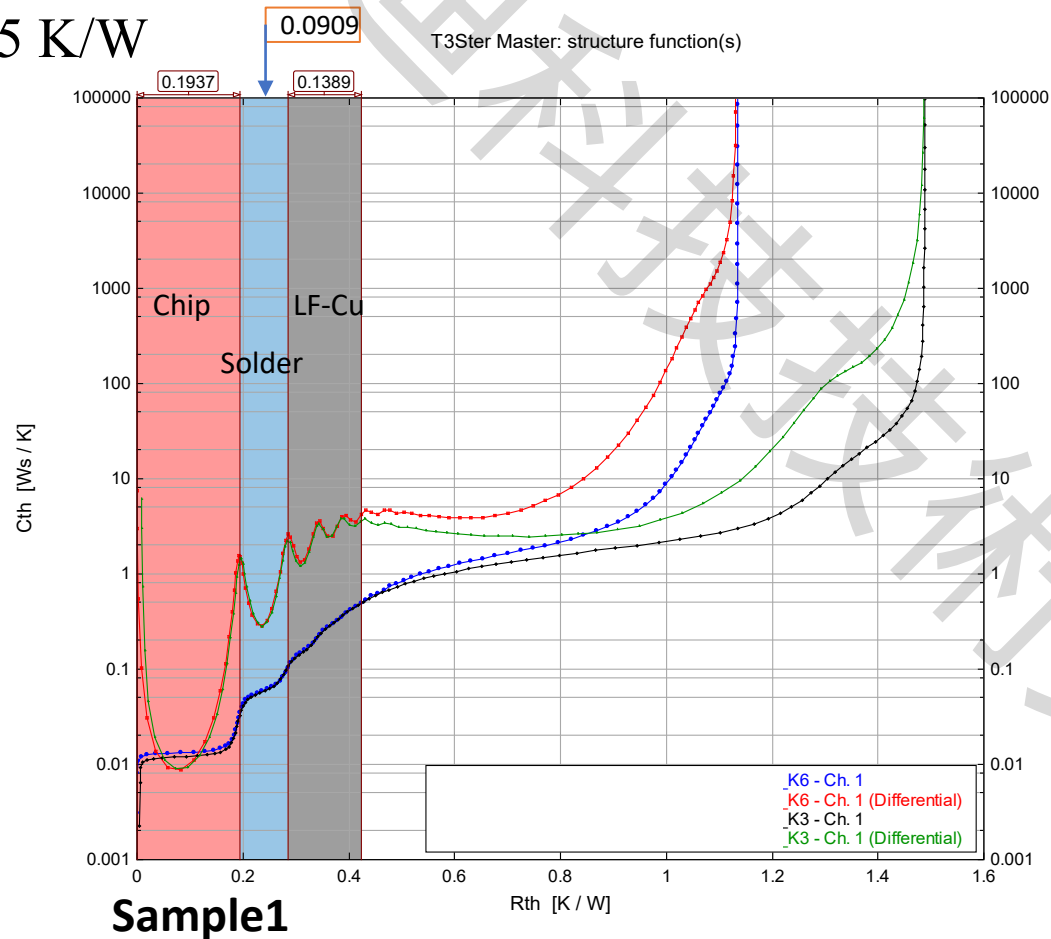
# Device Setting

🌀 DUT put on **25°C Cold plate(水冷板)** and measurement



# T3Ster Measurement Results\_Rthjc\_ Structure Function\_Sample 1

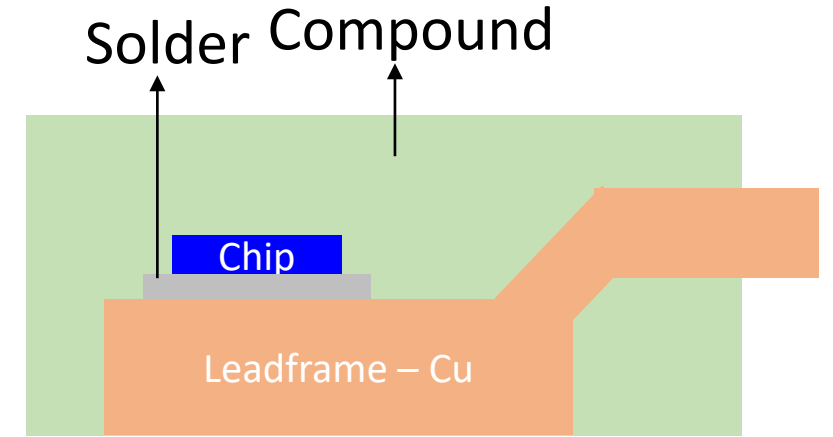
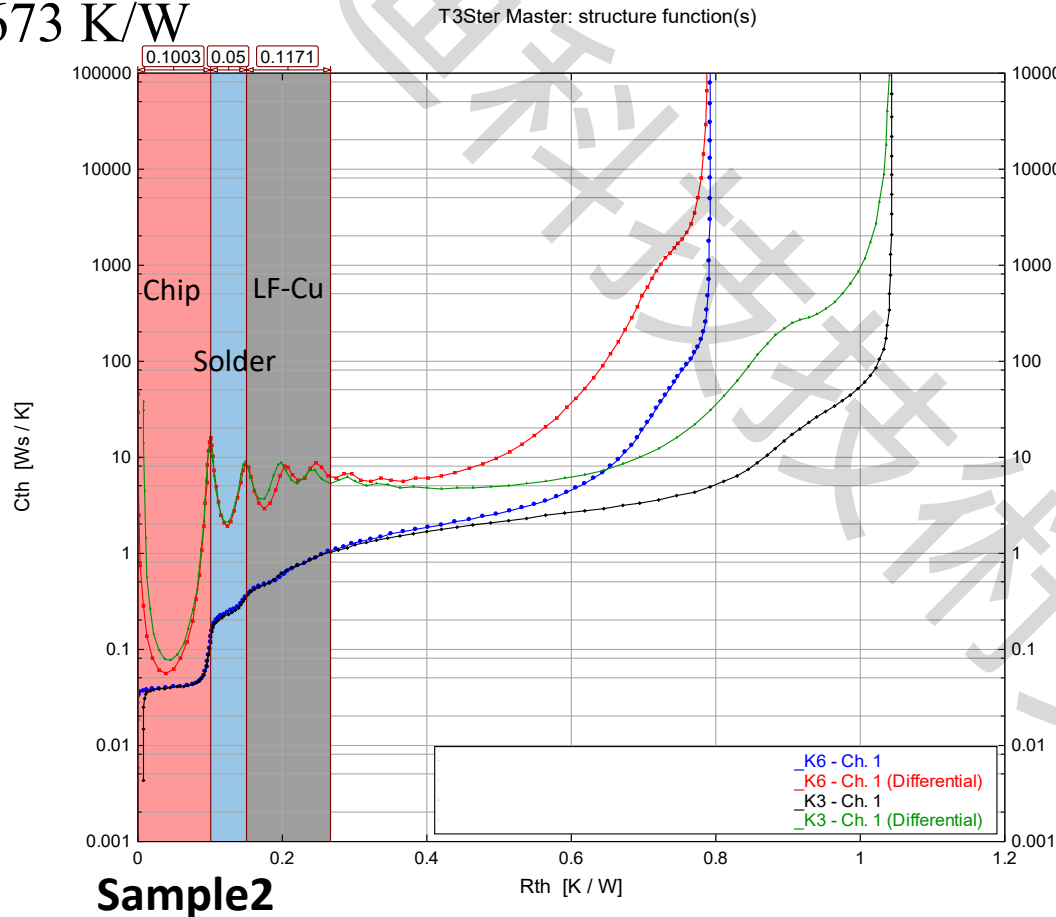
- Integral Structure Function@ 25°C
- Use JESD 51-14
- Rthjc = 0.4235 K/W



	各層厚度 (um)
Chip	350
Solder	60~100
Leadframe - Cu	2000

# T3Ster Measurement Results\_Rthjc\_ Structure Function\_Sample 2

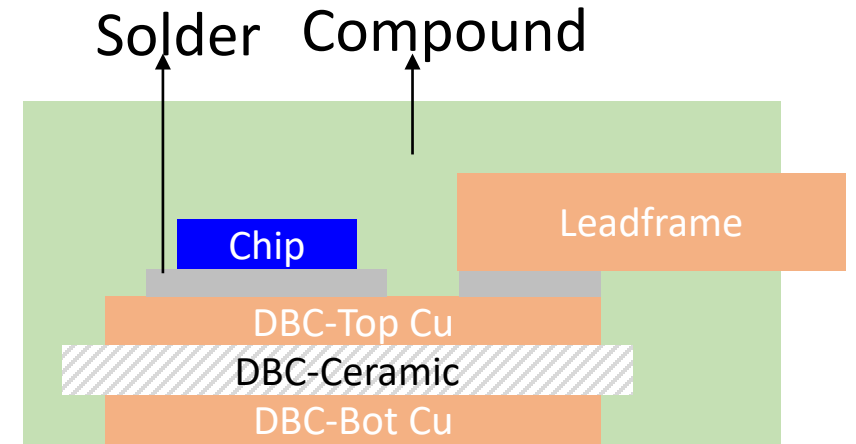
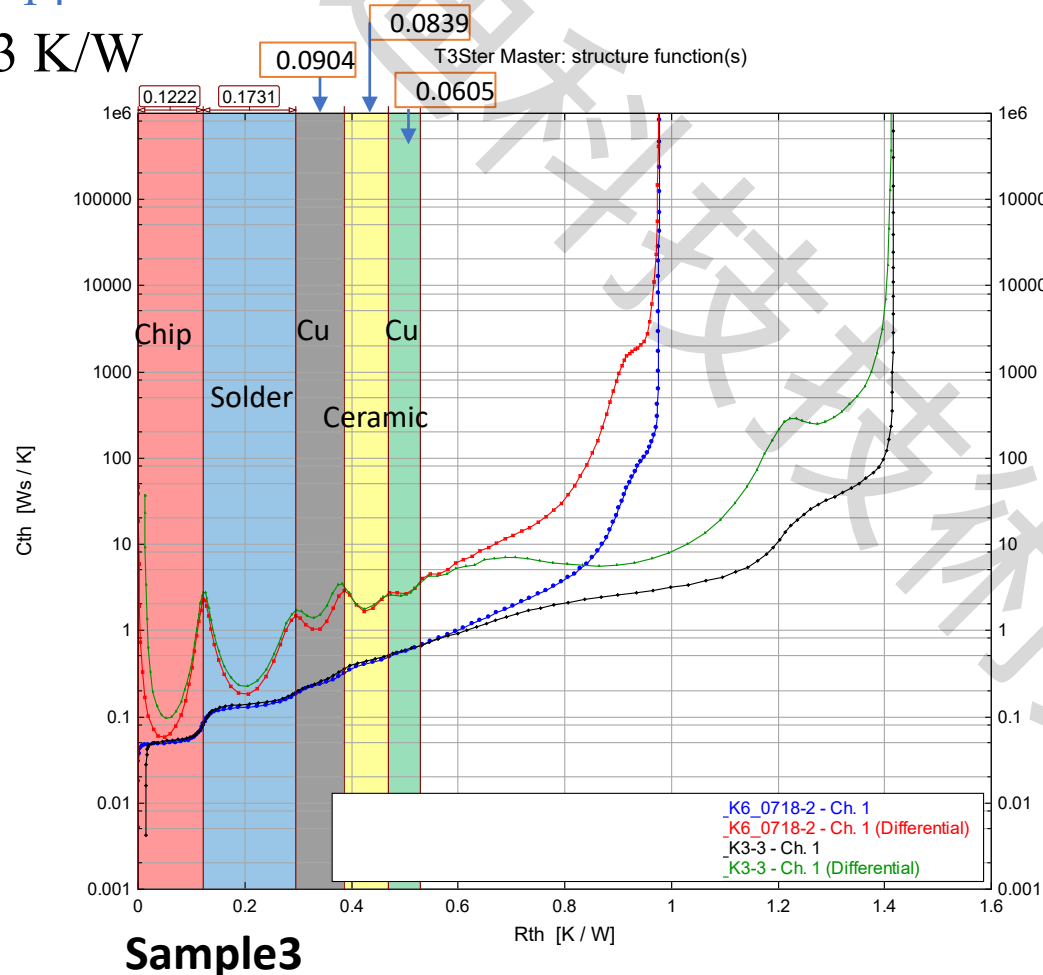
- Integral Structure Function@ 25°C
- Use JESD 51-14
- Rthjc = 0.2673 K/W



	各層厚度 (um)
Chip	350
Solder	60~100
Leadframe - Cu	2000

# T3Ster Measurement Results\_Rthjc\_ Structure Function\_Sample 3

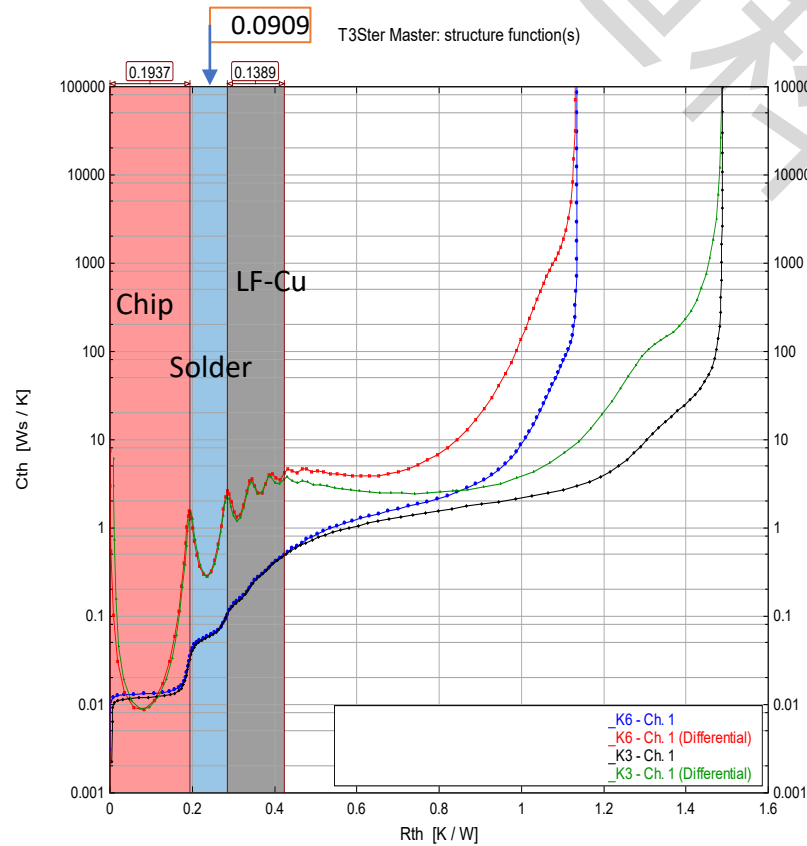
- Integral Structure Function @ 25°C
- Use JESD 51-14
- Rthjc = 0.53 K/W



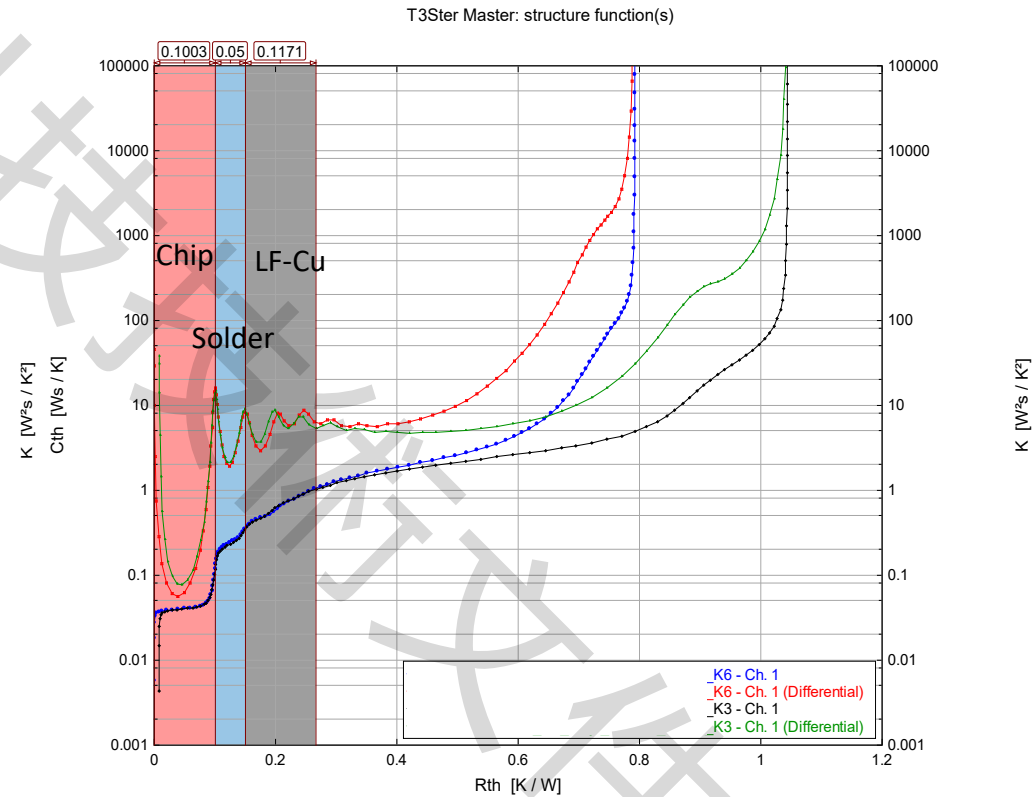
	各層厚度 (um)
Chip	350
Leadframe	600
Solder	~175
DBC-top Cu	300
DBC-Ceramic	635
DBC-bot Cu	300

# Summary\_Rthjc

相同封裝，不同晶片  
除了受到chip的影響，Sample 1 solder阻抗略大一點，整體熱阻被拉大



Sample 1

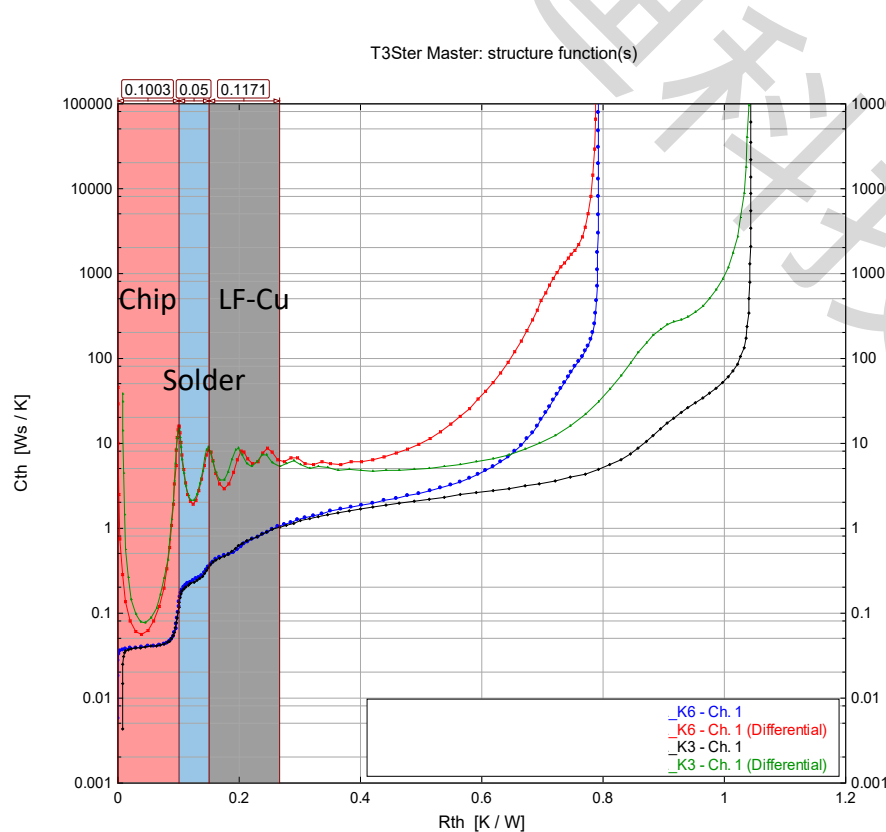


Sample 2

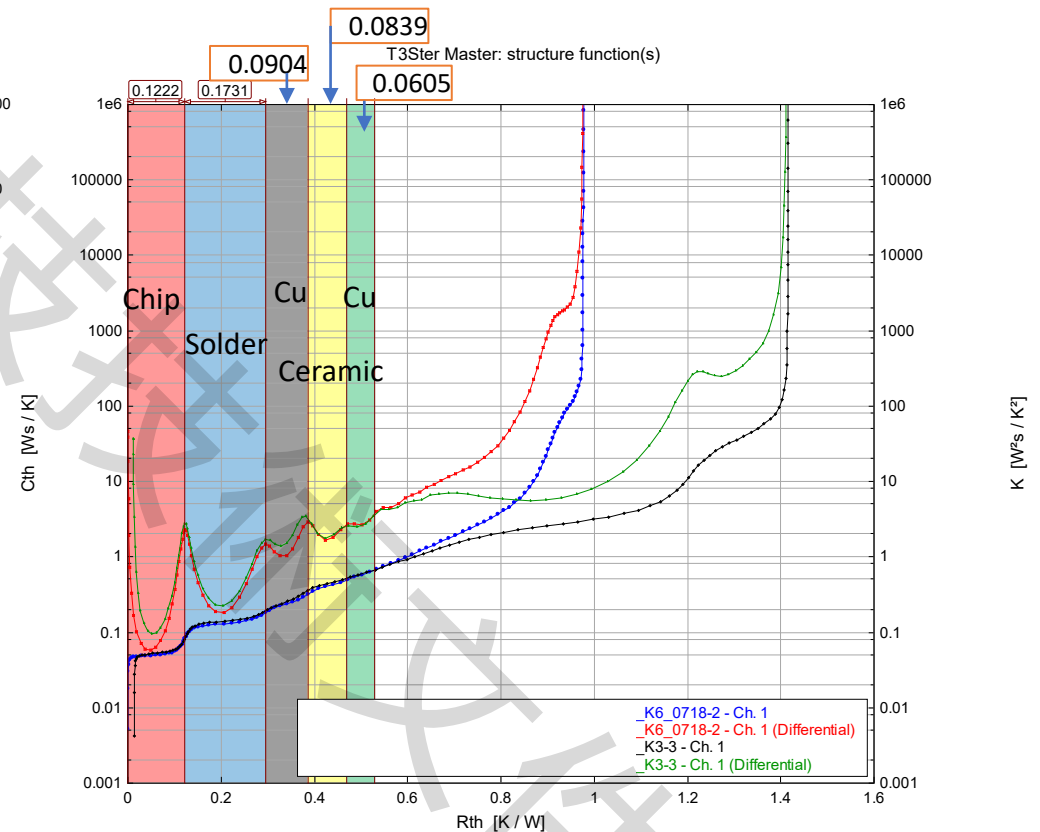
# Summary\_Rthjc

相同晶片，不同封裝

Solder的厚度不同，導致熱阻有明顯差異，Sample 3的熱阻較Sample 2高出許多。



Sample 2



Sample 3



# THANK YOU

## Contact Us

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如對內容有更進一步的興趣，歡迎隨時來電實驗室詢問喔！！