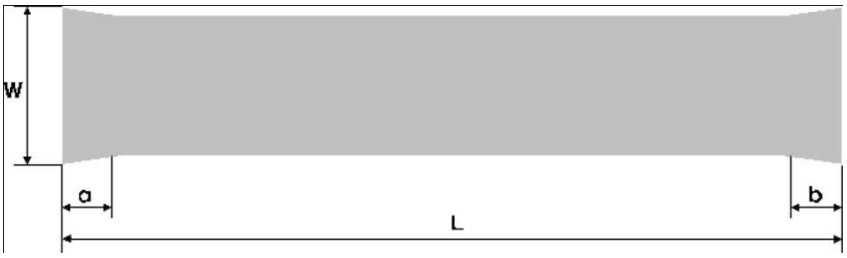
FLAT HEAT PIPE / MHP-1630A150A

General Specification

Item		Description
Part Number		MHP-1630A150A
Material of Container		Aluminium 1070
Wick Structure		Groove
Working Fluid		Acetone
Dimension	Thickness	1.6 mm
	Width	30.0 mm
	Length	150 mm
Weight		12 g (Unit Weight)
Qmax	Horizontal	14.5 W (at 50°C)
	Vertical	75.0 W (at 50°C)
Typical Thermal Resistance		<0.25°C / W (Average)
Operating Inclination, Ø		0 ~ 90°
Operating Temperature		-40 ~ 100°C

Dimensions

The dimensional attributes of this shall conform to the following figure.



Thickness (t)	Width (W)	Length (L)	Ineffective Length (a)	Ineffective Length (b)
1.6 ±0.05	30.0 ±0.50	150.0 ±0.50	3.0 ±0.50	3.0 ±0.50

Dimensions are in mm

Material

Container	Aluminium 1070
Working Fluid	Acetone
Surface Treatment	None

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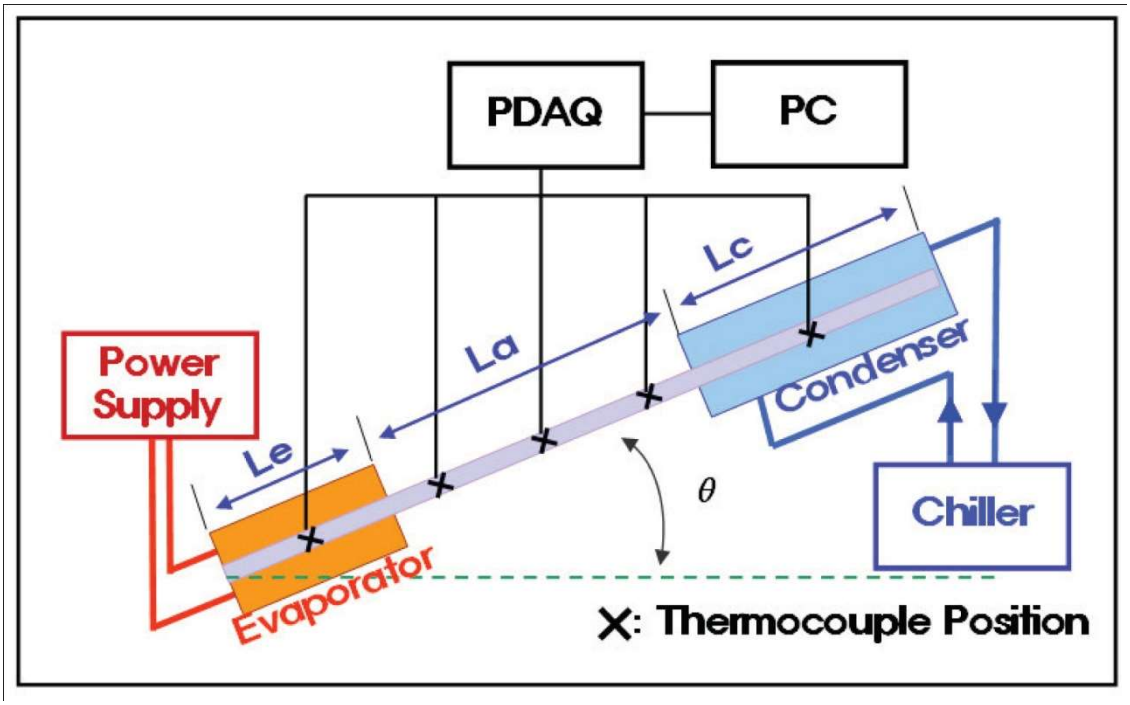

Qmax Test Apparatus

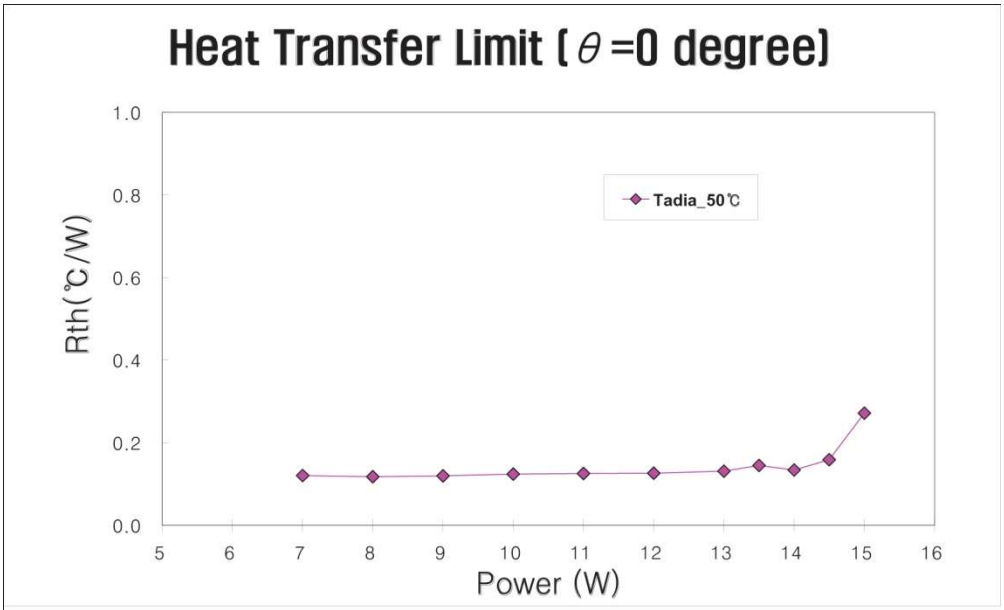

Fig. 3 Maximum Heat Transfer Rate at Θ=0°, Tadia=50℃
(Le=30mm, La=74mm, Lc=90mm)

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FLAT HEAT PIPE / MHP-1630A150A

Test Data – MHP-1630A200A

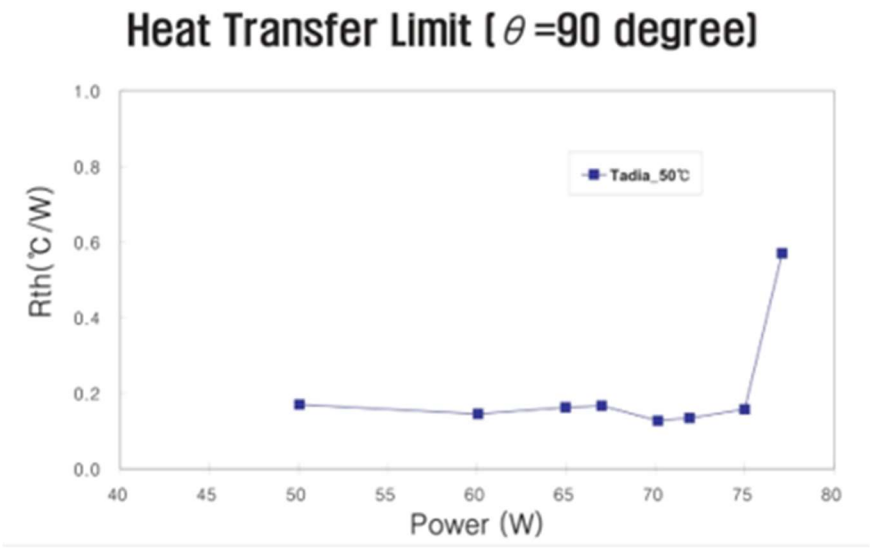

Fig. 4 Maximum Heat Transfer Rate at Θ=90°, Tadia=50℃
(Le=30mm, La=74mm, Lc=90mm)

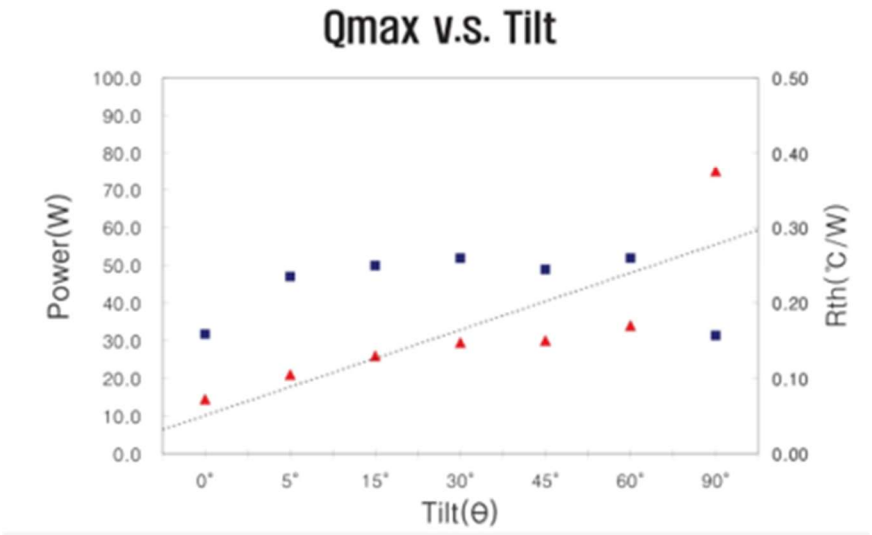

Fig. 5 Maximum Heat Transfer Rate vs. Inclination at Tadia=50℃
(Le=30mm, La=74mm, Lc=90mm)

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FLAT HEAT PIPE / MHP-1630A150A

Test Data – MHP-1630A200A

Operating Range

	Operating	Storage
Temperature	-40 ~ 100°C	-10 ~ 40°C
Humidity	80 % RH Max (at 60°C)	80 % RH Max (at 60°C)
Tilt Angle	0 ~ 90 degree	Horizontal

High Temperature Leak Test

Every manufactured component is sealed with a mechanical pinch system. The mechanical pinch of container results in a cold weld seal. The average leak temperature is about 170°C.

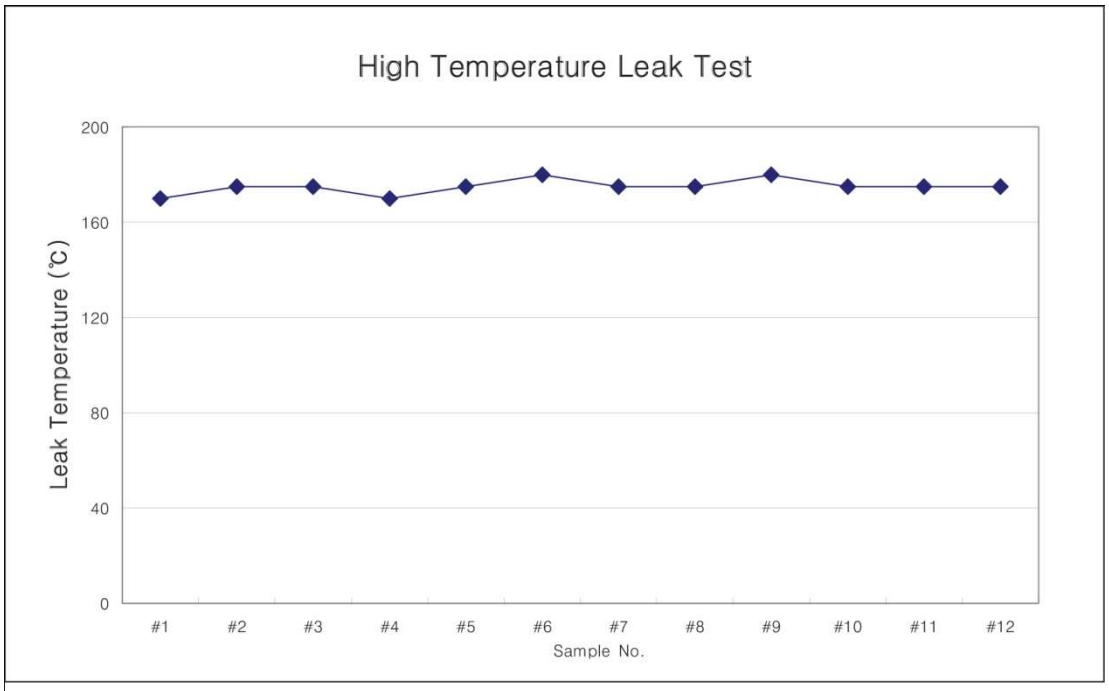

Fig. 6 Leak Test at High Temperature

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Thermal Response Test

A thermal response test and vacuum leakage check are carried out to ensure its operation. The experimental test bench is schematically shown in Fig.6. Water bath temperature, **(Tw)** is set at 50°C and the temperature of other end, **Tt** is measured immediately after it is placed vertically into the water bath. The criterion for acceptance is 5°C (Tw – Tt).

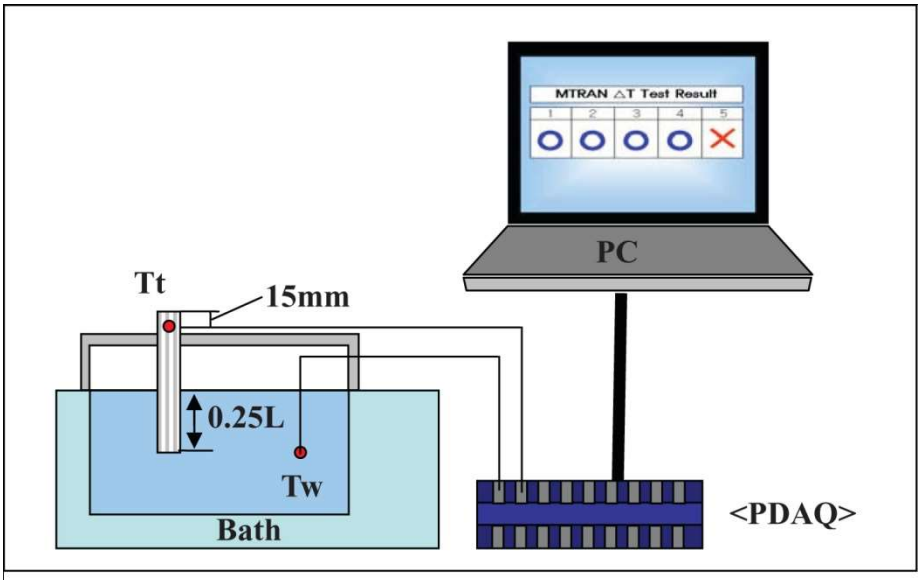

Fig. 7 Thermal Response Test Apparatus

ANNOTATION

All specifications shown herein are typical values and are not guaranteed. It is recommended to test in the application for suitability.

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