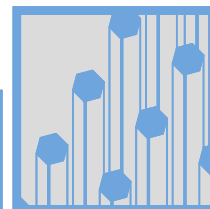


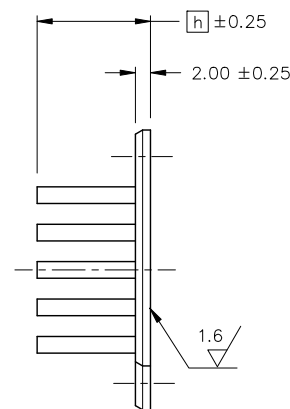
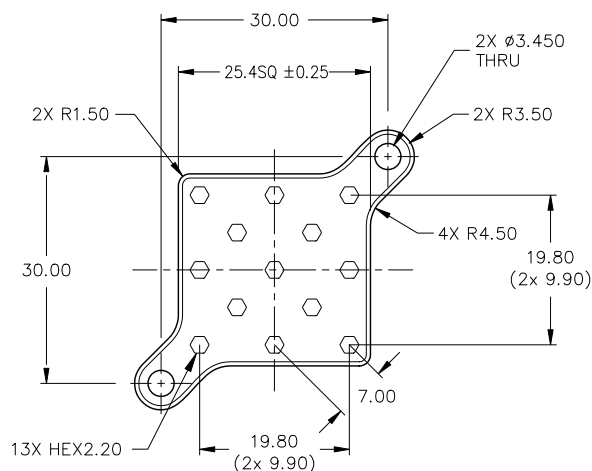
NR Series

Natural Convection Heat Sink
with Mounting Tabs

ALPHA



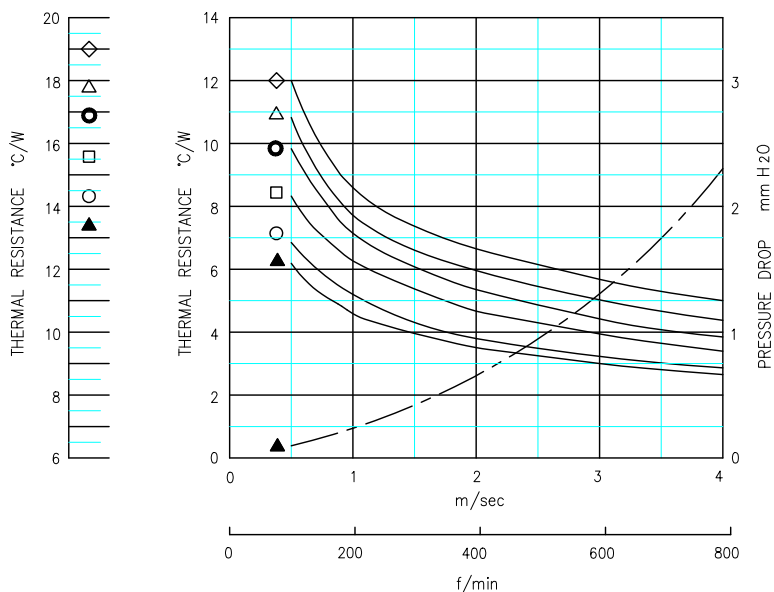
DIM



MODEL	HEATSINK HEIGHT [h]	WEIGHT (grams)
NR25-8B	8	4.8
NR25-10B	10	5.1
NR25-12B	12	5.4
NR25-15B	15	5.9
NR25-20B	20	6.6
NR25-25B	25	7.3

MATERIAL : A6063
 FINISH : BLACK ANODIZE
 DIMENSIONS : mm

DATA

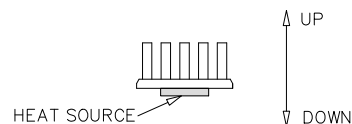


NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

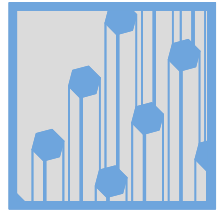
- ◇ NR25-8B
- △ NR25-10B
- NR25-12B
- NR25-15B
- NR25-20B
- ▲ NR25-25B

- DUCTED CONDITION
 DUMMY HEATER SIZE: 12.7 SQ
 THERMAL RESISTANCE
 PRESURE DROP
- NATURAL CONVECTION
 DUMMY HEATER SIZE: 12.7 SQ
 DISSIPATED POWER: 3.5 (W)

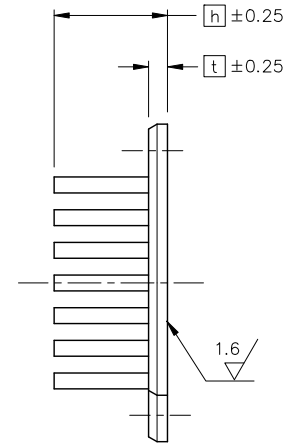
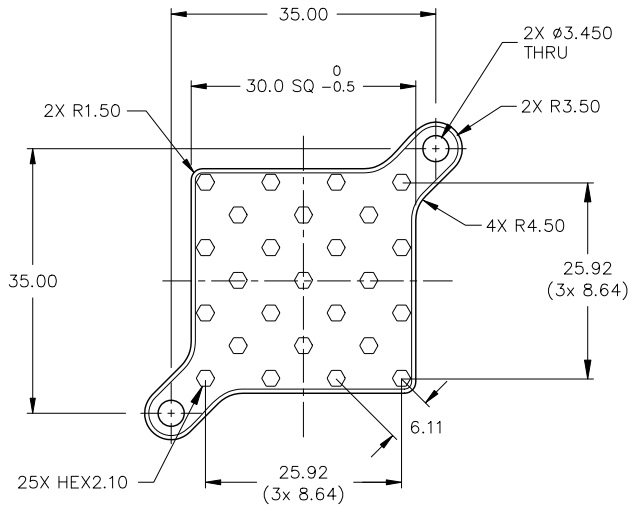


NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.



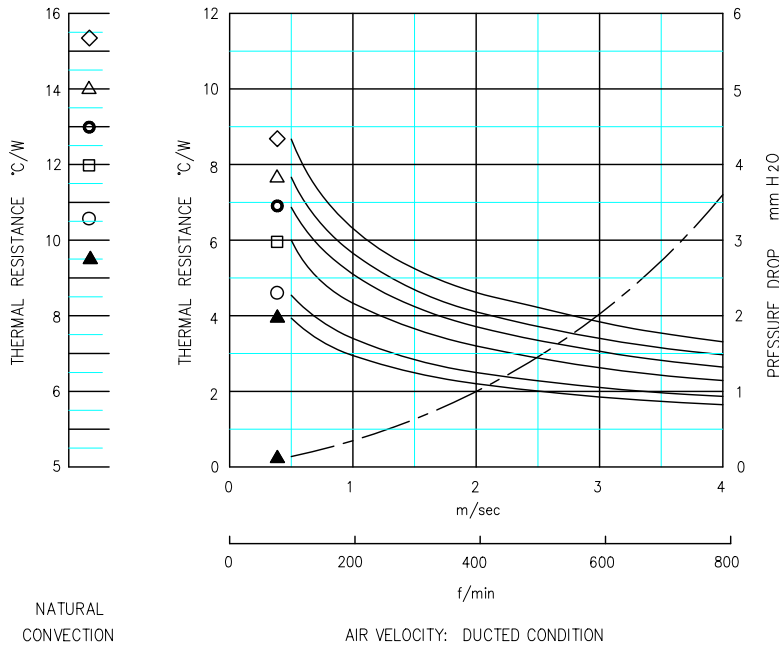
DIM



MODEL	HEIGHT [h]	THICKNESS [h]	WEIGHT (grams)
NR30-8B	8	2.00	6.8
NR30-10B	10	2.50	8.5
NR30-12B	12		9.0
NR30-15B	15		9.8
NR30-20B	20		11.1
NR30-25B	25		12.4
NR30-[h]B	[h] < 10	2.00	-
	10 ≤ [h]	2.50	-

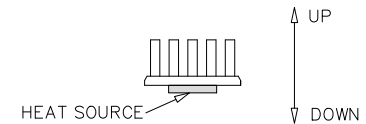
MATERIAL : A6063
 FINISH : BLACK ANODIZE
 DIMENSIONS : mm

DATA



- ◇ NR30-8B
- △ NR30-10B
- NR30-12B
- NR30-15B
- NR30-20B
- ▲ NR30-25B

- DUCTED CONDITION
 DUMMY HEATER SIZE: 12.7 SQ
 THERMAL RESISTANCE
 PRESURE DROP
- NATURAL CONVECTION
 DUMMY HEATER SIZE: 12.7 SQ
 DISSIPATED POWER: 4.9 (W)

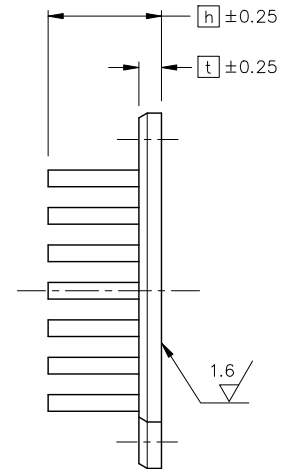
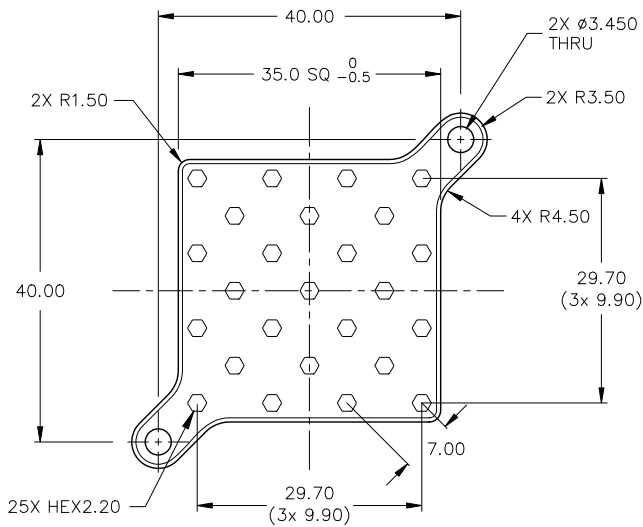


NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.



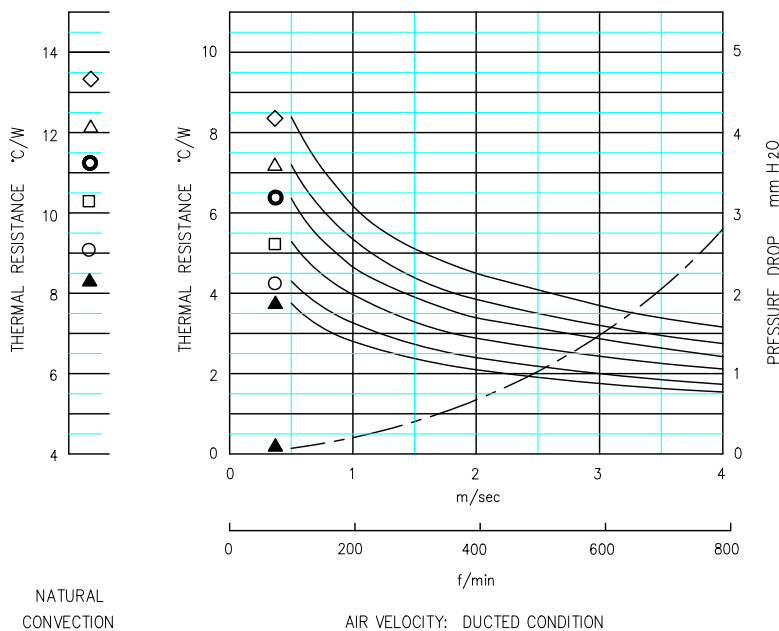
DIM



MODEL	HEIGHT [h]	THICKNESS [h]	WEIGHT (grams)
NR35-8B	8	2.00	8.7
NR35-10B	10	3.00	12.5
NR35-12B	12		13.1
NR35-15B	15		13.9
NR35-20B	20		15.3
NR35-25B	25		16.7
NR35-[h]B	[h] < 10	2.00	-
	10 ≤ [h]	3.00	-

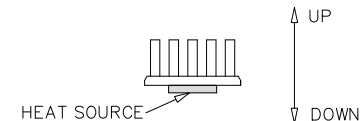
MATERIAL : A6063
 FINISH : BLACK ANODIZE
 DIMENSIONS : mm

DATA



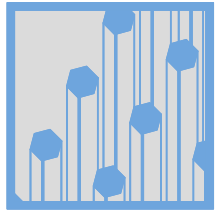
- ◇ NR35-8B
- NR35-12B
- NR35-20B
- △ NR35-10B
- NR35-15B
- ▲ NR35-25B

- DUCTED CONDITION
- NATURAL CONVECTION
- DUMMY HEATER SIZE: 12.7 SQ
- THERMAL RESISTANCE
- PRESURE DROP
- DUMMY HEATER SIZE: 12.7 SQ
- DISSIPATED POWER: 5.7 (W)

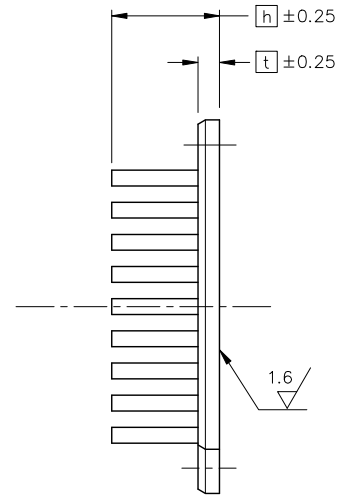
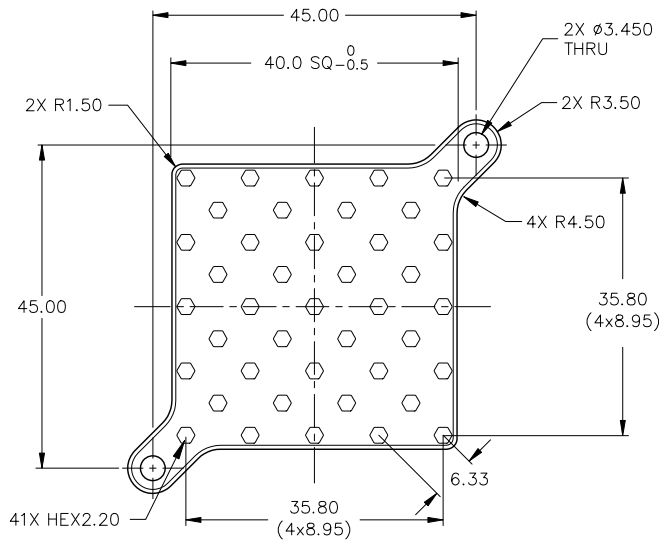


NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

- BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.



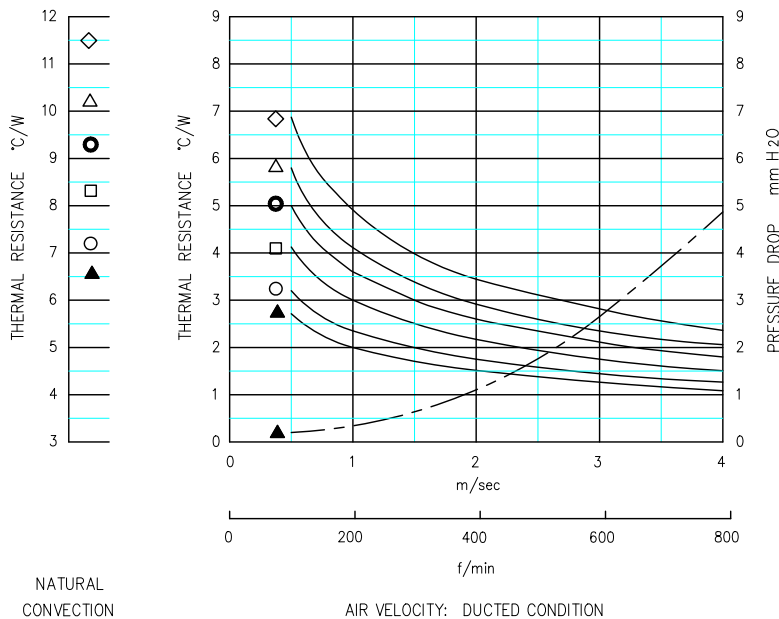
DIM



MODEL	HEIGHT [h]	THICKNESS [h]	WEIGHT (grams)
NR40-8B	8	2.50	13.8
NR40-10B	10	3.00	16.7
NR40-12B	12		17.7
NR40-15B	15		19.0
NR40-20B	20		21.4
NR40-25B	25		23.7
NR40-[h]B	[h] < 10	2.50	-
	10 ≤ [h]	3.00	-

MATERIAL : A6063
 FINISH : BLACK ANODIZE
 DIMENSIONS : mm

DATA



- ◇ NR40-8B
- NR40-12B
- NR40-20B
- △ NR40-10B
- NR40-15B
- ▲ NR40-25B

- DUCTED CONDITION
- NATURAL CONVECTION
- DUMMY HEATER SIZE: 12.7 SQ
- THERMAL RESISTANCE
- PRESURE DROP
- DUMMY HEATER SIZE: 12.7 SQ
- DISSIPATED POWER: 6.4(W)

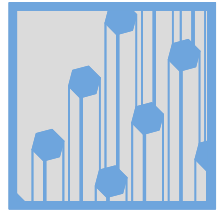
HEAT SOURCE

NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

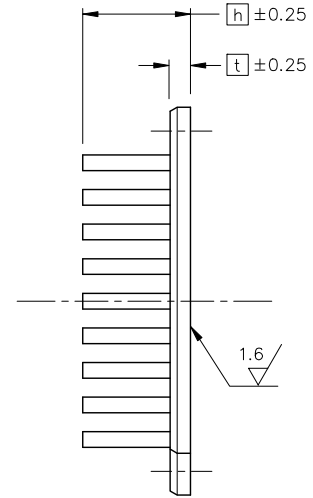
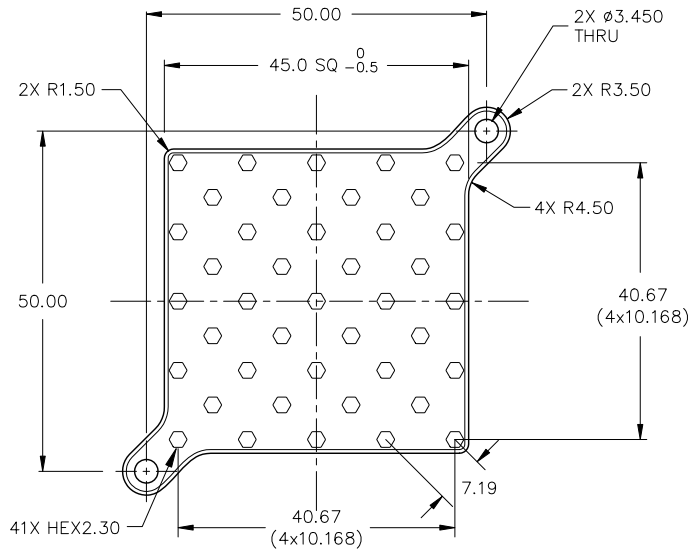
UP

DOWN

BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.



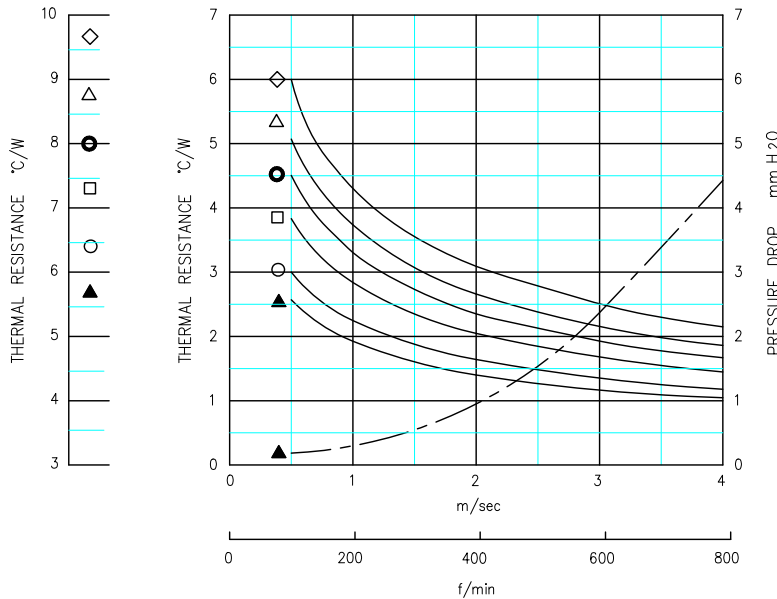
DIM



MODEL	HEIGHT [h]	THICKNESS [h]	WEIGHT (grams)
NR45-8B	8	2.50	16.8
NR45-10B	10	3.00	20.4
NR45-12B	12		21.4
NR45-15B	15		23.0
NR45-20B	20		25.5
NR45-25B	25		28.0
NR45-[h]B	[h] < 10	2.50	-
	10 ≤ [h]	3.00	-

MATERIAL : A6063
 FINISH : BLACK ANODIZE
 DIMENSIONS : mm

DATA

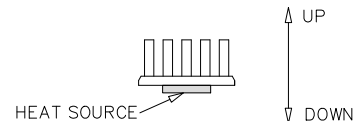


NATURAL CONVECTION

AIR VELOCITY: DUCTED CONDITION

- ◇ NR45-8B
- NR45-12B
- NR45-20B
- △ NR45-10B
- NR45-15B
- ▲ NR45-25B

- DUCTED CONDITION
 DUMMY HEATER SIZE: 12.7 SQ
 THERMAL RESISTANCE
 PRESURE DROP
- NATURAL CONVECTION
 DUMMY HEATER SIZE: 12.7 SQ
 DISSIPATED POWER: 8.0(W)



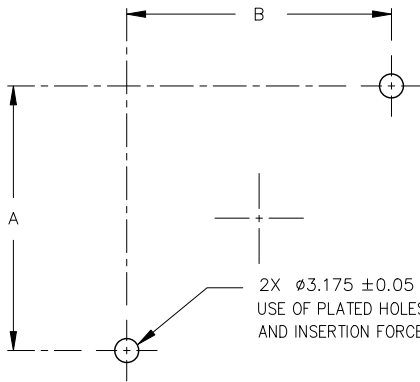
NOTE ORIENTATION OF HEAT SINK USED FOR NATURAL CONVECTION TESTING

BASED ON ALPHA'S STANDARD TEST PROCEDURE. REFER TO TECHNICAL INFORMATION.

REF



PCB HOLE LAYOUT



2X $\phi 3.175 \pm 0.05$ [$\phi .125 \pm .002$]
 USE OF PLATED HOLES TO REDUCE EXCESSIVE WEAR
 AND INSERTION FORCE IS RECOMMENDED.

LPDR19 AND UBR19	22.0	22.0
LPDR25, UBR25, NR25 AND SR25	30.0	30.0
LPDR30, UBR30, NR30 AND SR30	35.0	35.0
LPDR35, UBR35, NR35 AND SR35	40.0	40.0
LPDR40, UBR40, NR40 AND SR40	45.0	45.0
LPDR45, UBR45 AND NR45	50.0	50.0
MODEL	A	B

PUSH-IN-PIN CATALOG: <http://www.micforg.co.jp/dxf/PIP-3175.pdf>