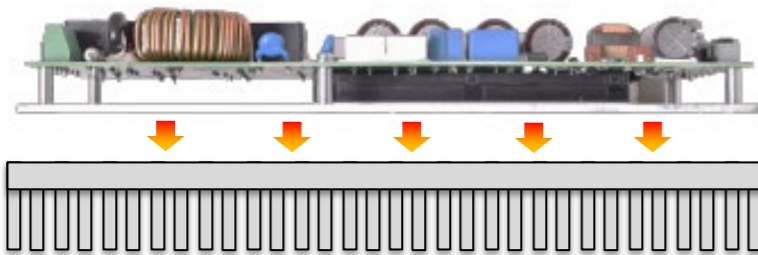


OFI1200A

Heatsink calculation

OFI1200A48
Heatsink 100x250x40mm will manage 900W @50°C ambient operating temp. Convection cooling



Condition at max. baseplate temperature 95 °C

Waste power OFI1200A48 (Efficiency@230Vac: 92%)

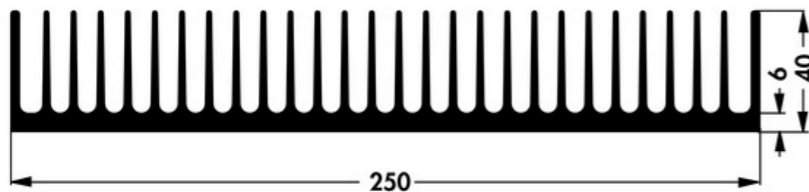
- $78,26W = (900/0.92) - 900$

Max. rise temperature on the baseplate

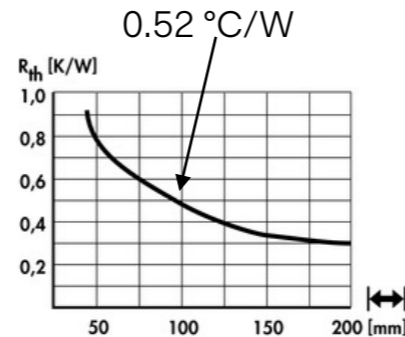
- Max. baseplate temperature: 95°C
- Max. ambient operating temp: 50°C
- Temp. loss grease: $2 \times 2,196$ °C
- $40,61 = 95 - 50 - (2 \times 2,196)$

Required heatsink is defined by it's thermal resistance

- Max. rise temp/waste power
- $0.518^{\circ}C/W = 40,61/78,26$
- Search for heatsink with thermal resistance lower than $0.518^{\circ}C/W$

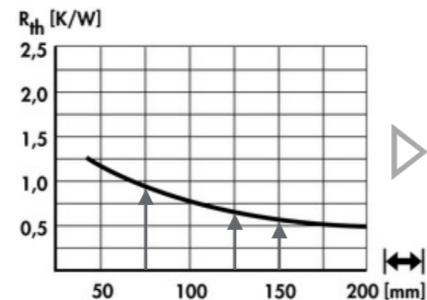
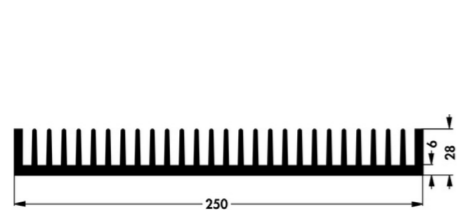
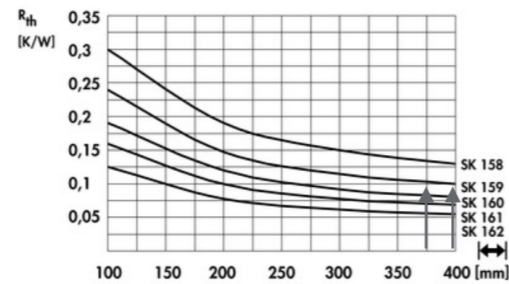
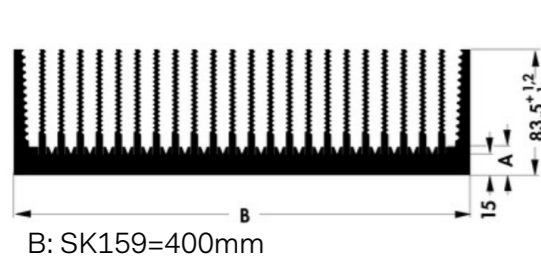
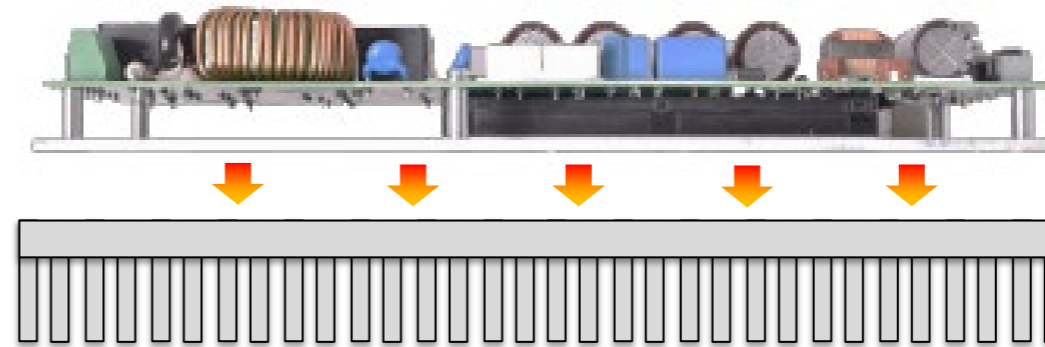
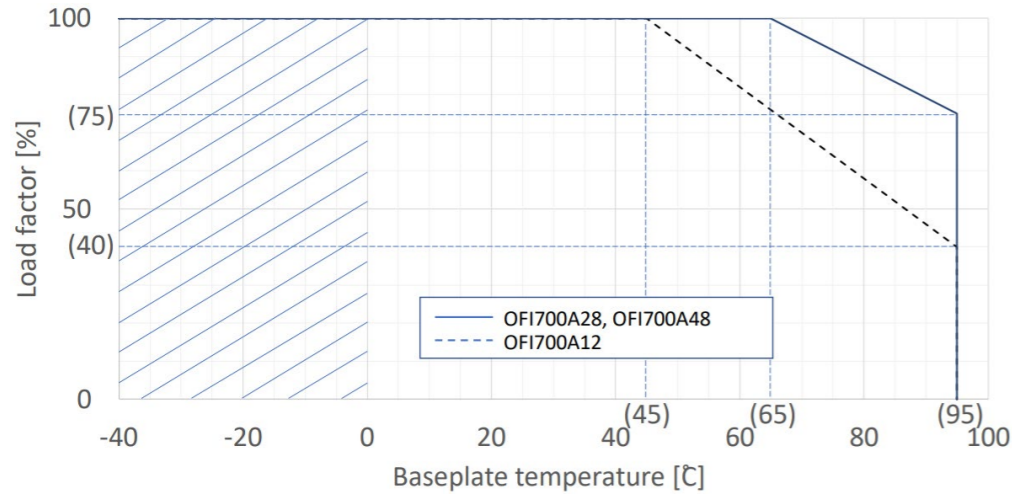


SK555



OFI700A

Examples of heatsink



Condition at full load, 230Vac

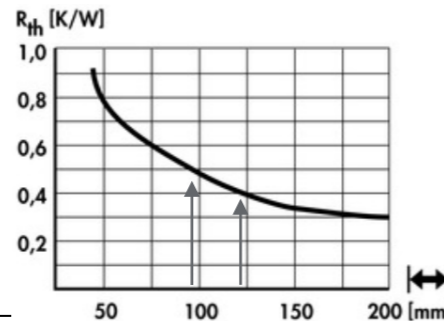
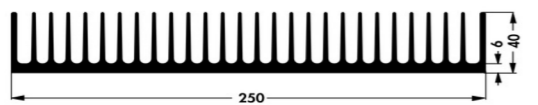
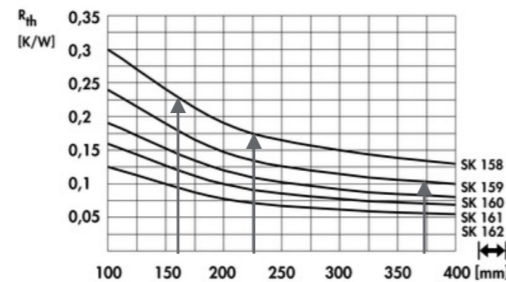
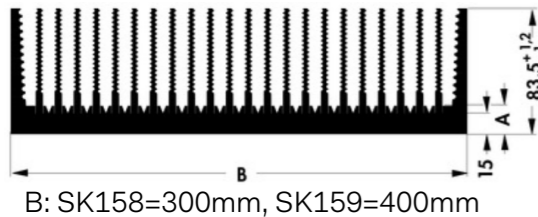
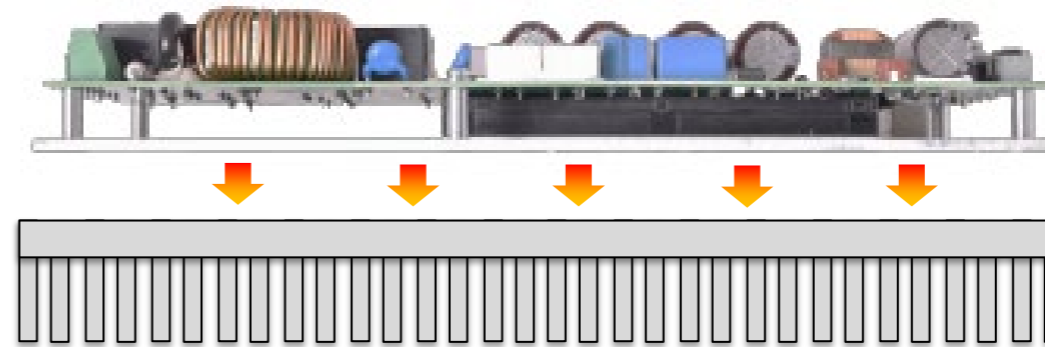
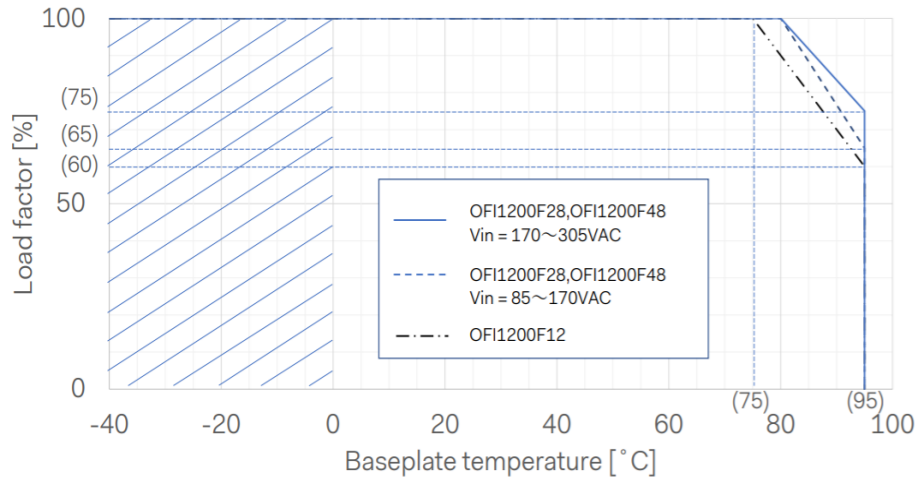
Model	Output power [W]	Efficiency [%]	Losses [W]	TC of Grease [W/mK]	Tgrease [°C]	Tbpmax [°C]	Ta [°C]	Ths [°C]	Required Rth [°C/W]	Possible heat sink [mm]
OFI700A12	700	85,5	118,713	0,7	4,701	45	35	0,598	0,005	
OFI700A28	700	88,5	90,96	0,7	3,602	65	50	7,796	0,085	400x400x84 (SK159)
OFI700A48	700	89,5	82,122	0,7	3,252	65	50	8,496	0,103	375x400x84 (SK159)

Condition at maximum temperature of baseplate, 230Vac

Model	Output power [W]	Efficiency [%]	Losses [W]	TC of Grease [W/mK]	Tgrease [°C]	Tbpmax [°C]	Ta [°C]	Ths [°C]	Required Rth [°C/W]	Possible heat sink [mm]
OFI700A12	280	85,5	47,485	0,7	1,88	95	50	41,24	0,868	75x250x28 (SK492)
OFI700A28	525	88,5	68,22	0,7	2,701	95	50	39,598	0,58	150x250x28 (SK492)
OFI700A48	525	89,5	61,592	0,7	2,439	95	50	40,122	0,651	125x250x28 (SK492)

OFI1200A

Examples of heatsink



Condition at full load, 230Vac

Model	Output power [W]	Efficiency [%]	Losses [W]	TC of Grease [W/mK]	Tgrease [°C]	Tbpmax [°C]	Ta [°C]	Ths [°C]	Required Rth [°C/W]	Possible heat sink [mm]
OFI1200A12	1000	86,5	156,069	0,7	4,379	75	50	16,242	0,104	375x400x84 (SK159)
OFI1200A28	1200	90,5	125,966	0,7	3,534	80	50	22,932	0,182	225x300x84 (SK158)
OFI1200A48	1200	92	104,347	0,7	2,928	80	50	24,144	0,231	160x300x84 (SK158)

Condition at maximum temperature of baseplate, 230Vac

Model	Output power [W]	Efficiency [%]	Losses [W]	TC of Grease [W/mK]	Tgrease [°C]	Tbpmax [°C]	Ta [°C]	Ths [°C]	Required Rth [°C/W]	Possible heat sink [mm]
OFI1200A12	600	86,5	93,641	0,7	2,627	95	50	39,746	0,424	125x250x40 (SK555)
OFI1200A28	900	90,5	94,475	0,7	2,651	95	50	39,698	0,42	125x250x40 (SK555)
OFI1200A48	900	92	78,26	0,7	2,196	95	50	40,608	0,518	100x250x40 (SK555)