

Power Dissipation Values

According to EN 50298 and IEC 60890

For each enclosures range

- The 4 or 5 different matrix tables contain all the enclosure **dimensions**.
- The tables are created according to the **positioning** of the enclosure.
- **Two different values** of temperature rise are given depending on the measuring point in the cabinet: **half way or on top**.

What is acceptable according to EN 50298 and IEC 60890

- For common electrical applications, a **temperature rise of 50K** is generally accepted. If the rise is above 50K, a larger enclosure should be chosen. More volume results in a decrease of the temperature rise.
- The **absolute** temperature in °C in the enclosure is the **sum** of the **ambient** temperature in °C and the **temperature rise** in K. According to the standards, the absolute temperature is **max. 70°C**

How to use a matrix?

- First** choose the right matrix according to the position and the size of the enclosure.
- Second** calculate the effective power loss in Watt (left column). Add 10-20% to the total effective power loss of the components in order to compensate the small wiring and connections.
- Third** read in the matrix the temperature rise in the cabinet due to the thermal power dissipation.

Example of an individual enclosure VJ

(see page 82)
Enclosure: VJ1614 height = 440 mm, width = 389 mm, depth = 208 mm. Placed against the wall.
The calculated effective power loss of the components: 90W
Components are placed in the centre of the cabinet.
In the table 'Rear against wall' (see below) read for **90W** and column **'Half': 38K** temperature rise.
With an ambient temperature of 20°C, the absolute temperature around the components will be approximately 20 + 38 = 58°C
If the temperature is too high for the components, then choose a larger cabinet to allow air ventilation.

Example of coupled enclosures VJ

Enclosure on the **left side**: VJ1614
Enclosure **in the middle**: VJ1614
Enclosure on the **right side**: VJ1614
Placed against the wall
Do the same calculation as above for each individual enclosure. Find the temperature rise for the **left and right side** enclosure in the table **'Front, left and top free'**, see page 82 and find **'Half': 40K**
Find the temperature rise for the middle enclosure in the table **'Front and top free'**, see page 83 and find **'Half': 43K**

DISSIPATION		Rear against wall																				Temperature rise [Kelvin]	
		VJ 606		VJ 806		VJ 1008		VJ 1008		VJ 1210		VJ 1210		VJ 1412		VJ 1412		VJ 1614		VJ 1614		VJ1816	
Watt		186x186x126	186x186x126	236x186x126	236x186x126	287x236x138	287x236x138	287x236x176	287x236x176	338x287x142	338x287x142	338x287x180	338x287x180	389x338x170	389x338x170	389x338x208	389x338x208	440x389x170	440x389x170	440x389x208	440x389x208	491x440x243	491x440x243
		Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
5		11	13	9	11	7	9	7	8	6	7	5	6										
10		19	22	16	20	13	15	12	14	10	13	9	11	8	10	8	9	7	8	6	8	5	6
15		26	31	22	27	17	21	16	20	15	18												
20		33	39	28	34	22	27	20	25	18	22	16	19	14	17	13	16	12	15	11	14	9	11
25		39	46	34	41	26	32	24	29	22	26												
30		45	54	39	48	30	37	28	34	25	31	22	29	20	24	18	22	17	21	16	19	13	15
35				44	54	35	42	32	39	29	35												
40				49	60	38	47	35	43	32	39	28	34	25	30	23	28	21	26	20	24	16	19
45						42	51	39	47	35	42												
50								42	41	38	46	34	41	30	36	27	33	26	31	24	29	19	23
55										41	50												
60												39	47	34	41	32	38	30	36	27	33	22	27
65												41	50										
70												44	53	39	47	36	43	34	41	31	37	25	30
75														41	50								
80																40	48	38	45	35	42	28	34
85																42	51						
90																		41	50	38	46	31	37
95																							
100																				41	50	34	40
105																							
110																						36	44
115																							
120																						39	47
125																							
130																						42	50
135																							
140																						44	53

Power Dissipation Values

Rear against wall

Temperature rise [Kelvin]

DISSIPATION Watt	VJ 606 186x186x126		VJ 806 236x186x126		VJ 1008 287x236x138		VJ 1008 287x236x176		VJ 1210 338x287x142		VJ 1210 338x287x180		VJ 1412 389x338x170		VJ 1412 389x338x208		VJ 1614 440x389x170		VJ 1614 440x389x208		VJ1816 491x440x243	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
5	11	13	9	11	7	9	7	8	6	7	5	6										
10	19	22	16	20	13	15	12	14	10	13	9	11	8	10	8	9	7	8	6	8	5	6
15	26	31	22	27	17	21	16	20	15	18												
20	33	39	28	34	22	27	20	25	18	22	16	19	14	17	13	16	12	15	11	14	9	11
25	39	46	34	41	26	32	24	29	22	26												
30	45	54	39	48	30	37	28	34	25	31	22	29	20	24	18	22	17	21	16	19	13	15
35			44	54	35	42	32	39	29	35												
40			49	60	38	47	35	43	32	39	28	34	25	30	23	28	21	26	20	24	16	19
45					42	51	39	47	35	42												
50							42	41	38	46	34	41	30	36	27	33	26	31	24	29	19	23
55									41	50												
60											39	47	34	41	32	38	30	36	27	33	22	27
65											41	50										
70											44	53	39	47	36	43	34	41	31	37	25	30
75													41	50								
80															40	48	38	45	35	42	28	34
85															42	51						
90																	41	50	38	46	31	37
95																						
100																			41	50	34	40
105																						
110																					36	44
115																						
120																					39	47
125																						
130																					42	50
135																						
140																					44	53

Front, left and upperside free

Temperature rise [Kelvin]

DISSIPATION Watt	VJ 606 186x186x126		VJ 86 236x186x126		VJ 1008 287x236x138		VJ 1008 287x236x176		VJ 1210 338x287x142		VJ 1210 338x287x180		VJ 1412 389x338x170		VJ 1412 389x338x208		VJ 1614 440x389x170		VJ 1614 440x389x208		VJ1816 491x440x243	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
5	11	13	10	12																		
10	20	24	17	21	13	16	12	15	11	13	10	12	9	10	8	10	7	9	7	8	6	7
15	27	33	24	29																		
20	35	41	30	37	23	28	21	26	19	24	17	21	15	18	14	17	13	16	12	14	10	12
25	41	49	36	44																		
30	48	57	42	51	32	39	30	36	27	33	24	29	21	25	19	23	18	22	17	20	14	16
35																						
40					40	49	37	45	34	41	30	36	26	31	24	29	23	27	21	25	17	21
45					44	54	41	50														
50							45	54	41	49	36	44	31	38	29	35	27	33	25	30	20	25
55									44	53												
60											42	50	36	44	34	41	31	38	29	35	24	28
65																						
70													41	49	38	46	35	43	33	40	27	32
75													43	52	40	49						
80															42	51	39	48	37	44	30	36
85																	41	50				
90																			40	49	33	39
95																			42	51		
100																					36	43
105																						
110																					39	46
115																						
120																					41	50
125																						
130																					44	53

Power Dissipation Values

Frontside and upperside free

Temperature rise [Kelvin]

DISSIPATION Watt	VJ 606 186x186x126		VJ 806 236x186x126		VJ 1008 287x236x138		VJ 1008 287x236x176		VJ 1210 338x287x142		VJ 1210 338x287x180		VJ 1412 389x338x170		VJ 1412 389x338x208		VJ 1614 440x389x170		VJ 1614 440x389x208		VJ1816 491x440x243	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
5	12	14	11	13	8	10																
10	21	25	19	23	14	17	13	16	12	14	11	13	9	11	8	10	8	9	7	9	6	7
15	29	35	26	31	19	23																
20	37	44	32	39	24	30	23	27	20	25	19	23	16	19	15	18	14	16	13	15	10	13
25	44	53	39	47	29	35																
30			45	55	34	41	31	38	28	34	26	32	22	26	20	25	19	23	18	21	14	17
35					38	46																
40					43	52	39	48	36	43	33	40	27	33	26	31	24	29	22	27	18	22
45							43	52	39	47												
50									43	52	40	48	33	39	31	37	28	34	27	32	22	26
55											43	52										
60													38	46	36	43	33	40	31	37	25	30
65													40	49								
70													43	52	40	49	37	45	35	42	29	34
75															43	51						
80																	42	50	39	47	32	38
85																			41	49		
90																			43	52	35	42
95																						
100																					38	46
105																						
110																					41	50

Frontside free, upper side not free

Temperature rise [Kelvin]

DISSIPATION Watt	VJ 606 186x186x126		VJ 806 236x186x126		VJ 1008 287x236x138		VJ 1008 287x236x176		VJ 1210 338x287x142		VJ 1210 338x287x180		VJ 1412 389x338x170		VJ 1412 389x338x208		VJ 1614 440x389x170		VJ 1614 440x389x208		VJ1816 491x440x243	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
5	14	16	12	14	9	11	8	10														
10	24	28	21	25	15	19	14	17	13	15	12	14	10	12	9	11	8	10	8	10	7	8
15	33	39	29	35	21	26	20	24														
20	42	50	36	44	27	33	25	30	22	27	21	25	17	21	16	19	15	18	14	17	12	14
25			43	53	32	39	30	36														
30					37	45	35	42	30	37	29	35	24	29	22	27	21	25	20	24	16	20
35					42	51	39	47														
40							43	53	38	46	36	44	31	37	28	34	26	31	25	30	20	25
45								53	42	51	40	48										
50											44	53	37	44	34	41	31	37	29	36	24	29
55													39	48								
60													42	51	39	47	36	43	34	41	28	34
65															42	50						
70															44	53	41	42	39	47	32	39
75																	43	52	41	49		
80																			43	52	36	43
85																						
90																					39	47
95																					41	49
100																					43	51

Power Dissipation Values

Rear against wall

Temperature rise [Kelvin]

DISSIPATION	A1-106 185x150x130		A31-1207 300x185x175		A41-1212 300x300x175		A71-1412 370x300x175		A51-1912 485x300x175		A81-2212 555x300x175		A61-2412 600x300x175		A11-2414 600x370x175		A12-2424 600x600x175		
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
5	12	14	7	9	6	7	5	6	4	5	4	5	4	5	3	4	3	3	
10	20	25	12	15	10	12	9	11	8	9	7	9	7	8	6	7	4	5	
15	28	34	17	21	14	16	12	15	10	13	10	12	9	11	8	10	6	7	
20	36	43	22	27	17	20	15	19	13	16	12	15	11	14	10	13	8	9	
25	43	52	26	32	21	24	18	22	16	19	14	18	14	17	12	15	9	11	
30			30	37	24	28	21	26	18	22	17	21	16	20	14	17	11	13	
40			38	47	30	36	27	32	23	28	21	26	20	25	18	22	14	16	
50			45	56	36	43	32	39	27	34	25	31	24	30	21	26	16	19	
60					42	49	37	45	32	39	29	36	28	34	25	30	19	22	
70							42	51	36	44	33	41	31	39	28	34	21	25	
80									40	49	37	46	35	43	31	38	24	28	
90											40	50	38	48	34	42	26	31	
100													42	52	37	46	28	34	
110															40	50	31	36	
120															43	53	33	39	
130																	35	42	
140																	37	44	
150																	39	47	
160																	41	49	
170																	45	53	

Front, left and upperside free

Temperature rise [Kelvin]

DISSIPATION	A1-106 185x150x130		A31-1207 300x185x175		A41-1212 300x300x175		A71-1412 370x300x175		A51-1912 485x300x175		A81-2212 555x300x175		A61-2412 600x300x175		A11-2414 600x370x175		A12-2424 600x600x175		
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
5	13	15	8	9	6	7	5	6	5	6	4	5	4	5	4	4	3	3	
10	22	27	13	16	11	13	9	11	8	10	7	9	7	9	6	8	5	5	
15	30	37	18	23	15	18	13	15	11	14	10	13	10	12	9	11	6	8	
20	38	46	23	28	19	22	16	19	14	17	13	16	12	15	11	13	8	10	
25	46	56	28	34	22	27	19	23	17	21	15	19	15	18	13	16	10	11	
30			32	39	26	31	22	27	19	24	18	22	17	21	15	19	11	13	
40			40	50	33	39	28	34	24	30	22	28	19	24	19	23	14	17	
50					39	46	33	41	29	36	27	33	25	32	23	28	17	20	
60					45	54	39	47	34	42	31	39	29	37	26	32	19	23	
70							44	53	38	47	35	44	33	42	30	37	22	26	
80									42	52	39	49	37	46	33	41	25	29	
90											43	53	41	51	36	45	27	32	
100															39	49	29	35	
110															43	53	32	38	
120																	34	40	
130																	36	43	
140																	39	46	
150																	41	48	
160																	43	51	
170																			

Power Dissipation Values

Frontside and upperside free

Temperature rise [Kelvin]

DISSIPATION	A1-706 185x150x130		A31-1207 300x185x175		A41-1212 300x300x175		A71-1412 370x300x175		A51-1912 485x300x175		A81-2212 555x300x175		A61-2412 600x300x175		A11-2414 600x370x175		A12-2424 600x600x175	
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half
5	13	16	8	10	7	8	6	7	5	6	5	6	4	5	4	5	3	3
10	24	29	14	18	11	14	10	12	8	10	8	10	7	9	7	8	5	6
15	33	40	20	24	16	19	14	17	12	15	11	14	10	13	9	11	7	8
20	41	50	25	31	20	24	17	21	15	18	14	17	13	16	12	14	8	10
25			30	37	24	28	21	25	18	22	16	20	16	20	14	17	10	12
30			34	42	28	33	24	29	20	25	19	24	18	23	16	20	12	14
40			43	54	35	41	30	37	26	32	24	30	23	29	20	25	15	17
50					42	49	36	44	31	38	29	36	27	34	24	30	17	21
60					48	57	42	51	36	44	33	41	32	39	28	35	20	24
70									40	50	38	47	36	45	32	39	23	27
80											42	52	40	50	35	44	26	30
90															39	48	28	33
100															42	52	31	36
110																	33	39
120																	35	42
130																	38	45
140																	40	48
150																	42	50
160																		
170																		

Frontside free, upper side not free

Temperature rise [Kelvin]

DISSIPATION	A1-706 185x150x130		A31-1207 300x185x175		A41-1212 300x300x175		A71-1412 370x300x175		A51-1912 485x300x175		A81-2212 555x300x175		A61-2412 600x300x175		A11-2414 600x370x175		A12-2424 600x600x175	
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half
5	13	16	8	10	7	8	6	7	5	6	5	6	4	5	4	5	3	3
10	24	29	14	18	11	14	10	12	8	10	8	10	7	9	7	8	5	6
15	33	40	20	24	16	19	14	17	12	15	11	14	10	13	9	11	7	8
20	41	50	25	31	20	24	17	21	15	18	14	17	13	16	12	14	8	10
25			30	37	24	28	21	25	18	22	16	20	16	20	14	17	10	12
30			34	42	28	33	24	29	20	25	19	24	18	23	16	20	12	14
40			43	54	35	41	30	37	26	32	24	30	23	29	20	25	15	17
50					42	49	36	44	31	38	29	36	27	34	24	30	17	21
60					48	57	42	51	36	44	33	41	32	39	28	35	20	24
70									40	50	38	47	36	45	32	39	23	27
80											42	52	40	50	35	44	26	30
90															39	48	28	33
100															42	52	31	36
110																	33	39
120																	35	42
130																	38	45
140																	40	48
150																	42	50
160																		
170																		

Power Dissipation Values

Rear against wall

Temperature rise [Kelvin]

DISSIPATION	AN1208 300x200x170		AN1612 400x300x170		AN2016 500x400x230		AN2416 600x400x230		AN2820 700x500x270		AN3325 800x600x300		AN4032 1000x800x300		
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10	12	15	8	10	6	7	5	6	4	5	3	4	2	3	
20	21	26	15	18	10	12	9	11	7	9	6	7	4	5	
30	30	36	20	25	14	17	12	15	10	12	8	10	5	7	
40	37	46	26	32	17	21	15	19	12	15	10	13	7	9	
50	45	55	31	38	21	25	18	22	15	18	12	15	8	11	
60			36	44	24	29	21	26	17	21	13	18	9	13	
70			41	49	27	33	24	29	19	24	15	20	11	14	
80			45	55	30	36	27	33	21	26	17	23	12	16	
90					33	40	29	36	23	29	18	25	13	18	
100					36	44	32	39	26	31	20	27	14	19	
110					39	47	34	42	28	34	22	29	15	21	
120					42	50	37	45	30	36	23	31	16	22	
130							39	49	32	39	25	33	17	24	
140							42	51	33	41	26	35	19	25	
150									35	43	28	37	20	26	
160									37	46	29	39	21	28	
170									39	48	31	41	22	29	
180									41	50	32	43	23	31	
190											34	45	24	32	
200											35	47	25	33	
210											37	49	26	35	
220											38	51	27	36	
230													28	37	
240													29	39	
250													30	40	
260													31	41	
270													31	42	
280													32	44	
290													33	45	
300													34	46	
310													35	47	
320													36	49	
330													37	50	
340															

Front, left and upperside free

Temperature rise [Kelvin]

DISSIPATION	AN1208 300x200x170		AN1612 400x300x170		AN2016 500x400x230		AN2416 600x400x230		AN2820 700x500x270		AN3325 800x600x300		AN4032 1000x800x300		
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10	13	16	9	11	6	7	5	7	4	5	3	4	2	3	
20	23	28	16	19	10	13	9	11	7	9	6	8	4	6	
30	31	38	22	26	15	18	13	16	10	12	8	11	6	8	
40	39	49	27	33	18	22	16	20	13	16	10	13	7	10	
50	47	58	32	40	22	27	19	24	15	19	12	16	9	12	
60			38	46	25	31	23	28	18	22	14	19	10	13	
70			43	52	29	35	26	31	20	24	16	21	11	15	
80					32	39	28	35	22	27	18	23	13	17	
90					35	43	31	38	24	30	19	26	14	19	
100					38	46	34	42	27	33	21	28	15	20	
110					41	50	37	45	29	35	23	30	16	22	
120							39	48	31	38	24	32	18	23	
130							42	52	33	40	26	35	19	25	
140									35	43	28	37	20	26	
150									37	45	29	39	21	28	
160									39	48	31	41	22	29	
170									41	50	32	43	23	31	
180									43	52	34	45	24	32	
190											35	47	26	34	
200											37	49	27	35	
210											38	51	28	37	
220													29	38	
230													30	39	
240													31	41	
250													32	42	
260													33	44	
270													34	45	
280													35	46	
290													36	48	
300													37	49	
310													38	50	
320															
330															
340															

Power Dissipation Values

Frontside and upperside free

Temperature rise [Kelvin]

DISSIPATION Watt	AN1208 300x200x170		AN1612 400x300x170		AN2016 500x400x230		AN2416 600x400x230		AN2820 700x500x270		AN3325 800x600x300		AN4032 1000x800x300	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10	14	17	9	11	6	8	6	7	4	5	4	5	3	3
20	24	30	16	20	11	14	10	12	8	9	7	8	4	6
30	33	41	23	28	16	19	14	17	11	13	9	11	6	8
40	42	52	29	35	20	24	17	22	13	16	11	14	8	10
50			34	42	23	29	21	26	16	20	14	17	9	12
60			40	48	27	33	24	30	18	23	16	19	11	14
70			45	55	31	37	27	34	21	26	18	22	12	16
80					34	42	31	38	23	29	20	24	14	18
90					38	46	34	41	26	31	22	27	15	19
100					41	50	36	45	28	34	24	29	16	21
110							39	49	30	37	26	31	18	23
120							42	52	32	40	27	34	19	24
130									34	42	29	36	20	26
140									37	45	31	38	21	27
150									39	47	33	40	23	29
160									41	50	35	42	24	31
170											36	44	25	32
180											38	47	26	34
190											40	49	27	35
200											41	51	29	37
210													30	38
220													31	40
230													32	41
240													33	42
250													34	44
260													35	45
270													36	47
280													37	48
290													39	49
300													40	51
310														
320														
330														
340														

Frontside free, upper side not free

Temperature rise [Kelvin]

DISSIPATION Watt	AN1208 300x200x170		AN1612 400x300x170		AN2016 500x400x230		AN2416 600x400x230		AN2820 700x500x270		AN3325 800x600x300		AN4032 1000x800x300	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10	15	19	11	13	7	9	6	8	5	6	4	5	3	4
20	27	33	19	23	12	15	11	14	8	10	7	8	5	6
30	37	46	26	32	17	21	15	19	11	14	10	12	7	9
40	47	57	33	40	22	26	19	24	14	18	12	15	9	11
50			39	48	26	32	23	28	17	21	14	18	10	14
60			45	56	30	37	27	33	20	24	17	21	12	16
70					34	41	30	37	23	28	19	23	13	18
80					38	46	33	41	25	31	21	26	15	20
90					42	51	37	45	28	34	23	28	16	22
100							40	49	30	37	25	31	18	24
110									32	40	27	33	19	26
120									35	43	29	36	21	27
130									37	45	31	38	22	29
140									39	48	33	41	23	31
150									42	51	35	43	25	33
160											37	45	26	35
170											39	47	27	36
180											41	50	29	38
190													30	40
200													31	41
210													32	43
220													34	45
230													35	46
240													36	48
250													37	49
260													39	51
270														
280														
290														
300														
310														
320														
330														
340														

Power Dissipation Values

Rear against wall (wall mounting)

Temperature rise [Kelvin]

DISSIPATION Watt	PS 2020 500x500		PS 2030 500x750		PS 3020 750x500		PS 3030 750x750		PS 3040 750x1000		PS 3052 750x1250		PS 4020 1000x500		PS 4030 1000x750		PS4040/4042 1000x1000		PS 4052 1000x1250		PS 5030 1250x750		PS5042/5046 1250x1000		
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	
10	4	5	4	4	4	5																			
20	8	9	7	7	6	8	5	6	4	5			5	7											
30	11	13																							
40	13	16	11	13	11	14	9	11	7	9	6	7	9	13	7	9	5	7	5	6	5	8			
50	16	19																							
60	19	22	16	18	16	19	12	16	10	12	8	10	12	18	10	13	7	10	6	8	8	11	6	8	
70	21	25																							
80	23	28	20	23	20	24	15	20	12	16	10	12	16	22	12	16									
90	26	31																							
100	28	33	24	27	23	29	18	23	15	19	12	14	19	27	14	19	11	14	9	12	11	16	9	13	
120	32	38	28	31	27	33	21	27						22	31	17	23								
140	37	44	31	35	31	38	24	31	19	24	15	19	25	35	19	26	15	19	12	16	15	21	12	16	
160	41	48	35	39	34	42	27	34						27	39	21	28								
180	45	53	38	43	38	46	29	38	24	30	19	23	30	43	23	31	18	23	15	19	18	25	15	20	
200	49	58	42	47	41	51	32	41						33	47	25	34								
220	53	63	45	51	44	55	34	44	28	35	22	27	35	50	27	37	21	27	18	23	21	30	18	24	
240			48	55	47	58	37	47						38	54	29	39								
260			52	58	51	62	39	51	32	40	25	31	40	58	31	42	24	31	20	26	24	34	20	27	
280							42	54						43	61	33	45								
300							44	57	36	45	28	35	45	65	35	47	27	35	23	29	27	38	23	30	
350							50	64	40	51	32	40	51	73	40	53	30	39	26	33	31	43	25	34	
400									45	57	36	44			44	59	34	44	29	37	34	48	28	38	
450									49	62	39	48			48	65	37	48	32	40	38	53	31	42	
500													43	53		53	71	40	53	34	44	41	58	34	46
550													46	57				44	57	37	47	45	63	37	49
600													49	61				47	61	40	51	48	67	39	53
650													53	65				50	65	42	54	51	72	42	57
700																				45	57			45	60
750																				48	61			47	63
800																				50	64			50	67

Front, left and upperside free

Temperature rise [Kelvin]

DISSIPATION Watt	PS 2020 500x500		PS 2030 500x750		PS 3020 750x500		PS 3030 750x750		PS 3040 750x1000		PS 3052 750x1250		PS 4020 1000x500		PS 4030 1000x750		PS4040/4042 1000x1000		PS 4052 1000x1250		PS 5030 1250x750		PS5042/5046 1250x1000	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10	4	5	4	4	4	5																		
20	8	10	7	8	7	8	5	7	4	5			5	8	4	6								
30	11	13	9	11	9	12																		
40	14	17	12	13	12	15	9	12	7	9	6	7	10	13	7	10	6	7	5	6	6	8	5	6
50	17	20	14	16	14	17																		
60	19	23	16	19	16	20	13	16	10	13	8	10	13	19	10	14	8	10	7	8	8	11	7	9
70	22	26	19	21	19	23																		
80	25	29	21	23	21	25	16	20	13	16	10	13	17	23	13	17	10	13	8	10	10	14	8	11
90	27	32	23	26	23	28																		
100	29	35	25	28	25	30	19	24	16	19	12	15	20	28	16	21	12	15	10	12	12	17	10	13
120	34	40	29	32	29	35	22	28	18	22			23	32	18	24								
140	39	46	32	37	32	40	25	32	20	25	16	20	26	37	20	27	15	20	13	16	16	22	13	17
160	43	51	36	41	36	44	28	35	23	28			29	41	23	30								
180	47	56	40	45	40	49	31	39	25	31	20	24	32	45	25	33	19	24	16	20	20	27	16	21
200	51	61	43	49	43	53	33	42	27	34			35	49	27	36								
220			47	53	47	57	36	46	29	36	23	28	38	53	29	39	22	28	19	23	23	32	19	25
240			50	56	50	62	39	49	32	39			40	57	32	42								
260							41	52	34	42	27	32	43	60	34	45	25	32	21	27	27	37	21	28
280							44	55	36	44			46	64	36	47								
300							46	58	38	47	30	36	48	68	38	50	28	36	24	30	30	41	24	32
350							52	66	43	53	34	41	55	77	43	57	32	41	27	34	34	47	27	36
400									48	59	38	46			48	63	36	46	30	38	38	52	30	40
450									52	65	41	50			52	69	39	50	33	41	41	57	33	44
500													45	55			43	55	36	45	45	62	36	48
550													49	59			46	59	39	49	49	67	39	52
600													52	63			50	63	42	52	52	72	42	55
650																			45	56			45	59
700																			47	59			47	63
750																			50	62			50	66

Power Dissipation Values

Frontside and upperside free

Temperature rise [Kelvin]

DISSIPATION	PS 2020		PS 2030		PS 3020		PS 3030		PS 3040		PS 3052		PS 4020		PS 4030		PS4040/4042		PS 4052		PS 5030		PS5042/5046	
	500x500		500x750		750x500		750x750		750x1000		750x1250		1000x500		1000x750		1000x1000		1000x1250		1250x750		1250x1000	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10	5	6	4	5	4	5																		
20	9	10	7	8	7	8	5	7	5	5			6	8	5	6								
30	12	14	10	11	10	12																		
40	15	18	12	14	12	15	10	12	8	9	6	7	11	13	8	10	6	7	5	6	7	9	5	6
50	18	21	15	17	15	18																		
60	21	25	17	19	17	21	13	16	11	13	9	10	15	19	11	14	8	10	7	8	9	12	7	9
70	23	28	19	22	19	24																		
80	26	31	21	24	22	27	17	20	14	16	11	13	19	23	14	18	11	13	9	11	11	15	9	11
90	29	34	23	26	24	29																		
100	31	37	26	29	26	32	20	25	17	20	13	15	23	28	17	22	13	16	10	13	14	18	11	14
120	36	43	30	33	30	37	23	28	19	23			26	33	19	25	15	18						
140	41	49	33	38	34	42	26	32	22	26	17	20	30	37	22	28	17	21	14	16	18	24	14	18
160	46	54	37	42	38	47	29	36	24	29			33	41	25	31	18	23						
180			41	46	42	51	32	39	27	32	21	25	36	45	27	35	20	25	17	20	22	29	17	22
200			45	50	45	56	35	43	29	34			39	49	29	38	22	27						
220			48	54	49	60	38	46	31	37	25	29	42	53	32	41	24	29	20	24	26	35	20	26
240			52	58	52	65	41	50	33	40			46	57										
260							43	53	36	42	28	33	49	61										
280							46	56	38	45			52	64										
300							48	59	40	48	32	37			41	52	31	38	25	30	33	44	24	33
350							55	67	45	54	36	42			46	59	35	43	28	34	37	50	26	37
400									50	60	40	47			51	66	39	48	32	38	42	56	29	41
450													44	52			42	52	35	42	46	61	32	45
500													48	56			46	57	38	46	50	67	38	49
550													52	61			50	62	41	50			42	53
600																			44	53			45	57
650																			47	57			47	61
700																			50	60			50	65

Frontside free, upperside not free

Temperature rise [Kelvin]

DISSIPATION	PS 2020		PS 2030		PS 3020		PS 3030		PS 3040		PS 3052		PS 4020		PS 4030		PS4040/4042		PS 4052		PS 5030		PS5042/5046	
	500x500		500x750		750x500		750x750		750x1000		750x1250		1000x500		1000x750		1000x1000		1000x1250		1250x750		1250x1000	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10	6	7	4	5	4	5							4	5										
20	10	12	8	9	8	9	6	8	5	6	4	5	7	8	5	7					4	6		
30	14	16	11	12	11	13							9	11										
40	17	20	13	15	13	16	11	13	9	11	7	9	12	14	9	12	7	9	5	7	7	10	5	7
50	20	24	16	18	16	20							14	17										
60	24	28	19	21	18	23	15	18	12	15	10	13	16	20	12	16	10	12	8	9	10	14	7	10
70	27	32	21	24	21	26							19	23										
80	30	35	24	27	23	28	19	23	16	19	13	16	20	25	15	20	12	16	10	12	13	18	9	13
90	33	39	26	29	25	31																		
100	36	42	28	32	28	34	23	28	19	23	16	19	24	30	18	24	15	19	11	14	15	21	11	15
120	41	49	33	37	32	39	27	32	22	27	18	22	28	35	21	28					18	24		
140	47	55	37	42	36	45	31	36	24	30	21	25	32	39	24	32	19	25	15	19	20	28	15	20
160	52	62	41	46	40	50	34	40	27	33	23	28	35	44	27	35					22	31		
180			45	51	44	55	37	44	30	37	25	30	39	48	29	39	23	30	18	23	24	34	18	24
200			49	55	48	60	41	48	32	40	27	33	42	53	32	42								
220			53	60	52	64	44	52	35	43	30	36	46	57	35	46	28	35	22	27	29	40	21	28
240							47	56	38	46	32	38	49	61	37	49								
260							50	60	40	49	34	41	52	65	40	52	32	40	25	31	33	45	24	32
280							43	52	36	43			42	56										
300							45	55	38	46			44	59	35	45	35	45	28	34	37	51	27	36
350							51	63	43	52			50	66	40	50	40	51	31	39	42	58	31	41
400									48	58					45	57	45	57	35	43	46	64	34	46
450									52	64					49	63	49	63	38	48	51	70	38	50
500															53	68			42	52			41	55
550																			45	56			44	59
600																			48	60			48	63
650																			51	64			51	67

Stand alone

Temperature rise [Kelvin]

DISSIPATION	PS 2020		PS 2030		PS 3020		PS 3030		PS 3040		PS 3052		PS 4020		PS 4030		PS4040/4042		PS 4052		PS 5030		PS5042/5046	
	500x500		500x750		750x500		750x750		750x1000		750x1250		1000x500		1000x750		1000x1000		1000x1250		1250x750		1250x1000	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
20	7	9	6	7	6	8	4	6					5	7										
40	13	15	10	13	10	13	8	10	6	8	5	6	8	12	6	8	5	6	4	5	5	7		
60	17	21	14	17	14	19	11	14					11	16	8	11								
80	22	26	17	22	17	23	13	18	10	13	9	11	14	21	10	14	8	11	7	9	8	12	7	9
100	26	31	21	26	20	28	16	21					17	25	12	16								
120	30	36	24	30	24	33	19	25	14	18	12	15	20	28	14	19	11	15	9	12	12	17	9	13
140	34	41	27	34	27	37	21	28					22	32	16	22								
160	38	46	30	38	30	41	24	31	18	23	15	19	25	36	17	24	14	19	12	15	15	21	12	16
180	42	50	33	42	33	45	26	34					27	39	19	26								
200	46	55	36	46	36	49	28	37	21	27	18	23	29	43	21	29	17	22	14	18	17	25	14	19
220	50	59	39	50	38	53	30	40					32	46	23	31								
250			43	55	43	59	34	45	25	33	21	27	35	51	25	34	20	27	17	22	21	30	17	23
300			50	64	49	68	39	52																

Power Dissipation Values

Stand alone Temperature rise [Kelvin]

DISSIPATION Watt	EH1 752x385x270		EH2-NA 256x433x240		EH2-NB 516x433x240		EH2-NC 791x433x240		EH2-ND 1066x433x240	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
	10		5	7	8	5	6	7	5	5
20	7	9	13	14	8	10	7	8	5	8
30	10	12	17	19	11	14	9	12	7	11
40	12	15	22	24	14	17	12	15	9	14
50	15	18	26	29	17	21	14	17	11	17
60	17	21	30	34	20	24	16	20	13	20
70	19	24	34	38	23	27	18	23	14	23
80	21	26	38	43	25	30	20	25	16	25
90	23	29	42	47	28	33	23	28	18	28
100	25	32	46	51	30	36	25	30	19	30
120	29	37	53		35	42	28	35	22	35
140	33	41			39	48	32	40	25	40
160	37	46			44	53	36	44	28	44
180	41	51			48		39	49	31	49
200	44	55			53		43	53	34	53
220	48				57		46		36	57
240	51						50		39	
260	55						53		42	
280							56		44	
300									47	
350									53	

Stand alone Temperature rise [Kelvin]

DISSIPATION Watt	EH3/F-0 EH3/AP-0 875x590x320		EH3/F-1 EH3/AP-1 875x785x320		EH3/F-2 EH3/AP-2 875x1115x320		EH3/F-3 EH3/AP-3 875x1445x320		EH3/AP-20 1125x590x320		EH3/AP-21 1125x785x320		EH3/AP-22 1125x1115x320		EH3/AP23 1125x1445x320		EH6-00 830x470x320		EH6-0 830x605x320		EH6-1 830x800x320		
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	
	10									5		4						4	5	7			5
20	5	6		5					5	7	4	6		4			5	8	11	7	9	5	7
30	6	9	5	7		5			5	9	5	7		5	4	4	9	13	8	11	7	9	
40	8	11	6	9	5	6		5	6	9	5	7		5	4	4	9	13	8	11	7	9	
50	10	13	8	10	6	7	5	6	8	11	6	8	5	6	4	5	11	16	10	14	8	11	
60	11	16	9	12	7	9	5	7	9	13	7	10	5	7	5	6	13	19	11	16	9	12	
70	13	18	10	13	7	10	6	8	10	14	8	11	6	8	5	7	15	21	13	18	10	14	
80	14	20	11	15	8	11	7	8	11	16	9	12	7	9	6	8	17	23	14	20	12	15	
90	16	22	12	16	9	12	7	9	12	18	10	14	7	10	7	9	18	26	16	22	13	17	
100	17	23	13	18	10	13	8	10	13	19	11	15	8	11	7	9	20	28	17	24	14	18	
120	20	27	15	21	11	15	9	12	15	22	12	17	9	12	8	11	23	32	20	27	16	21	
140	22	31	17	23	13	17	10	13	17	25	14	19	10	14	9	12	26	37	23	31	18	24	
160	25	34	19	26	14	19	12	15	19	28	15	22	12	16	10	14	29	41	25	35	20	27	
180	27	38	21	29	16	21	13	16	21	31	17	24	13	17	11	15	32	45	28	38	22	29	
200	29	41	23	31	17	22	14	18	23	33	18	26	14	19	13	16	34	49	30	41	24	32	
220	32	44	25	34	19	24	15	19	25	36	20	28	15	20	14	18	37	53	33	45	26	35	
240	34	47	27	36	20	26	16	21	27	39	21	30	16	22	14	19	40	57	35	48	28	37	
260	36	51	29	38	21	28	17	22	28	41	23	32	17	23	15	20	43		37	51	30	40	
280	39	54	30	41	23	29	18	23	30	44	24	34	18	25	16	21	45		40	54	32	42	
300	41	57	32	43	24	31	19	25	32	46	26	36	19	26	17	23	48		42		33	44	
350	46		36	49	27	35	22	28	36	52	29	40	22	29	20	26	54		47		38	50	
400	51		41	54	30	39	24	31	40		32	45	24	33	22	29		53		42	56		
450	57		45		33	43	27	34	44		35	50	27	36	24	31					46		
500			48		36	47	29	37	48		39	54	29	39	26	34					50		
550			52		39	51	31	40	52		42		31	42	28	37					54		
600			56		42	54	34	43	56		45		34	45	30	40							
650					45		36	46			48		36	48	32	42							
700					47		38	49			51		38	51	34	45							
750					50		40	51			53		40	54	36	47							
800					53		42	54			56		43		38	50							
850					55		44	57					45		40	52							
900							47						47		42	55							
950							49						49		44								
1000							51						51		46								
1100							55						55		49								
1200															53								
1300															56								

Power Dissipation Values

Stand alone

Temperature rise [Kelvin]

DISSIPATION Watt	EH3/DC-1 875x785x320		EH3/DC-2 875x1115x320		EH3/GD-AP - 031 875x676x424		EH3/GD-AP - 041 875x871x424		EH3/GD-AP - 051 875x1200x424		EH3/GD-AP - 233 1125x676x676		EH3/GD-AP - 243 1125x871x676		EH3/GD-AP - 253 1125x1200x676	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10																
20		5				5										
30	5	7		5	5	7	4	5				4				
40	6	9	5	6	6	8	5	7		5		5		5		
50	8	10	6	7	7	10	6	8	5	6	5	6	4	5		5
60	9	12	7	9	9	11	7	9	5	7	5	7	5	6	4	5
70	10	13	7	10	10	13	8	10	6	8	6	8	6	7	5	6
80	11	15	8	11	11	14	9	12	7	9	7	9	6	8	5	7
90	12	16	9	12	12	16	10	13	8	10	7	10	7	9	6	7
100	13	18	10	13	13	17	11	14	8	11	8	11	7	10	6	8
120	15	21	11	15	15	20	12	16	10	12	9	12	9	11	7	9
140	17	23	13	17	17	22	14	18	11	14	11	14	10	13	8	11
160	19	26	14	19	19	25	16	20	12	15	12	15	11	14	9	12
180	21	29	16	21	21	27	17	22	13	17	13	17	12	15	10	13
200	23	31	17	22	23	30	19	24	14	18	14	18	13	17	11	14
220	25	34	19	24	24	32	20	26	16	20	15	20	14	18	12	15
240	27	36	20	26	26	35	22	28	17	21	16	21	15	19	13	16
260	29	38	21	28	28	37	23	30	18	23	17	23	16	21	14	18
280	30	41	23	29	30	39	25	32	19	24	18	24	17	22	15	19
300	32	43	24	31	31	41	26	34	20	25	19	26	18	23	16	20
350	36	49	27	35	35	47	29	38	23	29	22	29	20	26	18	22
400	41	54	30	39	39	52	33	42	25	32	25	32	23	29	20	25
450	45		33	43	43		36	47	28	35	27	35	25	32	22	27
500	48		36	47	47		39	51	30	38	29	38	27	35	24	30
550	52		39	51	51		42	55	33	41	32	42	29	38	25	32
600	56		42	54	55		45		35	44	34	45	31	40	27	34
650			45				48		37	47	36	47	34	43	29	37
700			47				51		40	50	38	50	36	46	31	39
750			50				54		42	53	41	53	38	48	33	41
800			53						44	56	43	56	40	51	34	43
850			55						46		45		42	54	36	46
900									49		47		44	56	38	48
950									51		49		46		40	50
1000									53		51		47		41	52
1100											55		51		44	56
1200													55		48	
1300															51	
1400															54	