IHLP Selection Example

IHLP-1616 APPLICATIONS																
L_0 µH	DCR Ω Max.	I_{HEAT} (A)	I_{SAT} (A)	R_{TH} (1)	P_{HEAT} (2) (W)	ET_{100} (3)	K_0 (4)	K_1 (5)	DCR Ω Max.	I_{HEAT} (A)	I_{SAT} (A)	R_{TH} (1)	P_{HEAT} (2) (W)	ET_{100} (3)	K_0 (4)	K_1 (5)
IHLP-1616AB-01									IHLP-1616AB-11							
0.047	0.00375	13.00	32.00	63.11	0.63	0.02	0.14	0.00028	0.0033	15.00	15.00	51.35	0.78	0.01	0.12	0.00036
0.10	0.006	11.50	25.00	47.65	0.84	0.08	1.13	0.00028	0.0055	12.00	12.00	48.14	0.83	0.07	0.91	0.00032
0.22	0.011	8.50	20.00	47.98	0.83	0.10	0.55	0.00077	0.0105	9.50	9.50	40.43	0.99	0.10	0.67	0.00026
0.47	0.022	5.00	13.00	69.32	0.58	0.18	0.87	0.00067	0.021	6.00	6.00	50.68	0.79	0.16	0.70	0.00067
1.00	0.05	4.00	8.50	48.14	0.83	0.27	0.86	0.00053	0.047	4.20	4.50	45.70	0.88	0.23	0.66	0.00053
1.20	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	0.055	3.75	3.75	49.30	0.81	0.22	0.47	0.00171
1.50	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	0.075	3.25	3.25	48.26	0.83	0.25	0.45	0.00171
2.20	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	0.100	2.75	3.00	50.93	0.79	0.32	0.53	0.00171
IHLP-1616BZ-01									IHLP-1616BZ-11							
0.10	0.005	11.00	35.00	63.66	0.63	0.10	1.64	0.00032	0.0045	12.00	12.00	58.71	0.68	0.08	1.17	0.00032
0.22	0.0066	13.00	24.00	34.18	1.17	0.12	0.78	0.00097	0.0085	9.00	9.00	56.31	0.71	0.10	0.56	0.00097
0.47	0.018	5.60	11.50	69.08	0.58	0.19	0.72	0.00083	0.0160	7.00	7.00	48.79	0.82	0.13	0.46	0.00083
1.00	0.037	3.75	8.50	74.69	0.54	0.29	0.95	0.00077	0.0270	4.50	5.00	71.32	0.56	0.31	1.08	0.00077
2.20	0.09	2.85	6.00	53.34	0.75	0.53	1.30	0.00053	0.0680	3.25	3.25	53.80	0.74	0.41	1.10	0.00060
4.70	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	0.1500	2.00	1.75	61.90	0.65	0.53	0.75	0.00196

Notes

(1) Thermal resistance of the part (°C/W)

(2) Total power loss that will cause an approximate ΔT of 40 °C

(3) V-µs product that corresponds to a peak flux density of 100 Gauss

(4) Core loss constant

(5) AC loss constant

- **Bold: Estimated or not used values**

APPLICATION NOTE

IHLP Selection Example

IHLP-2525 APPLICATIONS																
L_0 µH	DCR Ω Max.	I_{HEAT} (A)	I_{SAT} (A)	R_{TH} (1)	P_{HEAT} (2) (W)	ET_{100} (3)	K_0 (4)	K_1 (5)	DCR Ω Max.	I_{HEAT} (A)	I_{SAT} (A)	R_{TH} (1)	P_{HEAT} (2) (W)	ET_{100} (3)	K_0 (4)	K_1 (5)
IHLP-2525AH-01									IHLP-2525AH-11							
0.100	0.0035	18.00	118.00	35.66	1.12	0.10	1.78	0.00050	**0.0026**	**19.50**	**19.50**	**35.06**	**1.14**	**0.09**	**1.62**	**0.00050**
0.15	0.0052	15.00	110.00	32.78	1.22	0.23	4.85	0.00040	**0.0035**	**17.00**	**17.00**	**34.27**	**1.17**	**0.21**	**4.41**	**0.00044**
0.22	0.0057	14.00	80.00	33.37	1.20	0.22	2.77	0.00120	**0.0038**	**16.50**	**16.50**	**33.50**	**1.19**	**0.20**	**2.52**	**0.00170**
0.33	0.007	12.00	65.00	36.47	1.10	0.26	2.37	0.00120	**0.0044**	**14.50**	**14.50**	**37.47**	**1.07**	**0.24**	**2.15**	**0.00150**
0.47	0.0093	11.00	55.00	34.10	1.17	0.49	5.22	0.00120	**0.0063**	**13.00**	**13.00**	**32.82**	**1.22**	**0.45**	**4.75**	**0.00133**
0.68	0.0139	9.00	54.00	33.69	1.19	0.52	4.08	0.00107	**0.0085**	**11.00**	**11.00**	**33.58**	**1.19**	**0.47**	**3.71**	**0.00133**
0.82	0.0159	8.00	53.00	39.25	1.02	0.54	3.83	0.00306	**0.0107**	**9.50**	**9.50**	**35.96**	**1.11**	**0.49**	**3.48**	**0.00120**
1.00	0.0183	7.00	50.00	40.42	0.99	0.74	5.51	0.00391	**0.0136**	**9.00**	**8.50**	**31.44**	**1.27**	**0.67**	**5.01**	**0.00440**
1.50	0.034	4.00	48.00	66.45	0.60	0.66	3.20	0.00077	**0.0205**	**7.00**	**6.50**	**34.51**	**1.16**	**0.60**	**2.91**	**0.00097**
2.20	0.046	3.75	32.00	61.16	0.65	0.76	2.63	0.00306	**0.0302**	**5.50**	**5.00**	**37.94**	**1.05**	**0.69**	**2.39**	**0.00306**
2.50	0.052	3.50	32.00	56.70	0.71	1.26	5.34	0.00281	**0.0330**	**5.00**	**4.50**	**42.01**	**0.95**	**1.15**	**4.85**	**0.00306**
3.30	0.0601	3.25	27.00	58.39	0.69	1.32	5.07	0.00281	**0.0394**	**4.50**	**4.00**	**43.44**	**0.92**	**1.20**	**4.61**	**0.00306**
4.70	0.078	3.00	22.00	50.28	0.80	1.27	3.70	0.00281	**0.0576**	**3.50**	**3.00**	**49.12**	**0.81**	**1.15**	**3.36**	**0.00281**
IHLP-2525BD-01									IHLP-2525BD-11							
0.10	0.0017	30.00	50.00	25.68	1.56	0.13	3.13	0.00071	**0.0011**	**37.00**	**37.00**	**25.32**	**1.58**	**0.12**	**2.85**	**0.00071**
0.22	0.0032	21.00	34.00	27.10	1.48	0.24	3.46	0.00170	**0.0015**	**30.00**	**30.00**	**27.51**	**1.45**	**0.22**	**3.15**	**0.00170**
0.33	0.0041	18.00	22.00	28.91	1.38	0.28	3.02	0.00170	**0.0021**	**25.00**	**25.00**	**29.19**	**1.37**	**0.25**	**2.75**	**0.00170**
0.47	0.0065	13.50	21.00	31.70	1.26	0.33	2.78	0.00150	**0.0034**	**19.00**	**19.00**	**30.97**	**1.29**	**0.30**	**2.53**	**0.00170**
0.68	0.0094	11.00	18.00	32.93	1.21	0.41	2.80	0.00133	**0.0052**	**14.50**	**14.50**	**34.35**	**1.16**	**0.37**	**2.55**	**0.00150**
0.82	0.0118	10.00	17.00	32.70	1.22	0.49	3.29	0.00120	**0.0070**	**13.00**	**13.00**	**32.56**	**1.23**	**0.45**	**2.99**	**0.00133**
1.00	0.142	9.00	16.00	32.67	1.22	0.69	5.23	0.00120	**0.0081**	**12.00**	**11.50**	**32.09**	**1.25**	**0.63**	**4.75**	**0.00133**
1.50	0.0212	7.50	15.00	33.31	1.20	0.92	6.01	0.00107	**0.0133**	**9.50**	**9.00**	**33.11**	**1.21**	**0.84**	**5.46**	**0.00120**
2.20	0.034	6.50	14.00	29.30	1.37	1.06	6.15	0.00107	**0.0219**	**8.00**	**7.00**	**30.09**	**1.33**	**0.96**	**5.59**	**0.00107**
3.30	0.0516	5.00	13.00	37.99	1.05	1.39	6.03	0.00354	**0.0410**	**6.00**	**5.50**	**33.20**	**1.20**	**1.26**	**5.48**	**0.00354**
4.70	0.063	4.50	10.00	37.87	1.06	1.27	3.87	0.00354	**0.0507**	**5.00**	**5.00**	**38.09**	**1.05**	**1.15**	**3.52**	**0.00354**
6.80	0.095	3.50	9.00	39.03	1.02	2.01	5.82	0.00306	**0.0708**	**4.00**	**4.00**	**40.12**	**1.00**	**1.83**	**5.29**	**0.00306**
8.20	0.106	3.00	8.00	45.74	0.87	1.98	5.11	0.00306	**0.0818**	**3.50**	**3.00**	**43.53**	**0.92**	**1.80**	**4.65**	**0.00306**
10	0.129	2.50	7.00	47.98	0.83	2.55	7.08	0.00281	**0.0926**	**3.00**	**2.50**	**46.40**	**0.86**	**2.32**	**6.44**	**0.00281**

Notes

(1) Thermal resistance of the part (°C/W)

(2) Total power loss that will cause an approximate ΔT of 40 °C

(3) V-µs product that corresponds to a peak flux density of 100 Gauss

(4) Core loss constant

(5) AC loss constant

- **Bold: Estimated or not used values**

IHLP Selection Example

IHLP-2525 APPLICATIONS															
L_0 µH	DCR Ω Max.	I_{HEAT} (A)	I_{SAT} (A)	R_{TH} (1)	P_{HEAT} (2) (W)	ET_{100} (3)	K_0 (4)	K_1 (5)	DCR Ω Max.	I_{HEAT} (A)	I_{SAT} (A)	R_{TH} (1)	P_{HEAT} (2) (W)	ET_{100} (3)	K_0 (4)	K_1 (5)
IHLP-2525CZ-01									IHLP-2525CZ-11							
0.10	0.0017	32.50	60.00	21.88	1.83	0.11	2.42	0.00071	**0.0008**	**42.00**	**33.50**	**27.03**	**1.48**	**0.10**	**2.20**	**0.00090**
0.15	0.0025	26.00	52.00	26.99	1.48	0.26	7.53	0.00063	**0.0015**	**33.50**	**27.00**	**26.81**	**1.49**	**0.24**	**6.85**	**0.00071**
0.20	0.003	24.00	41.00	25.07	1.60	0.26	4.00	0.00190	**0.0020**	**28.50**	**23.00**	**26.47**	**1.51**	**0.24**	**3.64**	**0.00213**
0.22	0.0028	23.00	40.00	26.21	1.53	0.31	4.99	0.00190	**0.0021**	**26.50**	**21.50**	**26.12**	**1.53**	**0.28**	**4.54**	**0.00213**
0.33	0.0039	20.00	30.00	24.76	1.62	0.35	4.15	0.00190	**0.0033**	**20.00**	**16.00**	**28.97**	**1.38**	**0.32**	**3.77**	**0.00190**
0.47	0.0042	17.50	26.00	28.30	1.41	0.41	4.11	0.00190	**0.0035**	**18.00**	**14.50**	**32.31**	**1.24**	**0.37**	**3.74**	**0.00190**
0.68	0.0055	15.50	25.00	28.85	1.39	0.61	5.88	0.00190	**0.0049**	**17.00**	**13.50**	**26.99**	**1.48**	**0.55**	**5.35**	**0.00190**
0.82	0.008	13.00	24.00	30.61	1.31	0.62	5.16	0.00150	**0.0051**	**16.00**	**13.00**	**31.64**	**1.26**	**0.56**	**4.69**	**0.00190**
1.00	0.01	11.00	22.00	31.83	1.26	0.68	4.99	0.00150	0.0080	12.50	9.50	29.19	1.44	0.68	5.44	0.00150
1.50	0.015	9.00	18.00	30.57	1.31	1.04	7.65	0.00120	**0.0096**	**11.50**	**9.00**	**29.22**	**1.37**	**0.95**	**6.95**	**0.00150**
2.20	0.02	8.00	14.00	30.09	1.33	1.00	5.62	0.00120	0.0165	9.00	7.00	27.26	1.47	0.98	5.75	0.00120
3.30	0.03	6.00	13.50	34.39	1.16	1.53	8.23	0.00107	0.0260	7.00	6.50	28.52	1.40	1.38	7.46	0.00107
4.70	0.04	5.50	10.00	30.97	1.29	1.30	3.80	0.00391	0.0334	6.00	4.00	30.28	1.32	1.13	3.30	0.00391
6.80	0.06	4.50	8.00	31.70	1.26	1.75	5.01	0.00354	0.0410	5.50	4.00	25.69	1.56	1.72	5.58	0.00354
8.20	0.068	4.00	7.50	33.85	1.18	2.09	5.79	0.00354	0.0549	5.00	4.00	26.36	1.52	1.85	5.38	0.00354
10	0.105	3.00	7.00	37.76	1.06	2.74	7.23	0.00281	0.0712	4.00	3.50	31.95	1.25	1.95	5.04	0.00306
22	**0.191**	**2.25**	**3.75**	**39.35**	**1.02**	**3.81**	**7.22**	**0.00244**	0.1320	2.90	2.50	31.97	1.25	3.27	6.79	0.00281
IHLP-2525EZ-01									IHLP-2525EZ-11							
0.56	0.0036	20.00	12.00	25.49	1.57	TBD	TBD	0.00213	**0.0035**	**21.00**	**21.00**	**23.48**	**1.70**	**0.45**	**3.46**	**0.00213**
0.68	0.0045	18.00	11.50	25.47	1.57	TBD	TBD	0.00190	**0.0045**	**19.50**	**19.50**	**21.88**	**1.83**	**0.55**	**4.45**	**0.00190**
0.82	0.0049	16.50	13.00	27.68	1.45	TBD	TBD	0.00190	**0.0047**	**18.00**	**18.00**	**24.40**	**1.64**	**0.79**	**7.60**	**0.00190**
1.00	0.0065	13.00	15.00	36.63	1.09	TBD	TBD	0.00150	**0.0052**	**17.00**	**17.00**	**26.84**	**1.49**	**0.82**	**6.58**	**0.00190**
1.50	0.009	12.00	12.00	27.99	1.43	TBD	TBD	0.00150	**0.0078**	**14.00**	**13.00**	**23.68**	**1.69**	**1.10**	**8.02**	**0.00170**
2.20	0.0136	10.00	10.00	26.66	1.50	TBD	TBD	0.00133	**0.0108**	**11.00**	**10.00**	**27.79**	**1.44**	**1.49**	**10.07**	**0.00150**
3.30	0.0209	8.00	8.00	27.22	1.47	TBD	TBD	0.00120	**0.0166**	**9.00**	**8.50**	**27.07**	**1.48**	**2.17**	**14.18**	**0.00133**
4.70	0.0303	6.50	7.00	28.39	1.41	TBD	TBD	0.00107	**0.0227**	**7.50**	**6.75**	**28.42**	**1.41**	**2.52**	**13.38**	**0.00120**
5.60	0.0344	6.00	7.00	29.44	1.36	TBD	TBD	TBD	**0.0326**	**6.50**	**6.00**	**26.51**	**1.51**	**1.41**	**3.55**	**0.00391**
6.80	0.0446	5.50	5.50	26.96	1.48	TBD	TBD	0.00097	**0.0374**	**6.00**	**5.00**	**27.03**	**1.48**	**1.55**	**3.54**	**0.00391**
8.20	0.0456	5.50	5.50	26.34	1.52	TBD	TBD	0.00083	**0.0471**	**5.50**	**4.50**	**25.53**	**1.57**	**1.96**	**4.69**	**0.00354**
10	0.0713	4.50	4.50	25.21	1.59	TBD	TBD	0.00083	**0.0627**	**4.75**	**3.50**	**25.74**	**1.55**	**2.62**	**6.78**	**0.00107**

Notes

(1) Thermal resistance of the part (°C/W)

(2) Total power loss that will cause an approximate ΔT of 40 °C

(3) V-µs product that corresponds to a peak flux density of 100 Gauss

(4) Core loss constant

(5) AC loss constant

- **Bold: Estimated or not used values**

IHLP Selection Example

IHLP-4040 APPLICATIONS																
L_0 µH	DCR Ω Max.	I_{HEAT} (A)	I_{SAT} (A)	R_{TH} (1)	P_{HEAT} (2) (W)	ET_{100} (3)	K_0 (4)	K_1 (5)	DCR Ω Max.	I_{HEAT} (A)	I_{SAT} (A)	R_{TH} (1)	P_{HEAT} (2) (W)	ET_{100} (3)	K_0 (4)	K_1 (5)
IHLP-4040DZ-01									IHLP-4040DZ-11							
0.19	0.00095	40.00	90.00	24.76	1.62	0.68	35.45	0.00143	0.00080	40.00	46.00	30.95	1.29	0.35	13.75	0.00143
0.24	**0.00114**	**36.00**	**80.00**	**25.47**	**1.57**	**0.75**	**36.36**	**0.00430**	0.00095	33.00	44.00	37.45	1.07	0.68	33.05	0.00143
0.36	0.00140	31.50	60.00	26.87	1.49	0.39	6.66	0.00383	0.00115	32.00	30.00	32.24	1.24	0.53	12.79	0.00383
0.47	**0.00162**	**28.50**	**54.00**	**28.45**	**1.41**	**0.55**	**9.54**	**0.00383**	0.00168	30.00	30.00	25.17	1.59	0.50	8.67	0.00383
0.56	0.00180	27.50	49.00	26.96	1.48	0.88	18.31	0.00340	0.00170	32.00	22.00	21.84	1.83	0.72	13.04	0.00340
0.78	**0.00293**	**22.00**	**39.00**	**25.85**	**1.55**	**1.20**	**25.12**	**0.00303**	0.00190	27.00	22.00	26.42	1.51	1.09	22.84	0.00340
1.00	0.00410	17.50	36.00	30.59	1.31	1.57	26.68	0.00270	0.00250	25.00	20.00	24.11	1.66	1.12	18.87	0.00340
1.50	0.00580	15.00	27.50	29.07	1.38	1.90	26.24	0.00240	**0.00342**	**21.00**	**20.00**	**24.95**	**1.60**	**1.73**	**23.85**	**0.00270**
1.80	**0.00633**	**14.00**	**26.00**	**30.57**	**1.31**	**2.30**	**37.52**	**0.00240**	0.00500	17.00	16.00	26.65	1.50	2.09	34.11	0.00240
2.00	**0.00691**	**13.00**	**24.00**	**32.50**	**1.23**	**2.19**	**28.51**	**0.00240**	0.00580	16.00	14.00	26.04	1.54	1.99	25.92	0.00240
2.20	0.00900	12.00	25.60	29.35	1.36	2.34	27.18	0.00213	0.00083	**15.00**	**14.00**	**28.01**	**1.43**	**2.13**	**24.71**	**0.00240**
3.30	0.01180	10.00	18.60	32.09	1.25	2.08	12.95	0.00697	0.00083	**12.00**	**11.00**	**27.97**	**1.43**	**1.89**	**11.77**	**0.00782**
4.70	0.01650	9.50	17.00	25.60	1.56	2.77	17.78	0.00697	0.00083	9.50	7.60	29.77	1.34	2.03	10.93	0.00782
5.60	0.01930	8.50	16.00	27.26	1.47	3.24	20.44	0.00697	0.00083	**9.25**	**7.50**	**29.33**	**1.36**	**2.95**	**18.58**	**0.00697**
6.80	0.02330	8.00	13.50	25.55	1.57	3.30	17.44	0.00697	0.00083	9.00	7.50	24.45	1.64	2.75	14.23	0.00697
10	0.03650	6.80	12.00	22.58	1.77	4.30	20.87	0.00550	0.00083	7.50	7.10	22.17	1.80	4.52	25.56	0.00550
22	**0.08048**	**4.50**	**8.00**	**24.11**	**1.66**	**6.66**	**23.61**	**0.00440**	0.06600	5.00	4.50	22.96	1.74	6.05	21.46	0.00489
47	**0.18600**	**3.00**	**5.50**	**23.47**	**1.70**	**11.69**	**34.22**	**0.00354**	0.19100	3.30	3.00	18.29	2.19	10.63	31.11	0.00391
100	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	0.2700	2.50	2.25	22.27	1.80	13.98	25.70	0.00354

Notes

(1) Thermal resistance of the part (°C/W)

(2) Total power loss that will cause an approximate ΔT of 40 °C

(3) V-µs product that corresponds to a peak flux density of 100 Gauss

(4) Core loss constant

(5) AC loss constant

- **Bold: Estimated or not used values**

APPLICATION NOTE

IHLP Selection Example

IHLP-5050 APPLICATIONS																
L_0 µH	DCR Ω Max.	I_{HEAT} (A)	I_{SAT} (A)	R_{TH} (1)	P_{HEAT} (2) (W)	ET_{100} (3)	K_0 (4)	K_1 (5)	DCR Ω Max.	I_{HEAT} (A)	I_{SAT} (A)	R_{TH} (1)	P_{HEAT} (2) (W)	ET_{100} (3)	K_0 (4)	K_1 (5)
IHLP-5050CE-01									IHLP-5050CE-11							
0.10	0.00096	43.00	84.00	23.43	1.71	0.09	2.38	0.00128	**0.00091**	**45.00**	**45.00**	**22.61**	**1.77**	**0.08**	**2.16**	**0.00128**
0.15	0.0012	41.00	75.00	20.62	1.94	0.27	9.72	0.00128	**0.00116**	**42.50**	**42.00**	**19.91**	**2.01**	**0.25**	**8.84**	**0.00128**
0.22	0.0013	38.50	65.00	21.26	1.88	0.71	32.14	0.00128	**0.00118**	**39.00**	**39.00**	**22.79**	**1.76**	**0.65**	**29.22**	**0.00430**
0.33	0.0015	36.50	62.00	20.01	2.00	0.80	26.86	0.00383	**0.00139**	**38.00**	**38.00**	**20.00**	**2.00**	**0.73**	**21.69**	**0.00430**
0.47	0.002	32.00	55.00	21.16	1.89	0.86	18.94	0.00383	**0.00159**	**35.00**	**34.00**	**22.28**	**1.80**	**0.78**	**17.22**	**0.00430**
0.60	0.0022	29.00	51.00	22.90	1.75	1.11	25.74	0.00383	**0.00183**	**32.00**	**31.00**	**22.60**	**1.77**	**1.01**	**23.40**	**0.00340**
0.68	0.0025	28.00	49.00	19.22	2.08	1.12	24.57	0.00340	**0.00194**	**31.00**	**30.00**	**20.25**	**1.98**	**1.02**	**22.34**	**0.00340**
0.82	0.003	25.00	44.00	21.33	1.88	1.51	35.19	0.00340	**0.00216**	**29.50**	**29.00**	**21.68**	**1.84**	**1.37**	**31.99**	**0.00340**
1.00	0.0035	24.00	40.00	18.24	2.19	1.32	21.69	0.00340	**0.00254**	**28.00**	**27.00**	**18.47**	**2.17**	**1.20**	**19.72**	**0.00340**
1.50	0.0055	19.00	35.00	18.83	2.12	2.25	38.60	0.00270	**0.00428**	**21.50**	**19.00**	**18.91**	**2.12**	**2.05**	**35.09**	**0.00303**
1.80	0.007	16.50	30.00	19.59	2.04	1.55	14.19	0.00990	**0.00492**	**19.50**	**17.00**	**19.94**	**2.01**	**1.41**	**12.90**	**0.00270**
2.20	0.008	16.00	29.00	18.81	2.13	2.10	31.39	0.00990	**0.00652**	**17.50**	**15.00**	**19.30**	**2.07**	**1.91**	**28.54**	**0.00990**
3.30	0.012	12.00	27.00	21.88	1.83	2.71	25.18	0.00782	**0.00864**	**14.50**	**13.00**	**20.82**	**1.92**	**2.46**	**22.89**	**0.00990**
4.70	0.015	10.00	24.00	24.24	1.65	3.51	28.52	0.00782	**0.01116**	**11.50**	**110.00**	**24.63**	**1.62**	**3.19**	**25.93**	**0.00880**
5.60	0.018	9.50	19.00	22.46	1.78	4.33	34.66	0.00697	**0.01346**	**11.00**	**9.00**	**22.41**	**1.78**	**3.94**	**31.51**	**0.00782**
6.80	0.022	9.00	18.00	21.61	1.85	3.86	25.10	0.00697	**0.01586**	**10.50**	**8.50**	**22.02**	**1.82**	**3.51**	**22.82**	**0.00782**
8.20	0.028	8.50	16.00	19.34	2.07	4.82	33.66	0.00623	**0.02060**	**9.50**	**8.00**	**21.05**	**1.90**	**4.38**	**30.60**	**0.00782**
10	0.034	7.00	14.00	23.27	1.72	5.36	32.38	0.00623	**0.02759**	**8.00**	**7.00**	**21.95**	**1.82**	**4.87**	**29.44**	**0.00623**
IHLP-5050EZ-01									IHLP-5050EZ-11							
0.10	0.0006	55.00	118.00	21.62	1.85	0.17	5.79	0.00161	**0.00039**	**68.50**	**68.50**	**21.60**	**1.85**	**0.15**	**5.26**	**0.00161**
0.22	0.0008	51.00	110.00	20.82	1.92	0.92	53.68	0.00161	**0.00052**	**63.50**	**63.50**	**20.83**	**1.92**	**0.84**	**48.80**	**0.00161**
0.33	0.0011	42.00	80.00	23.12	1.73	0.95	32.50	0.00161	**0.00070**	**52.50**	**52.50**	**23.12**	**1.73**	**0.86**	**29.55**	**0.00483**
0.47	0.0013	38.00	65.00	21.82	1.83	1.11	29.00	0.00483	**0.00084**	**47.50**	**47.50**	**21.73**	**1.84**	**1.01**	**26.36**	**0.00430**
0.56	0.0015	36.00	55.00	20.57	1.94	1.00	26.04	0.00430	**0.00100**	**44.00**	**44.00**	**20.72**	**1.93**	**0.91**	**20.95**	**0.00430**
0.68	0.0017	34.00	54.00	19.99	2.00	1.55	42.08	0.00430	**0.00110**	**42.00**	**38.00**	**20.34**	**1.97**	**1.41**	**38.25**	**0.00430**
0.82	0.0023	31.00	53.00	18.03	2.22	2.06	57.33	0.00383	**0.00142**	**39.00**	**35.00**	**18.47**	**2.17**	**1.87**	**52.12**	**0.00383**
1.00	0.0025	29.00	50.00	19.63	2.04	1.96	41.28	0.00383	**0.00179**	**34.00**	**30.50**	**19.95**	**2.01**	**1.78**	**38.02**	**0.00383**
1.50	0.0041	23.00	48.00	19.27	2.08	2.88	60.16	0.00303	**0.00301**	**26.50**	**24.00**	**19.75**	**2.03**	**2.62**	**54.69**	**0.00303**
2.20	0.0055	20.00	32.00	18.84	2.12	2.91	49.82	0.00303	**0.00408**	**23.00**	**18.50**	**19.20**	**2.08**	**2.65**	**45.29**	**0.00303**
3.30	0.0092	15.00	32.00	20.01	2.00	2.90	41.87	0.00303	**0.00640**	**18.00**	**14.50**	**19.99**	**2.00**	**2.64**	**38.06**	**0.00303**
4.70	0.0150	12.00	27.00	18.81	2.13	4.49	65.07	0.00240	**0.01040**	**14.50**	**11.50**	**18.58**	**2.15**	**4.08**	**59.15**	**0.00270**
5.60	0.0165	11.50	22.00	18.72	2.14	5.19	55.68	0.00213	**0.01102**	**14.00**	**11.00**	**18.92**	**2.11**	**4.72**	**50.62**	**0.00213**
6.80	0.0185	11.00	21.00	18.60	2.15	5.63	61.71	0.00213	**0.01459**	**12.50**	**10.00**	**18.27**	**2.19**	**5.12**	**56.10**	**0.00213**
7.80	0.0205	10.00	18.00	20.15	1.98	5.65	54.15	0.00213	**0.01586**	**11.50**	**9.50**	**19.69**	**2.03**	**5.14**	**49.23**	**0.00190**
8.20	0.0225	9.50	18.00	20.32	1.97	5.67	39.43	0.00782	**0.01650**	**11.00**	**9.00**	**20.67**	**1.94**	**5.15**	**35.85**	**0.00697**
10	0.0255	9.00	16.00	20.00	2.00	5.88	38.77	0.00782	**0.0205**	**9.25**	**7.50**	**23.55**	**1.70**	**5.35**	**35.25**	**0.00697**
15	0.0330	8.25	14.50	18.19	2.20	5.69	34.19	0.00697	**0.0266**	**9.00**	**7.00**	**18.93**	**2.11**	**5.17**	**31.08**	**0.00623**

Notes

(1) Thermal resistance of the part (°C/W)

(2) Total power loss that will cause an approximate ΔT of 40 °C

(3) V-µs product that corresponds to a peak flux density of 100 Gauss

(4) Core loss constant

(5) AC loss constant

- **Bold: Estimated or not used values**

IHLP Selection Example

IHLP-5050 APPLICATIONS																
L_0 µH	DCR Ω Max.	I_{HEAT} (A)	I_{SAT} (A)	R_{TH} (1)	P_{HEAT} (2) (W)	ET_{100} (3)	K_0 (4)	K_1 (5)	DCR Ω Max.	I_{HEAT} (A)	I_{SAT} (A)	R_{TH} (1)	P_{HEAT} (2) (W)	ET_{100} (3)	K_0 (4)	K_1 (5)
IHLP-5050FD-01									IHLP-5050FD-11							
0.10	0.00047	60.00	120.00	20.49	1.95	0.17	5.86	0.00181	**0.00043**	**65.00**	**65.00**	**20.11**	**1.99**	**0.15**	**5.33**	**0.00181**
0.15	0.00053	55.00	118.00	21.62	1.85	0.51	26.26	0.00181	**0.00056**	**59.00**	**59.00**	**20.32**	**1.97**	**0.46**	**23.87**	**0.00181**
0.22	0.00063	53.00	112.00	19.59	2.04	0.92	54.32	0.00161	**0.00061**	**55.00**	**55.00**	**20.83**	**1.92**	**0.84**	**49.38**	**0.00181**
0.30	0.0007	48.00	72.00	21.49	1.86	0.72	21.56	0.00543	**0.00073**	**51.00**	**51.00**	**20.76**	**1.93**	**0.65**	**19.60**	**0.00181**
0.33	0.00083	46.00	65.00	19.74	2.03	0.83	24.79	0.00483	**0.00088**	**48.00**	**48.00**	**20.95**	**1.91**	**0.75**	**22.54**	**0.00543**
0.40	0.0009	44.00	64.00	19.89	2.01	1.26	45.17	0.00483	**0.00109**	**46.00**	**46.00**	**20.58**	**1.94**	**1.15**	**41.06**	**0.00543**
0.47	0.001	41.00	63.00	20.62	1.94	1.43	50.92	0.00430	**0.00127**	**44.00**	**44.00**	**19.67**	**2.03**	**1.30**	**46.29**	**0.00483**
0.56	0.0012	37.00	62.00	21.10	1.90	1.92	77.81	0.00430	**0.00135**	**40.00**	**40.00**	**19.97**	**2.00**	**1.75**	**70.74**	**0.00483**
0.68	0.0014	35.00	60.00	20.21	1.98	1.47	36.64	0.00430	**0.00148**	**38.00**	**38.00**	**20.33**	**1.97**	**1.34**	**33.31**	**0.00483**
0.82	0.0016	33.00	50.00	19.89	2.01	1.45	28.23	0.00430	**0.00171**	**36.00**	**36.00**	**21.43**	**1.87**	**1.32**	**25.66**	**0.00430**
1.00	0.0017	32.00	49.00	19.91	2.01	1.96	42.83	0.00430	**0.00198**	**34.00**	**34.00**	**20.68**	**1.93**	**1.78**	**38.94**	**0.00430**
1.20	0.0021	30.00	48.00	18.34	2.18	2.51	56.06	0.00383	**0.00234**	**32.00**	**30.50**	**20.39**	**1.96**	**2.28**	**50.96**	**0.00430**
1.50	0.0025	27.00	45.00	19.02	2.10	2.60	48.64	0.00383	**0.00241**	**30.00**	**28.50**	**19.75**	**2.03**	**2.36**	**44.22**	**0.00430**
1.80	0.0032	24.00	41.00	21.49	1.86	2.81	47.09	0.00383	**0.00311**	**28.00**	**26.50**	**21.00**	**1.90**	**2.55**	**42.81**	**0.00430**
2.20	0.0035	22.00	40.00	20.46	1.95	3.25	52.53	0.00340	**0.00456**	**26.00**	**25.00**	**19.81**	**2.02**	**2.95**	**47.75**	**0.00340**
3.30	0.0057	18.00	35.00	18.77	2.13	3.93	49.36	0.00303	**0.00678**	**21.00**	**20.00**	**20.56**	**1.95**	**3.57**	**44.87**	**0.00340**
4.70	0.0093	13.50	30.00	20.45	1.96	6.01	80.59	0.00270	**0.00716**	**17.50**	**17.00**	**20.10**	**1.99**	**5.46**	**73.26**	**0.00303**
5.60	0.01	13.50	26.50	20.45	1.96	5.49	57.91	0.00270	**0.00969**	**15.50**	**15.00**	**21.67**	**1.85**	**4.99**	**52.65**	**0.00303**
6.80	0.014	11.50	16.50	20.01	2.00	4.56	29.07	0.00782	**0.01182**	**13.50**	**13.00**	**20.98**	**1.91**	**4.15**	**26.43**	**0.00270**
8.20	0.0155	10.50	16.00	21.68	1.84	5.52	35.72	0.00782	**0.01375**	**12.00**	**11.50**	**21.76**	**1.84**	**5.02**	**32.47**	**0.00240**
10	0.0168	10.00	15.50	21.94	1.82	5.92	39.12	0.00782	0.0132	11.30	11.00	20.99	1.91	4.35	23.51	0.00990

Notes

(1) Thermal resistance of the part (°C/W)

(2) Total power loss that will cause an approximate ΔT of 40 °C

(3) V-µs product that corresponds to a peak flux density of 100 Gauss

(4) Core loss constant

(5) AC loss constant

- **Bold: Estimated or not used values**