

IGBT Modules / MiniSKiiP

Type	IGBT						Diode				Rectifier		Module	
	$I_C @ T_J = 25^{\circ}\text{C}$	I_{Cnom}	$V_{CE(sat)} @ T_J = 25^{\circ}\text{C typ.}$	E_{on}	E_{off}	$R_{th(j-a)}$	$I_F @ T_J = 25^{\circ}\text{C}$	$V_F @ T_J = 25^{\circ}\text{C typ.}$	E_{rr}	$R_{th(j-a)}$	$I_{FSM} @ T_J = 25^{\circ}\text{C}$	$R_{th(j-a)}$	Case	
	A	A	V	mJ	mJ	K/W	A	V	mJ	K/W	A	K/W		Circuit
600V - IGBT3 (Trench)														
SKiiP 16GH066V1	65	50	1.45	1.7	1.7	0.95	56	1.50	1.3	1.6	-	-	II 1	
SKiiP 27GH066V1	88	75	1.45	2.7	3	0.75	77	1.50	1.8	1.2	-	-	II 2	
SKiiP 28GH066V1	112	100	1.45	3.4	3.5	0.6	112	1.30	3.3	0.8	-	-	II 2	
SKiiP 02AC066V1	20	10	1.45	0.45	0.3	2	20	1.30	0.3	2.5	-	-	II 0	
SKiiP 04AC066V1	33	20	1.45	0.8	0.7	1.6	31	1.60	0.55	2.5	-	-	II 0	
SKiiP 15AC066V1	40	30	1.45	1	1.1	1.35	39	1.50	1.1	2.1	-	-	II 1	
SKiiP 26AC066V1	65	50	1.45	1.6	1.6	0.95	56	1.50	1.3	1.6	-	-	II 2	
SKiiP 27AC066V1	88	75	1.45	2.7	3	0.75	77	1.50	1.8	1.2	-	-	II 2	
SKiiP 28AC066V1	112	100	1.45	3.4	3.5	0.6	112	1.30	3.3	0.8	-	-	II 2	
SKiiP 39AC066V4	146	150	1.45	7.9	5.6	0.5	164	1.30	3.5	0.55	-	-	II 3	
SKiiP 01NEC066V3	12	6	1.45	0.3	0.2	2.4	12	1.30	0.2	3	220	1.5	II 0	
SKiiP 02NEC066V3	20	10	1.45	0.5	0.3	2	20	1.30	0.5	2.5	220	1.5	II 0	
SKiiP 03NEC066V3	27	15	1.45	0.6	0.5	1.8	28	1.40	0.5	2.5	220	1.5	II 0	
SKiiP 01NAC066V3	12	6	1.45	0.3	0.2	2.4	12	1.30	0.2	3	220	1.5	II 0	
SKiiP 02NAC066V3	20	10	1.45	0.5	0.3	2	20	1.30	0.5	2.5	220	1.5	II 0	
SKiiP 02NEB066V3	20	10	1.45	0.5	0.3	2	20	1.30	0.5	2.46	220	1.5	II 0	
SKiiP 03NEB066V3	27	15	1.45	0.6	0.5	1.8	28	1.40	0.5	2.5	220	1.5	II 0	
SKiiP 25NEB066V1	43	30	1.45	0.9	1.2	1.35	39	1.50	1.1	2.1	370	1.5	II 2	
SKiiP 11NAB066V1	12	6	1.45	0.3	0.2	2.4	12	1.30	0.2	3	220	1.5	II 1	
SKiiP 12NAB066V1	20	10	1.45	0.5	0.3	2	20	1.30	0.5	2.5	220	1.5	II 1	
SKiiP 13NAB066V1	27	15	1.45	0.6	0.5	1.8	28	1.40	0.5	2.5	220	1.5	II 1	
SKiiP 14NAB066V1	33	20	1.45	0.75	0.7	1.6	31	1.60	0.55	2.5	220	1.5	II 1	
SKiiP 25NAB066V1	43	30	1.45	0.9	1.2	1.35	39	1.50	1.1	2.1	370	1.5	II 2	
SKiiP 26NAB066V1	65	50	1.45	1.6	1.6	0.95	56	1.50	1.3	1.6	370	1.5	II 2	
SKiiP 37NAB066V1	88	75	1.45	2.7	3	0.75	77	1.50	1.8	1.2	700	0.9	II 3	
SKiiP 38NAB066V1	112	100	1.45	3.4	3.5	0.6	112	1.30	3.3	0.8	700	0.9	II 3	
SKiiP 11HEB066V1	27	15	1.50	0.6	0.5	1.8	28	1.40	0.5	2.46	370	1.25	II 1	
SKiiP 12HEB066V1	33	15	1.50	0.8	0.7	1.6	29	1.40	0.6	2.1	370	1.25	II 1	

Footnotes: 1) Sample status / 2) In production new / 3) Not for new designs

IGBT Modules / MiniSKiiP

Type	IGBT						Diode				Rectifier		Module	
	$I_C @ T_J = 25^{\circ}\text{C}$	I_{Cnom}	$V_{CE(sat)} @ T_J = 25^{\circ}\text{C typ.}$	E_{on}	E_{off}	$R_{th(j-a)}$	$I_F @ T_J = 25^{\circ}\text{C}$	$V_F @ T_J = 25^{\circ}\text{C typ.}$	E_{rr}	$R_{th(j-a)}$	$I_{FSM} @ T_J = 25^{\circ}\text{C}$	$R_{th(j-a)}$	Case	
	A	A	V	mJ	mJ	K/W	A	V	mJ	K/W	A	K/W		Circuit
650V - IGBT3 (Trench)														
SKiiP 24GB07E3V1 ²⁾	185	150	1.45	2.2	5.1	0.33	161	1.54	3.7	0.45	-	-	II 2	
SKiiP 26GB07E3V1 ²⁾	229	200	1.45	4.4	7.4	0.28	235	1.40	4.5	0.35	-	-	II 2	
SKiiP 38GB07E3V1 ²⁾	287	300	1.45	5.5	10.6	0.25	310	1.40	5.1	0.28	-	-	II 3	
SKiiP 26MLI07E3V1 ²⁾	98	75	1.45	2.8	2.8	0.6	75	1.54	1.4	1	-	-	II 2	
SKiiP 27MLI07E3V1 ²⁾	110	100	1.45	4.2	4.2	0.6	107	1.40	3.5	0.8	-	-	II 2	
SKiiP 28MLI07E3V1 ²⁾	135	150	1.45	5.5	5.6	0.55	126	1.40	5.5	0.75	-	-	II 2	
SKiiP 39MLI07E3V1 ²⁾	159	200	1.45	3.6	8.9	0.5	163	1.39	8.3	0.6	-	-	II 3	
1200V - IGBT3 (Trench)														
SKiiP 03AC126V1 ³⁾	16	8	1.70	0.9	0.9	1	8	1.90	0.7	2.5	-	-	II 0	
SKiiP 11AC126V1 ³⁾	16	8	1.70	0.9	1	1.5	14	1.90	0.9	2.5	-	-	II 1	
SKiiP 11AC126V10 ³⁾	16	6	1.65	18	1	1.5	48	1.10	16.4	2.5	-	-	II 1	
SKiiP 12AC126V1 ³⁾	28	15	1.70	1.7	1.9	1.15	26	1.60	1.2	1.95	-	-	II 1	
SKiiP 13AC126V1 ³⁾	41	25	1.70	4.1	3.1	0.9	30	1.80	2.2	1.7	-	-	II 1	
SKiiP 13AC126V20 ³⁾	41	25	1.65	2.9	3	0.9	27	2.00	1.2	1.5	-	-	II 1	
SKiiP 23AC126V1 ³⁾	41	25	1.70	3.7	3.1	0.9	30	1.80	2.6	1.7	-	-	II 2	
SKiiP 24AC126V1 ³⁾	52	35	1.70	4.2	4.4	0.75	38	1.80	3.5	1.5	-	-	II 2	
SKiiP 25AC126V1 ³⁾	73	50	1.70	5.8	6.5	0.55	62	1.60	5.1	1	-	-	II 2	
SKiiP 26AC126V1 ³⁾	88	70	1.70	9	7.7	0.5	91	1.50	7.5	0.7	-	-	II 2	
SKiiP 37AC126V2 ³⁾	97	75	1.70	9.6	8.7	0.45	90	1.60	9.6	0.7	-	-	II 3	
SKiiP 38AC126V2 ³⁾	118	105	1.70	13.1	13	0.4	118	1.60	11.2	0.55	-	-	II 3	
SKiiP 39AC126V2 ³⁾	157	140	1.70	19.9	17.2	0.3	167	1.50	16.2	0.4	-	-	II 3	
SKiiP 39AC126V20 ³⁾	157	140	1.65	13	17	0.3	-	2.00	8.1	0.4	-	-	II 3	
SKiiP 03NAC126V1 ³⁾	16	8	1.70	0.9	0.9	1.5	14	1.60	0.7	2.5	220	1.5	II 0	
SKiiP 11NAB126V1 ³⁾	16	8	1.70	0.8	1	1.5	14	1.90	0.9	2.5	220	1.5	II 1	
SKiiP 12NAB126V1 ³⁾	28	15	1.70	2	1.9	1.15	26	1.60	1.3	1.95	220	1.5	II 1	
SKiiP 12NAB126V20 ³⁾	28	15	1.65	1.5	1.8	1.15	28	2.45	0.9	1.95	220	1.5	II 1	
SKiiP 22NAB126V10 ³⁾	28	15	1.65	2	1.9	1.15	28	1.60	1.1	1.95	700	0.9	II 2	
SKiiP 23NAB126V1 ³⁾	41	25	1.70	3.5	3	0.9	30	1.80	2.5	1.7	370	1.25	II 2	
SKiiP 23NAB126V10 ³⁾	41	25	1.70	3.5	3	0.9	30	1.80	2.5	1.7	635	0.9	II 2	
SKiiP 23NAB126V20 ³⁾	-	25	1.65	2.7	2.9	0.9	41	2.00	1.2	1.5	370	1.25	II 2	
SKiiP 24NAB126V1 ³⁾	52	35	1.70	4.6	4	0.75	38	1.80	3.3	1.5	370	1.25	II 2	
SKiiP 24NAB126V10 ³⁾	52	35	1.70	4.6	4	0.75	38	1.80	3.3	1.5	635	0.9	II 2	
SKiiP 35NAB126V1 ³⁾	73	50	1.70	6.5	6.1	0.55	62	1.60	4.7	1	700	0.9	II 3	
SKiiP 35NAB126V10 ³⁾	72	50	1.70	6.5	6.1	0.55	60	1.67	4.7	1	850	0.85	II 3	
SKiiP 36NAB126V1 ³⁾	88	70	1.70	9	7.7	0.5	91	1.50	7.5	0.7	700	0.9	II 3	
SKiiP 36NAB126V10 ³⁾	91	80	1.70	9	7.7	0.5	87	1.64	7.5	0.7	850	0.85	II 3	

Footnotes: 1) Sample status / 2) In production new / 3) Not for new designs

IGBT Modules / MiniSKiiP

Type	IGBT						Diode			Rectifier		Module		Circuit
	$I_C @ T_S = 25^{\circ}\text{C}$	I_{Cnom}	$V_{CE(sat)} @ T_J = 25^{\circ}\text{C typ.}$	E_{on}	E_{off}	$R_{th(j-s)}$	$I_F @ T_S = 25^{\circ}\text{C}$	$V_F @ T_J = 25^{\circ}\text{C typ.}$	E_{rr}	$R_{th(j-s)}$	$I_{FSM} @ T_J = 25^{\circ}\text{C}$	$R_{th(j-s)}$	Case	
	A	A	V	mJ	mJ	K/W	A	V	mJ	K/W	A	K/W		
1200V - IGBT4 (Trench)														
SKiiP 24GB12T4V1 ²⁾	170	150	1.85	10.8	15.6	0.32	157	2.17	10.3	0.41	-	-	II 2	
SKiiP 26GB12T4V1 ²⁾	224	200	1.80	13.6	22.1	0.25	194	2.20	13.4	0.34	-	-	II 2	
SKiiP 38GB12E4V1 ²⁾	329	300	1.85	19.1	34.6	0.17	267	2.20	21.5	0.26	-	-	II 3	
SKiiP 39GB12E4V1 ²⁾	388	400	1.80	20.8	49.7	0.16	363	2.20	30.2	0.19	-	-	II 3	
SKiiP 39GA12T4V1 ²⁾	167	150	1.85	22.5	14	0.33	136	2.14	11.4	0.52	-	-	II 3	
SKiiP 26GH12T4V11	90	70	1.85	9.5	7.1	0.55	83	2.17	5.6	0.75	-	-	II 2	
SKiiP 39MLI12T4V1 ¹⁾	167	150	1.85	11.1	16.9	0.33	134	2.14	10.9	0.53	-	-	II 3	
SKiiP 39TMLI12T4V2 ²⁾	235	200	1.80	7.5	12.8	0.23	194	2.20	9.7	0.34	-	-	II 3	
SKiiP 11AC12T4V1	12	8	1.85	0.87	0.75	1.84	15	2.33	0.53	2.53	-	-	II 1	
SKiiP 12AC12T4V1	18	15	1.85	1.65	1.5	1.3	23	2.38	0.79	1.92	-	-	II 1	
SKiiP 13AC12T4V1	41	25	1.85	3.7	2.4	1	32	2.41	1.64	1.52	-	-	II 1	
SKiiP 23AC12T4V1	41	25	1.85	3.7	2.4	1	32	2.41	1.64	1.52	-	-	II 2	
SKiiP 24AC12T4V1	52	35	1.85	3.7	3	0.85	44	2.30	2.3	1.2	-	-	II 2	
SKiiP 25AC12T4V1	69	50	1.85	6	4.5	0.71	60	2.22	3.2	0.95	-	-	II 2	
SKiiP 26AC12T4V1	90	70	1.85	9.5	7.1	0.55	83	2.17	5.6	0.75	-	-	II 2	
SKiiP 37AC12T4V1	90	75	1.85	11.5	6.8	0.58	83	2.17	5.5	0.75	-	-	II 3	
SKiiP 38AC12T4V1	115	100	1.80	13.7	9.7	0.48	100	2.20	6.5	0.66	-	-	II 3	
SKiiP 39AC12T4V1	167	150	1.85	22.5	14	0.33	136	2.14	11.4	0.52	-	-	II 3	
SKiiP 02NAC12T4V1	6	4	1.85	0.66	0.37	2.49	7.5	1.82	0.34	2.53	220	1.5	II 0	
SKiiP 03NAC12T4V1	7.5	8	1.85	0.9	0.7	1.84	9	2.33	0.5	2.53	220	1.5	II 0	
SKiiP 10NAB12T4V1	6	4	1.85	0.66	0.37	2.49	7.5	1.82	0.34	2.53	220	1.5	II 1	
SKiiP 11NAB12T4V1	18	8	1.85	0.87	0.74	1.84	15	2.33	0.57	2.53	220	1.5	II 1	
SKiiP 12NAB12T4V1	28	15	1.85	1.4	1.3	1.3	23	2.38	1.1	1.92	220	1.5	II 1	
SKiiP 23NAB12T4V1	37	25	1.85	2.65	2.3	1.2	32	2.41	1.6	1.52	370	1.25	II 2	

Footnotes: 1) Sample status / 2) In production new / 3) Not for new designs

IGBT Modules / MiniSKiiP

Type	IGBT						Diode				Rectifier		Module		Circuit
	$I_C @ T_J = 25^{\circ}\text{C}$	I_{Cnom}	$V_{CE(sat)} @ T_J = 25^{\circ}\text{C typ.}$	E_{on}	E_{off}	$R_{th(j-a)}$	$I_F @ T_J = 25^{\circ}\text{C}$	$V_F @ T_J = 25^{\circ}\text{C typ.}$	E_{rr}	$R_{th(j-a)}$	$I_{FSM} @ T_J = 25^{\circ}\text{C}$	$R_{th(j-a)}$	Case		
	A	A	V	mJ	mJ	K/W	A	V	mJ	K/W	A	K/W			
1200V - IGBT4 (Trench)															
SKiiP 23NAB12T4V2 ²⁾	37	25	1.85	3.1	2.56	1.2	32	2.41	1.4	1.52	370	1.25	II 2		
SKiiP 23NAB12T4V10	37	25	1.85	2.65	2.3	1.2	30	2.41	1.6	1.52	700	0.9	II 2		
SKiiP 24NAB12T4V1	48	35	1.85	4.3	3.25	1	44	2.30	2.4	1.2	370	1.25	II 2		
SKiiP 24NAB12T4V4 ²⁾	48	35	1.85	4.3	3.25	1	40	2.30	2.4	1.4	370	1.25	II 2		
SKiiP 24NAB12T4V10	48	35	1.85	4.3	3.25	1	44	2.30	2.4	1.2	700	0.9	II 2		
SKiiP 34NAB12T4V1	52	35	1.85	4.3	3.3	0.85	44	2.30	2.4	1.2	370	1.25	II 3		
SKiiP 35NAB12T4V1	69	50	1.85	6	4.7	0.71	60	2.22	3.4	0.95	700	0.9	II 3		
SKiiP 37NAB12T4V1	90	75	1.85	9.7	6.8	0.58	83	2.17	4.9	0.75	700	0.9	II 3		
SKiiP 37NAB12T4V10	90	75	1.85	9.7	6.8	0.58	83	2.17	4.9	0.75	850	0.85	II 3		
SKiiP 38NAB12T4V1	115	100	1.80	11.2	10	0.48	99	2.20	6.5	0.66	1000	0.7	II 3		
SKiiP 12ACC12T4V10 ²⁾	28	15	1.85	2.1	1.6	1.3	23	2.38	0.8	1.92	60	2.5	II 1		
SKiiP 23ACC12T4V10 ²⁾	41	25	1.85	3.5	2.7	1	32	2.41	1.15	1.52	65	1.92	II 2		
SKiiP 24ACC12T4V10 ²⁾	52	35	1.85	3.9	3.5	0.85	44	2.30	2.3	1.2	100	1.52	II 2		
SKiiP 39AC12T4V21 ²⁾	192	150	1.85	22.5	14	0.26	149	2.14	11.4	0.45	-	-	II 3		
SKiiP 35ACC12F4V1 ²⁾	54	50	2.05	4.8	3.4	0.87	58	2.22	3	1.02	270	0.97	II 3		
1200V - IGBT4 (Fast Trench)															
SKiiP 26GB12F4V1 ²⁾	197	200	2.05	16.8	16.3	0.25	194	2.20	11.7	0.34	-	-	II 2		
SKiiP 28TMLI12F4V1 ²⁾	93	80	2.05	3.4	2.2	0.49	76	2.17	1.7	0.86	-	-	II 2		
SKiiP 29TMLI12F4V1 ²⁾	144	150	2.05	5.2	6.1	0.35	148	2.17	6.5	0.45	-	-	II 2		
SKiiP 35TMLI12F4V2 ¹⁾	49	40	2.05	1.2	1.7	0.88	46	2.30	1	1.13	-	-	II 3		

Footnotes: 1) Sample status / 2) In production new / 3) Not for new designs

IGBT Modules / MiniSKiiP

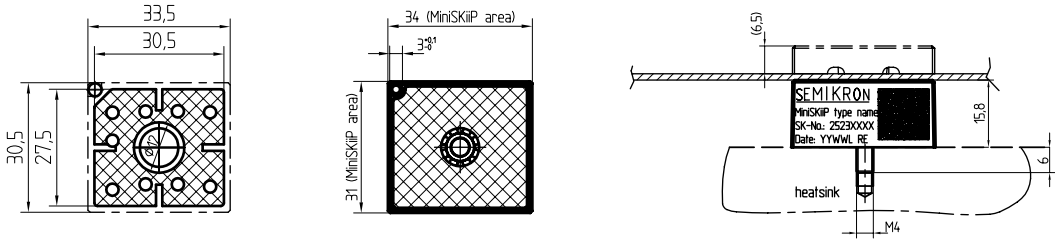
Type	IGBT						Diode				Rectifier		Module	
	$I_C @ T_S = 25^{\circ}\text{C}$	I_{Cnom}	$V_{CE(sat)} @ T_J = 25^{\circ}\text{C typ.}$	E_{on}	E_{off}	$R_{th(j-s)}$	$I_F @ T_S = 25^{\circ}\text{C}$	$V_F @ T_J = 25^{\circ}\text{C typ.}$	E_{rr}	$R_{th(j-s)}$	$I_{FSM} @ T_J = 25^{\circ}\text{C}$	$R_{th(j-s)}$	Case	Circuit
	A	A	V	mJ	mJ	K/W	A	V	mJ	K/W	A	K/W		
1200V - IGBT4 (Fast Trench)														
SKiiP 35ACC12F4V1 ²⁾	54	50	2.05	4.8	3.4	0.87	58	2.22	3	1.02	270	0.97	II 3	
1700V - IGBT3 (Trench)														
SKiiP 38AC176V2 ²⁾	118	100	2.00	23.8	32.2	0.38	115	1.76	26.2	0.61	-	-	II 3	
SKiiP 24NAB176V1 ²⁾	38	29	2.00	5.1	6.3	0.91	48	2.00	4.9	1.14	370	1.32	II 2	
SKiiP 34NAB176V3 ²⁾	67	58	2.00	11.2	12.8	0.57	66	2.06	6.6	0.84	635	0.86	II 3	
1700V - IGBT4 (Trench)														
SKiiP 22GB17E4V1 ²⁾	117	100	1.90	22.2	30.7	0.43	91	2.00	20.9	0.7	-	-	II 2	
SKiiP 24GB17E4V1 ²⁾	177	150	1.90	26	46	0.28	149	2.00	32.4	0.41	-	-	II 2	
SKiiP 36GB17E4V1 ²⁾	224	200	1.90	37	66	0.23	193	2.00	47	0.32	-	-	II 3	
SKiiP 38GB17E4V1 ²⁾	341	300	1.90	47	102	0.15	267	2.00	69	0.24	-	-	II 3	

Footnotes: 1) Sample status / 2) In production new / 3) Not for new designs

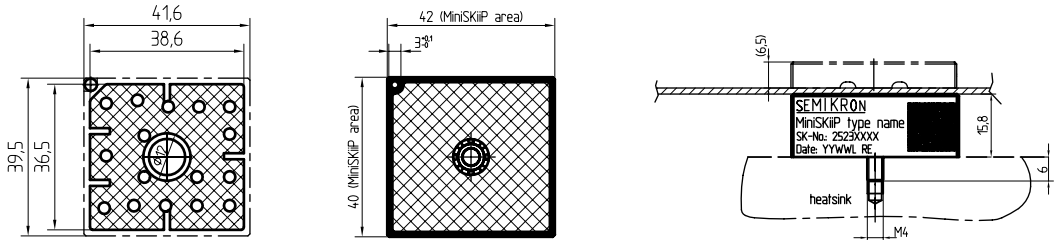
IGBT Modules / MiniSKiiP

Cases

MiniSKiiP II 0

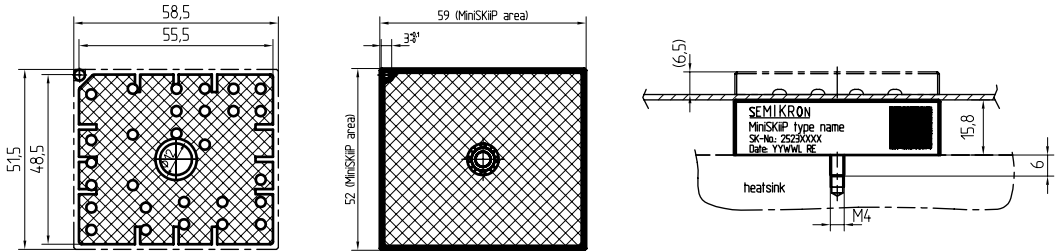


MiniSKiiP II 1



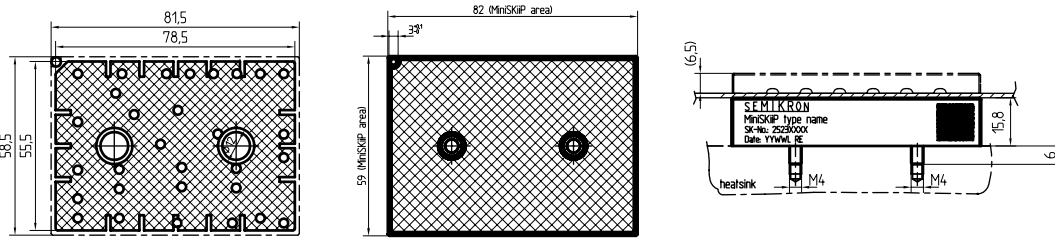
pin configuration depends on circuit (details in data sheet)

MiniSKiiP II 2



pin configuration depends on circuit (details in data sheet)

MiniSKiiP II 3



pin configuration depends on circuit (details in data sheet)

Dimensions in mm