

IGBT Modules / SEMITOP

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}	$R_{th(j-c)}$	$I_f @ T_s = 25^\circ\text{C}$	$V_f @ T_j = 25^\circ\text{C typ.}$	E_{rr}	$R_{th(j-c)}$	$R_{th(j-s)}$	$I_{FSM} @ T_j = 25^\circ\text{C}$	Case		
	A	A	V	mJ	mJ	K/W	A	V	mJ	K/W	K/W	A		Circuit	
600V - IGBT3 (Trench)															
SK 75 GB 066 T	77	75	1.45	3.1	2.8	0.94	62	1.35	0.85	1.55	-	-	3		
SK 100 GB 066 T	96	100	1.45	7	6	0.78	108	1.35	1.7	0.91	-	-	3		
SK 150 GB 066 T	124	150	1.45	6.25	5.7	0.55	135	1.35	1.7	0.73	-	-	3		
SK 30 GBB 066 T	40	30	1.45	0.97	1.77	1.65	36	1.45	0.26	2.1	-	-	3		
SK 50 GBB 066 T	60	50	1.45	2.2	1.73	1.11	56	1.50	0.72	1.7	-	-	3		
SK 75 GBB 066 T	77	75	1.45	3.1	2.8	0.94	77	1.35	0.85	1.55	-	-	3		
SK 20 MLI 066	30	20	1.45	0.4	1.07	1.95	30	1.60	0.2	2.46	-	-	3		
SK 30 MLI 066	40	30	1.45	0.97	1.77	1.65	37	1.50	0.26	2.3	-	-	3		
SK 30 MLI 066p ⁸⁾	37	30	1.45	0.97	1.77	1.65	34	1.50	0.26	2.3	-	-	3p		
SK 50 MLI 066	60	50	1.45	1.46	2.02	1.11	56	1.50	1.07	1.7	-	-	3		
SK 75 MLI 066 T	83	75	1.45	1.7	2.8	0.75	92	1.50	1.1	1.2	-	-	4		
SK 100 MLI 066 T	105	100	1.45	2.5	4.2	0.65	110	1.35	1.9	0.9	-	-	4		
SK 150 MLI 066 T	151	150	1.45	2.7	5.9	0.55	115	1.50	2.6	0.72	-	-	4		
SK 75 GD 066 T	83	75	1.45	3.1	2.8	0.75	92	1.35	0.85	1.2	-	-	4		
SK 100 GD 066 T	105	100	1.45	7	6	0.65	99	1.30	1.7	0.8	-	-	4		
SK 150 GD 066 T	151	150	1.45	6.25	5.7	0.55	198	1.30	1.7	0.54	-	-	4		
SK 200 GD 066 T	174	200	1.45	13.9	12	0.45	99	1.30	3.4	0.8	-	-	4		
SK 20 GD 066 ET	30	20	1.45	0.34	0.63	1.95	31	1.45	0.2	2.46	-	-	3		
SK 30 GD 066 ET	40	30	1.45	0.97	1.77	1.65	36	1.45	0.26	2.1	-	-	3		
SK 50 GD 066 ET	60	50	1.45	2.2	1.73	1.11	56	1.50	0.72	1.7	-	-	3		
SK 20 DGD L 066 ET	30	20	1.45	0.3	0.6	1.95	27	1.40	0.2	2.46	2.15	220	3		
SK 30 DGD L 066 ET	40	30	1.45	0.55	1.15	1.65	36	1.50	0.53	2.3	1.7	370	3		
SK 50 DGD L 066 T	69	50	1.45	2.2	1.74	0.95	54	1.35	0.73	1.6	1.5	370	4		
SK 75 DGD L 066 T	81	75	1.45	3.1	2.8	0.75	64	1.35	0.9	1.2	0.9	700	4		
SK 100 DGD L 066 T	106	100	1.45	4.4	3.5	0.65	99	1.10	1.45	0.8	0.9	700	4		
600V - NPT IGBT (Standard)															
SK 45 GAL 063	45	50	2.10	1.4	1.2	1	57	1.45	0.25	1.2	-	-	2		

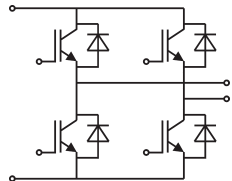
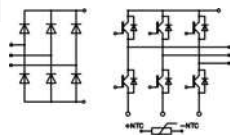
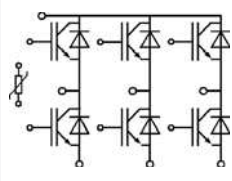
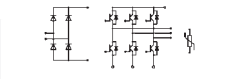
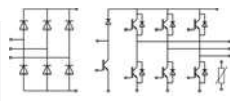
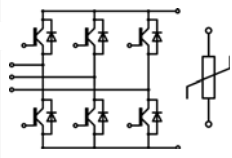
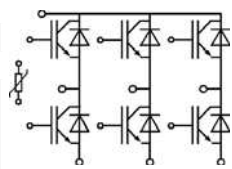
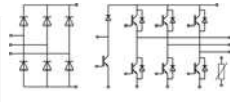
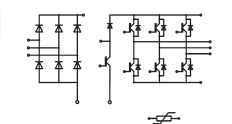
Footnotes: 8) Target data

IGBT Modules / SEMITOP

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}	$R_{th(j-c)}$	$I_f @ T_s = 25^\circ\text{C}$	$V_f @ T_j = 25^\circ\text{C typ.}$	E_{rr}	$R_{th(j-s)}$	$R_{th(j-s)}$	$I_{FSM} @ T_j = 25^\circ\text{C}$	Case	Circuit
	A	A	V	mJ	mJ	K/W	A	V	mJ	K/W	K/W	A		
600V - NPT IGBT (Standard)														
SK 45 GAR 063	45	50	2.10	1.4	1.2	1	57	1.45	0.25	1.2	-	-	2	
SK 80 GM 063	81	100	2.00	3	2.3	0.6	105	1.30	0.2	1.2	-	-	2	
SK 45 GB 063	45	50	2.10	1.4	1.2	1	57	1.45	0.25	1.2	-	-	2	
SK 80 GB 063	81	100	2.10	4	3	0.6	79	1.40	1.2	0.9	-	-	3	
SK 15 GH 063	20	15	2.00	0.71	0.4	1.9	20	1.45	0.45	1.2	-	-	2	
SK 25 GH 063	30	30	2.10	1.1	0.8	1.4	36	1.45	0.25	1.7	-	-	2	
SK 45 GH 063	45	50	2.10	1.4	1.2	1	57	1.30	0.9	1.2	-	-	3	
SK 13 GD 063	18	10	2.10	0.6	0.4	2	22	1.45	0.1	2.3	-	-	3	
SK 25 GD 063	30	30	2.10	1.3	0.9	1.4	36	1.45	0.25	1.7	-	-	3	
SK 45 GD 063	45	50	2.10	1.4	1.2	1	36	1.45	0.25	1.7	-	-	3	
600V - NPT IGBT (Ultrafast)														
SK 50 GAL 065	54	60	2.00	1.1	0.7	0.85	57	1.30	0.2	1.2	-	-	2	
SK 50 GAR 065	54	60	2.00	1.1	0.7	0.85	57	1.30	0.2	1.2	-	-	2	
SK 55 GARL 065 E	54	60	1.70	1.1	0.76	0.85	36	1.45	0.9	1.7	-	-	3	
SK 75 GARL 065 E	80	90	1.70	2.71	2.75	0.6	57	1.30	0.2	1.2	-	-	3	
SK 50 GB 065	54	60	2.00	1.1	0.7	0.85	64	1.45	0.55	1.1	-	-	2	
SK 50 GARL 065 F	54	60	1.70	1.03	0.8	0.85	82	1.70	-	2.3	-	-	2	
SK 50 GARL 065 USA	54	60	1.70	1.07	0.76	0.85	64	1.40	-	2.3	-	-	2	

Footnotes: 8) Target data

IGBT Modules / SEMITOP

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}	$R_{th(j-c)}$	$I_F @ T_s = 25^\circ\text{C}$	$V_F @ T_j = 25^\circ\text{C typ.}$	E_{rr}	$R_{th(j-c)}$	$R_{th(j-s)}$	$I_{FSM} @ T_j = 25^\circ\text{C}$	Case	Circuit
	A	A	V	mJ	mJ	K/W	A	V	mJ	K/W	K/W	A		
600V - NPT IGBT (Ultrafast)														
SK 50 GH 065 F	54	60	2.00	1.07	1.76	0.85	82	1.10	0.42	1.1	-	-	3	
SK 9 DGD 065 ET	12	6	2.00	0.22	0.12	2.6	20	1.35	0.31	2.7	2.15	220	3	
SK 20 DGD 065 ET	26	20	2.00	0.66	0.4	1.7	25	1.60	-	1.7	1.7	370	3	
SK 35 GD 065 ET	45	50	2.00	1.3	0.6	1	36	1.90	0.9	1.7	-	-	3	
SK 10 BGD 065 ET	17	6	2.00	0.18	0.13	2	22	1.30	0.18	2.3	2.7	220	3	
SK 9 BGD 065 ET	12	6	2.00	0.22	0.12	2.6	20	1.35	0.31	2.7	2.15	220	3	
SK 10 DGD 065 ET	17	6	2.00	0.18	0.13	2	22	1.30	0.18	2.3	2.7	220	3	
SK 20 DGD 065 ET	24	20	2.00	0.69	0.39	1.7	25	1.60	-	1.7	2	220	3	
1200V - IGBT3 (Trench)														
SK 50 GD 126 T	68	50	1.70	4.6	6.3	0.6	62	1.35	3.6	1	-	-	4	
SK 75 GD 126 T	88	75	1.70	11.3	10	0.5	91	1.46	6	0.7	-	-	4	
SK 100 GD 126 T	114	100	1.70	9.8	11.7	0.4	118	1.50	7.3	0.55	-	-	4	
SK 10 GD 126 ET	15	8	1.70	1	1	2	25	1.90	1.4	2.1	-	-	3	
SK 15 GD 126 ET	22	15	1.70	2	1.8	1.6	25	1.60	1.4	2.1	-	-	3	
SK 25 GD 126 ET	32	25	1.70	3.3	3.1	1.2	28	1.80	2.1	1.9	-	-	3	
SK 35 GD 126 ET	40	35	1.70	4.6	4.3	1.05	34	1.80	2.9	1.7	-	-	3	
SK 10 DGD 126 ET	15	8	1.70	1	1	2	25	1.90	1.4	2.1	2.7	220	3	
SK 15 DGD 126 ET	22	15	1.70	2	1.8	1.6	25	1.60	1.1	2.1	2	220	3	
SK 25 DGD 126 T	41	25	1.70	2.8	3.1	0.9	30	1.50	2	1.7	1.5	370	4	
SK 35 DGD 126 T	52	35	1.70	3.7	4.8	0.75	38	1.50	3	1.5	1.25	370	4	
SK 50 DGD 126 T	68	50	1.70	4.6	6.3	0.6	62	1.35	3.6	1	0.9	700	4	

Footnotes: 8) Target data

IGBT Modules / SEMITOP

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}	$R_{th(j-c)}$	$I_f @ T_s = 25^\circ\text{C}$	$V_f @ T_j = 25^\circ\text{C typ.}$	E_{rr}	$R_{th(j-c)}$	$R_{th(j-s)}$	$I_{FSM} @ T_j = 25^\circ\text{C}$	Case	Circuit	
	A	A	V	mJ	mJ	K/W	A	V	mJ	K/W	K/W	A			
1200V - IGBT4 (Trench)															
SK 35 GAL 12T4	44	35	1.85	3.27	3.3	1.21	38	2.3	1.46	1.55	-	225	2		
SK 35 GAR 12T4	44	35	1.85	3.27	3.3	1.21	38	2.3	1.46	1.55	-	225	2		
SK 25 GB 12T4	37	25	1.85	2.27	2.7	1.31	30	2.40	1.28	1.91	-	-	2		
SK 35 GB 12T4	44	35	1.85	3.27	3.3	1.21	40	2.30	1.46	1.55	-	-	2		
SK 50 GB 12T4 T	71	50	1.85	8.3	5	0.9	50	2.20	2.15	1.24	-	-	3		
SK 75 GB 12T4 T	80	75	1.85	13.6	8.2	0.74	70	2.10	3.39	0.97	-	-	3		
SK 100 GB 12T4 T	100	100	1.85	16.6	10	0.6	85	2.25	5.2	0.87	-	-	3		
SK 50 GH 12T4 T	75	50	1.80	8.3	5	0.65	56	2.20	2.15	1.05	-	-	4		
SK 100 GH 12T4 T	126	100	1.80	16.6	10	0.43	102	2.20	5.2	0.62	-	-	4		
SK 25 GH 12T4	35	25	1.85	2.27	2.7	1.31	28	2.41	1.28	1.91	-	-	3		
SK 50 GD 12T4 T	75	50	1.85	8.3	5	0.65	60	2.20	2.15	0.97	-	-	4		
SK 50 GD 12T4 Tp	75	50	1.85	8.3	5	0.65	60	2.22	2.15	0.97	-	-	4p		
SK 75 GD 12T4 T	102	75	1.85	13.6	8.2	0.51	83	2.20	3.38	0.75	-	-	4		
SK 75 GD 12T4 Tp ⁸⁾	99	75	1.85	13.6	8.2	0.51	83	2.17	3.38	0.75	-	-	4p		
SK 100 GD 12T4 T	126	100	1.85	16.6	10	0.43	102	2.25	5.2	0.62	-	-	4		
SK 10 GD 12T4 ET	17	8	1.85	0.41	0.76	2.2	15	2.38	0.41	2.7	-	-	3		
SK 15 GD 12T4 ET	27	15	1.85	0.83	1.52	1.65	21	2.38	0.82	2.34	-	-	3		
SK 25 GD 12T4 ET	37	25	1.85	2.27	2.7	1.31	30	2.40	1.28	1.91	-	-	3		
SK 25 GD 12T4 ETp ^{NEW}	37	25	1.85	2.27	2.7	1.31	28	2.41	1.28	1.91	-	-	3p		
SK 35 GD 12T4 ET	44	35	1.85	3.27	3.3	1.21	40	2.30	1.46	1.55	-	-	3		
SK 10 DGD 12T4 ET	17	8	1.85	0.41	0.75	2.2	15	2.38	0.41	2.7	2	220	3		
SK 15 DGD 12T4 ET	27	15	1.85	0.82	1.52	1.65	21	2.38	0.82	2.34	2	220	3		

Footnotes: 8) Target data

IGBT Modules / SEMITOP

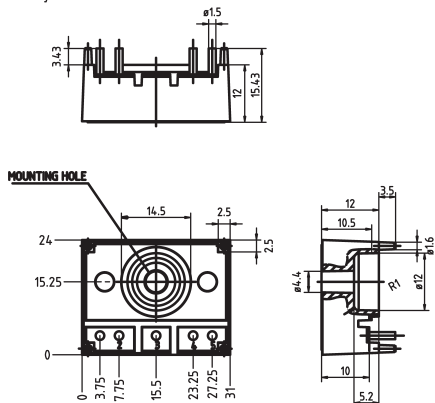
Type	IGBT						Diode			Rectifier		Module		
	$I_c @ T_s = 25^\circ\text{C}$	I_{cnom}	$V_{CE(sat)} @ T_j = 25^\circ\text{C typ.}$	E_{on}	E_{off}	$R_{th(j-c)}$	$I_f @ T_s = 25^\circ\text{C}$	$V_f @ T_j = 25^\circ\text{C typ.}$	E_{rr}	$R_{th(j-s)}$	$R_{th(j-r)}$	$I_{FSM} @ T_j = 25^\circ\text{C}$	Case	Circuit
	A	A	V	mJ	mJ	K/W	A	V	mJ	K/W	K/W	A		
1200V - IGBT4 (Trench)														
SK 25 DGD L 12T4 T	45	25	1.85	2.27	2.7	0.96	30	2.40	-	1.7	1.25	370	4	
SK 35 DGD L 12T4 T	58	35	1.85	3.27	3.3	0.8	46	2.30	1.46	1.37	1.25	370	4	
SK 50 DGD L 12T4 T	75	50	1.85	8.3	5	0.65	60	2.22	2.15	0.97	0.9	700	4	
1200V - NPT IGBT (Ultrafast)														
SK 60 GAL 125	51	50	3.20	8.36	3.32	0.6	43	2.00	2	1.16	-	-	2	
SK 60 GAR 125	51	50	3.20	8.36	3.32	0.6	43	2.00	2	1.16	-	-	2	
SK 60 GB 125	51	50	3.20	8.36	3.32	0.6	57	-	2	0.9	-	-	3	
SK 80 GB 125 T	85	75	3.20	9.9	5	0.32	90	2.00	1	0.65	-	-	3	

Footnotes: 8) Target data

Cases

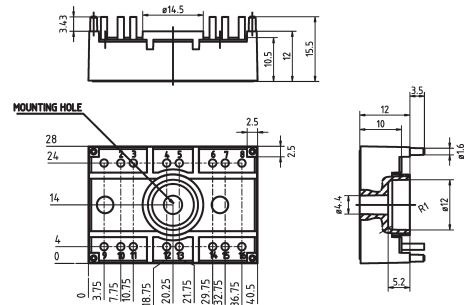
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dimensions in mm
tolerance system: ISO 2768-m



SEMISTOP 2

dimensions in mm
tolerance system: ISO 2768-m



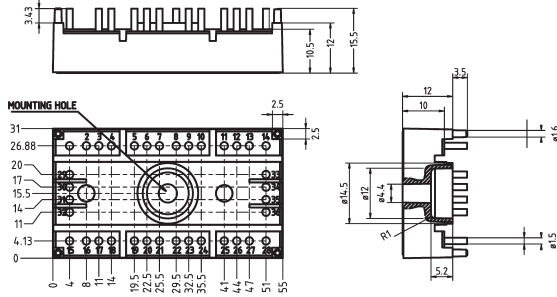
Dimensions in mm

IGBT Modules / SEMITOP

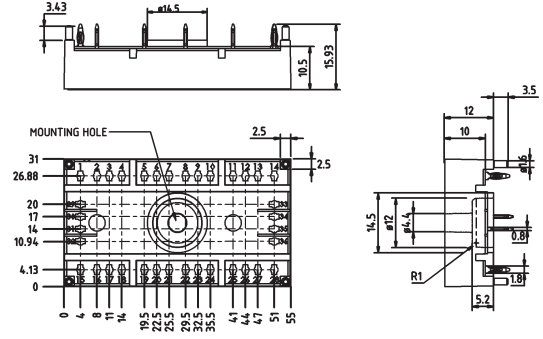
Cases

SEMISTOP 3

dimensions in mm
tolerance system: ISO 2768-m

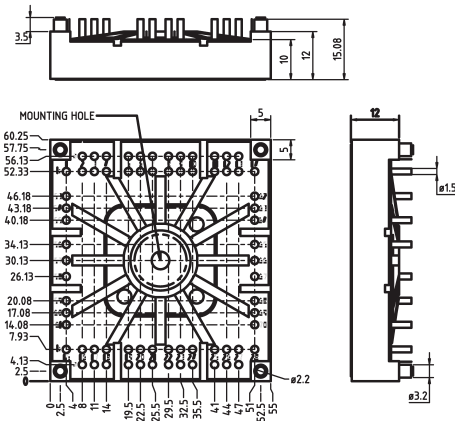


SEMISTOP 3 Press-Fit

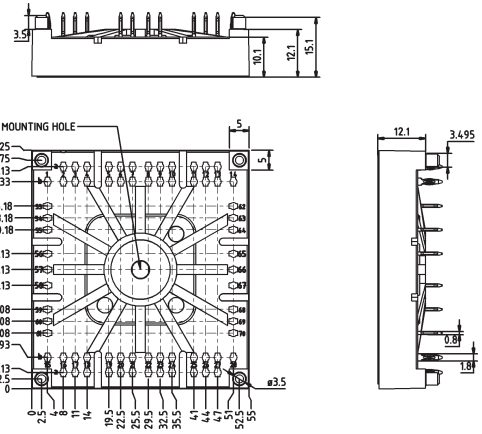


SEMISTOP 4

dimensions in mm
tolerance system: ISO 2768-m



SEMISTOP 4 Press-Fit



Dimensions in mm