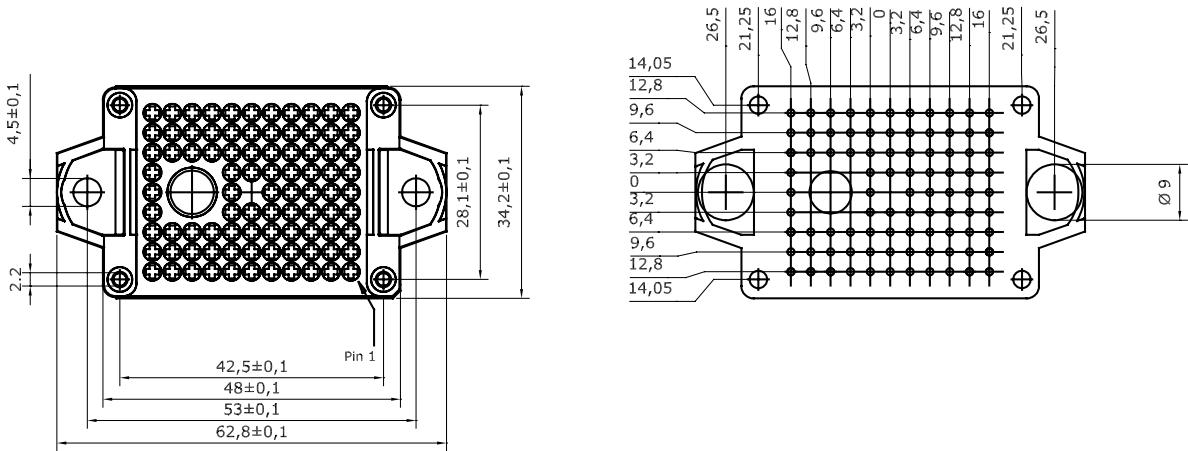


IGBT Modules / SEMITOP

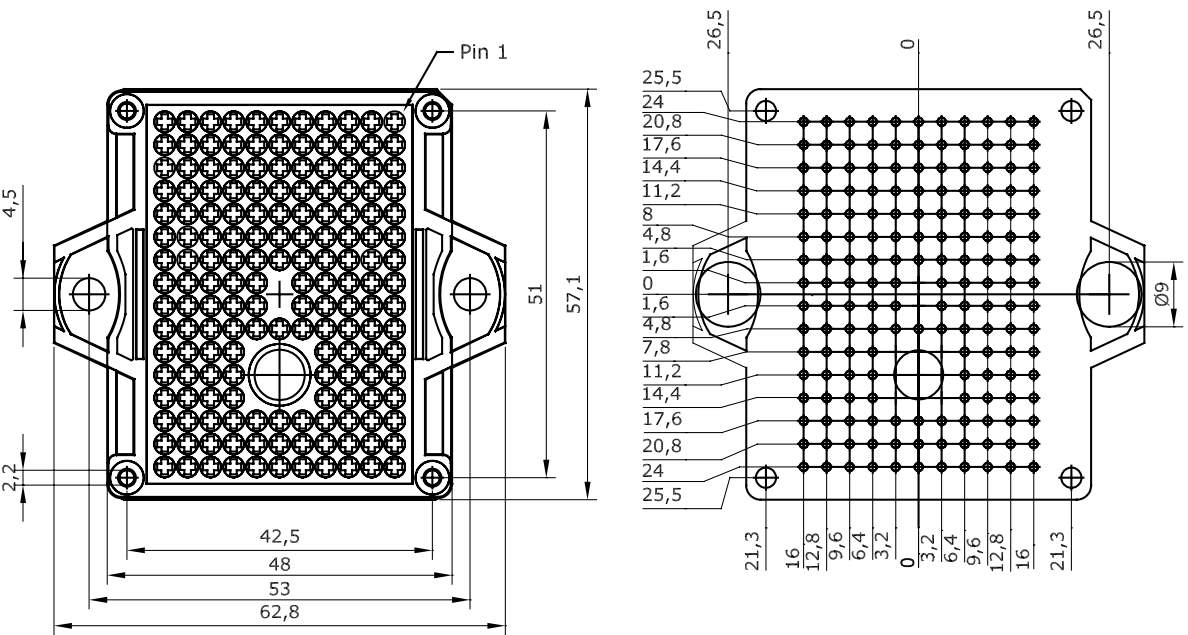
IGBT Modules / SEMiX

Cases

SEMITOP E1



SEMITOP E2



Dimensions in mm

Type	IGBT						Diode				Module		
	$I_c @ T_c = 25^{\circ}\text{C}$	I_{Cnom}	$V_{CE(sat)} @ T_j = 25^{\circ}\text{C typ.}$	E_{on}	E_{off}	$R_{th(j-c)}$	$I_F @ T_c = 25^{\circ}\text{C}$	$V_F @ T_j = 25^{\circ}\text{C typ.}$	E_{rr}	$R_{th(j-c)}$	Case	$R_{th(c-s)}$	
	A	A	V	mJ	mJ	K/W	A	V	mJ	K/W		K/W	Circuit
600V - IGBT3 (Trench)													
SEMiX402GAL066HDs	502	400	1.45	22	24	0.12	543	1.40	10	0.15	2s	0.045	
SEMiX603GAL066HDs	720	600	1.45	12	43	0.087	771	1.40	13	0.11	3s	0.04	
SEMiX402GAR066HDs	502	400	1.45	22	24	0.12	543	1.40	10	0.15	2s	0.045	
SEMiX603GAR066HDs	720	600	1.45	12	43	0.087	771	1.40	13	0.11	3s	0.04	
SEMiX202GB066HDs	272	200	1.45	6	8	0.21	291	1.40	6.5	0.27	2s	0.045	
SEMiX302GB066HDs	379	300	1.45	12	15	0.16	419	1.40	7.5	0.19	2s	0.045	
SEMiX402GB066HDs	502	400	1.45	22	24	0.12	543	1.40	10	0.15	2s	0.045	
SEMiX603GB066HDs	720	600	1.45	12	43	0.087	771	1.40	13	0.11	3s	0.04	
SEMiX101GD066HDs	139	100	1.45	3	4	0.41	151	1.40	4.5	0.51	13	0.04	
SEMiX151GD066HDs	200	150	1.45	3.8	6.1	0.29	219	1.40	5.8	0.36	13	0.04	
SEMiX201GD066HDs	258	200	1.45	5	8	0.23	284	1.40	7.5	0.28	13	0.04	
650V - IGBT4 (Trench)													
SEMiX205GARL07E3 ¹⁾	258	200	1.45	16	16	0.23	86	1.37	-	0.81	5p	0.019	
SEMiX305GARL07E3 ¹⁾	353	300	1.45	21	21	0.18	86	1.37	-	0.81	5p	0.018	
SEMiX405GARL07E3 ¹⁾	457	400	1.45	28	28	0.14	86	1.37	-	0.81	5p	0.017	
SEMiX155MLI07E4 ²⁾	187	150	1.55	1.5	8.6	0.32	145	1.40	2.3	0.51	5p	0.009	
SEMiX205MLI07E4 ²⁾	262	200	1.55	2	10	0.22	294	1.40	4.5	0.25	5p	0.005	
SEMiX305MLI07E4 ²⁾	388	300	1.55	2.5	16	0.15	294	1.40	7.7	0.25	5p	0.005	
SEMiX405MLI07E4 ²⁾	474	400	1.55	5.3	20	0.13	377	1.40	11	0.21	5p	0.004	
SEMiX305GD07E4 ¹⁾	372	300	1.55	5.5	16	0.16	335	1.40	5.2	0.25	5p	0.004	
1200V - V-IGBT													
SEMiX151GAL12Vs	231	150	1.75	19	17	0.19	189	2.14	12	0.31	1s	0.075	
SEMiX151GB12Vs	231	150	1.75	19	17	0.19	189	2.14	12	0.31	1s	0.075	
SEMiX202GB12Vs	310	200	1.75	25	24	0.14	229	2.20	15	0.26	2s	0.045	
SEMiX223GB12Vs	323	225	1.85	20	27	0.14	263	2.17	16	0.23	3s	0.04	
SEMiX302GB12Vs	448	300	1.75	37	36	0.1	356	2.14	22	0.17	2s	0.045	
SEMiX303GB12Vs	448	300	1.75	27	36	0.1	327	2.20	21	0.19	3s	0.04	
SEMiX404GB12Vs	596	400	1.75	39	52	0.075	440	2.20	34	0.14	4s	0.03	
SEMiX453GB12Vs	673	450	1.75	40	54	0.067	516	2.14	33	0.12	3s	0.04	
SEMiX603GB12Vs	800	600	1.85	50	83	0.057	516	2.42	40	0.12	3s	0.04	
SEMiX604GB12Vs	880	600	1.75	59	79	0.051	707	2.14	50	0.086	4s	0.03	

Footnotes: 1) Sample status / 2) In production new

IGBT Modules / SEMiX

Type	IGBT						Diode				Module			
	$I_C @ T_C = 25^{\circ}\text{C}$	I_{Cnom}	$V_{CE(sat)} @ T_J = 25^{\circ}\text{C typ.}$	E_{on}	E_{off}	$R_{th(j-c)}$	$I_F @ T_C = 25^{\circ}\text{C}$	$V_F @ T_J = 25^{\circ}\text{C typ.}$	E_{rr}	$R_{th(j-c)}$	Case	$R_{th(l-c)}$		
	A	A	V	mJ	mJ	K/W	A	V	mJ	K/W		K/W	Circuit	
1200V - V-IGBT														
SEMiX101GD12Vs	159	100	1.75	13	11	0.27	121	2.20	7.7	0.48	13	0.04		
SEMiX151GD12Vs	231	150	1.75	19	17	0.19	189	2.14	12	0.31	13	0.04		
SEMiX223GD12Vc	323	225	1.85	20	27	0.14	263	2.17	16	0.23	33c	0.014		
SEMiX303GD12Vc	448	300	1.75	27	36	0.1	327	2.20	21	0.19	33c	0.014		
SEMiX453GD12Vc	673	450	1.75	40	54	0.067	516	2.14	33	0.12	33c	0.014		
1200V - IGBT4 (Trench)														
SEMiX151GAL12E4s	232	150	1.80	17	18	0.19	189	2.14	8.9	0.31	1s	0.075		
SEMiX302GAL12E4s	463	300	1.80	30	44	0.096	356	2.14	19	0.17	2s	0.045		
SEMiX453GAL12E4s	683	450	1.80	45	67	0.065	544	2.14	28	0.11	3s	0.04		
SEMiX603GAL12E4p ²⁾	1110	600	1.80	59	76	0.037	856	2.08	33	0.065	3p	0.009		
SEMiX604GAL12E4s	916	600	1.80	35	110	0.049	707	2.14	44	0.086	4s	0.03		
SEMiX151GAR12E4s	232	150	1.80	17	18	0.19	189	2.14	8.9	0.31	1s	0.075		
SEMiX302GAR12E4s	463	300	1.80	30	44	0.096	356	2.14	19	0.17	2s	0.045		
SEMiX453GAR12E4s	683	450	1.80	45	67	0.065	544	2.14	28	0.11	3s	0.04		
SEMiX603GAR12E4p ²⁾	1110	600	1.80	64	76	0.037	856	2.08	32	0.065	3p	0.009		
SEMiX604GAR12E4s	916	600	1.80	35	110	0.049	707	2.14	44	0.086	4s	0.03		
SEMiX151GB12E4s	232	150	1.80	17	18	0.19	189	2.14	8.9	0.31	1s	0.075		
SEMiX202GB12E4s	312	200	1.80	22	28	0.14	229	2.20	12	0.26	2s	0.045		
SEMiX223GB12E4p	326	225	1.85	14	26	0.14	287	2.17	17	0.2	3p	0.009		
SEMiX302GB12E4s	463	300	1.80	30	44	0.096	356	2.14	19	0.17	2s	0.045		
SEMiX303GB12E4p	469	300	1.80	23	38	0.094	378	2.20	23	0.15	3p	0.009		
SEMiX303GB12E4s	466	300	1.80	30	41	0.095	338	2.20	18	0.18	3s	0.04		
SEMiX404GB12E4s	618	400	1.80	27	60	0.072	440	2.20	26	0.14	4s	0.03		
SEMiX453GB12E4p	678	450	1.80	25	57	0.066	578	2.14	37	0.1	3p	0.009		
SEMiX453GB12E4s	683	450	1.80	45	67	0.065	544	2.14	28	0.11	3s	0.009		
SEMiX603GB12E4p	1110	600	1.80	69	80	0.037	856	2.08	40	0.065	3p	0.009		
SEMiX604GB12E4s	916	600	1.80	35	110	0.049	707	2.14	44	0.086	4s	0.03		
SEMiX303GB12E4I50p ¹⁾	469	300	1.80	23	38	0.094	378	2.20	23	0.15	3Ip	0.009		
SEMiX453GB12E4Ip	678	450	1.80	33	57	0.066	578	2.14	39	0.1	3Ip	0.009		
SEMiX603GB12E4Ip	1110	600	1.80	63	80	0.037	856	2.08	40	0.065	3Ip	0.009		
SEMiX453GM12E4p ¹⁾	678	450	1.80	11	66	0.066	544	2.14	32	0.11	3Ip	0.009		
SEMiX155MLI12E4 ¹⁾	237	150	1.85	12	17	0.18	191	2.17	5.5	0.3	5p	0.007		
SEMiX205MLI12E4 ¹⁾	313	200	1.80	13	25	0.14	229	2.20	5.8	0.26	5p	0.006		
SEMiX305MLI12E4 ²⁾	451	300	1.80	17	39	0.1	344	2.14	22	0.18	5p	0.009		
SEMiX205TMLI12E4B ²⁾	318	200	1.80	5	4	0.136	229	2.20	5.9	0.26	5p	0.008		
SEMiX305TMLI12E4B ²⁾	479	300	1.80	4.5	21	0.09	363	2.20	8.8	0.16	5p	0.006		
SEMiX405TMLI12E4B ²⁾	636	400	1.80	6	28	0.068	461	2.20	12	0.13	5p	0.005		

Footnotes: 1) Sample status / 2) In production new

IGBT Modules / SEMiX

Type	IGBT						Diode				Module			
	$I_C @ T_C = 25^{\circ}\text{C}$	I_{Cnom}	$V_{CE(sat)} @ T_J = 25^{\circ}\text{C typ.}$	E_{on}	E_{off}	$R_{th(j-c)}$	$I_F @ T_C = 25^{\circ}\text{C}$	$V_F @ T_J = 25^{\circ}\text{C typ.}$	E_{rr}	$R_{th(j-c)}$	Case	$R_{th(l-c)}$		
	A	A	V	mJ	mJ	K/W	A	V	mJ	K/W		K/W	Circuit	
1200V - IGBT4 (Trench)														
SEMiX71GD12E4s	115	75	1.85	7.5	9	0.38	97	2.17	5.3	0.58	13	0.04		
SEMiX101GD12E4s	160	100	1.80	11	13	0.27	121	2.20	6.5	0.48	13	0.04		
SEMiX151GD12E4s	232	150	1.80	14	19	0.19	189	2.14	8.9	0.31	13	0.04		
SEMiX205GD12E4 ²⁾	313	200	1.80	14	23	0.15	224	2.20	16	0.27	5p	0.005		
SEMiX223GD12E4c	333	225	1.85	22	31	0.135	270	2.17	17	0.22	33c	0.014		
SEMiX303GD12E4c	466	300	1.80	29	42	0.095	338	2.20	23	0.18	33c	0.014		
SEMiX453GD12E4c	683	450	1.80	52	68	0.065	544	2.14	28	0.11	33c	0.014		
1200V - IGBT4 (Fast Trench)														
SEMiX105GD12T4 ¹⁾	163	100	1.80	12	19	0.26	129	2.20	12	0.43	5p	t.b.d.		
SEMiX155GD12T4 ¹⁾	219	150	1.80	13	21	0.21	175	2.14	14	0.35	5p	t.b.d.		
SEMiX106GD12T4p ¹⁾	153	100	1.80	7.5	9.5	0.29	128	1.70	8	0.5	6p	t.b.d.		
SEMiX156GD12T4p ¹⁾	225	150	1.80	10	16	0.2	177	1.70	13.5	0.375	6p	t.b.d.		
SEMiX206GD12T4p ¹⁾	302	200	1.80	29.4	31.4	0.15	249	1.70	22.9	0.26	6p	t.b.d.		
1200V - IGBT3 (Trench)														
SEMiX452GAL126HDs	455	300	1.70	35	45	0.083	394	1.60	33	0.15	2s	0.045		
SEMiX703GAL126HDs	642	450	1.70	32	68	0.061	561	1.60	60	0.11	3s	0.04		
SEMiX703GAR126HDs	642	450	1.70	32	68	0.061	561	1.60	60	0.11	3s	0.04		
SEMiX252GB126HDs	242	150	1.70	20	21	0.15	228	1.60	18	0.24	2s	0.045		
SEMiX302GB126HDs	311	200	1.70	30	26	0.12	292	1.60	23	0.19	2s	0.045		
SEMiX353GB126HDs	364	225	1.70	27	33	0.1	329	1.60	29	0.17	3s	0.04		
SEMiX452GB126HDs	455	300	1.70	35	45	0.083	394	1.60	33	0.15	2s	0.045		
SEMiX503GB126HDs	466	300	1.70	28	44	0.08	431	1.60	33	0.13	3s	0.04		
SEMiX604GB126HDs	590	400	1.70	36	60	0.065	533	1.60	46	0.11	4s	0.03		
SEMiX703GB126HDs	642	450	1.70	32	68	0.061	561	1.60	60	0.11	3s	0.04		
SEMiX904GB126HDs	821	600	1.70	60	88	0.05	752	1.60	75	0.081	4s	0.03		
SEMiX101GD126HDs	129	75	1.70	10	11	0.27	117	1.60	9	0.46	13	0.04		
SEMiX151GD126HDs	168	100	1.70	12	14	0.21	152	1.60	12	0.36	13	0.04		
SEMiX251GD126HDs	242	150	1.70	19	22	0.15	207	1.60	15	0.28	13	0.04		

Footnotes: 1) Sample status / 2) In production new

IGBT Modules / SEMiX

Type	IGBT						Diode				Module		
	$I_c @ T_c = 25^{\circ}\text{C}$	I_{cnom}	$V_{CE(sat)} @ T_j = 25^{\circ}\text{C typ.}$	E_{on}	E_{off}	$R_{th(j-c)}$	$I_f @ T_c = 25^{\circ}\text{C}$	$V_f @ T_j = 25^{\circ}\text{C typ.}$	E_r	$R_{th(j-c)}$	Case	$R_{th(c-a)}$	Circuit
	A	A	V	mJ	mJ	K/W	A	V	mJ	K/W		K/W	
1200V - IGBT3 (Trench)													
SEMiX353GD126Hdc	364	225	1.70	27	33	0.1	329	1.60	29	0.17	33c	0.014	
SEMiX503GD126Hdc	466	300	1.70	28	44	0.08	412	1.60	33	0.14	33c	0.014	
SEMiX703GD126Hdc	642	450	1.70	32	68	0.061	561	1.59	60	0.11	33c	0.014	
1700V - IGBT4 (Trench)													
SEMiX302GAL17E4s	516	300	1.90	140	122	0.083	324	1.98	70	0.184	2s	0.045	
SEMiX453GAL17E4s	762	450	1.90	250	190	0.056	482	1.98	100	0.125	3s	0.04	
SEMiX151GB17E4s	260	150	1.90	52	60	0.162	169	1.98	41	0.345	1s	0.075	
SEMiX202GB17E4s	321	200	1.90	75	82	0.122	213	2.00	55	0.276	2s	0.045	
SEMiX302GB17E4s	516	300	1.90	140	122	0.083	324	1.98	70	0.184	2s	0.045	
SEMiX303GB17E4s	477	300	1.90	140	125	0.083	311	2.00	85	0.191	3s	0.04	
SEMiX404GB17E4s	633	400	1.90	190	165	0.062	412	2.00	97	0.145	4s	0.03	
SEMiX453GB17E4p	731	450	1.90	131	146	0.06	557	1.98	72	0.1	3p	0.009	
SEMiX453GB17E4s	762	450	1.90	250	190	0.056	482	1.98	100	0.125	3s	0.04	
SEMiX603GB17E4p ²⁾	981	600	1.95	125	200	0.037	794	1.88	120	0.073	3p	0.009	
SEMiX604GB17E4s	1015	600	1.90	255	255	0.042	629	1.98	150	0.095	4s	0.03	
SEMiX453GB17E4Ip	731	450	1.90	153	150	0.06	557	1.98	73	0.1	3Ip	0.009	
SEMiX305TMLI17E4C ¹⁾	486	300	1.90	38	60	0.08	338	2.00	38	0.17	5p	0.005	
SEMiX155GD17E4 ¹⁾	245	150	1.90	-	-	0.18	175	2.00	-	0.32	5p	t.b.d.	
SEMiX453GD17E4c	762	450	1.90	186	183	0.056	482	1.98	122	0.125	33c	0.014	
1700V - IGBT3 (Trench)													
SEMiX653GAL176HDs	619	450	2.00	300	180	0.054	545	1.70	73	0.11	3s	0.04	
SEMiX653GAR176HDs	619	450	2.00	300	180	0.054	545	1.70	73	0.11	3s	0.04	

Footnotes: 1) Sample status / 2) In production new

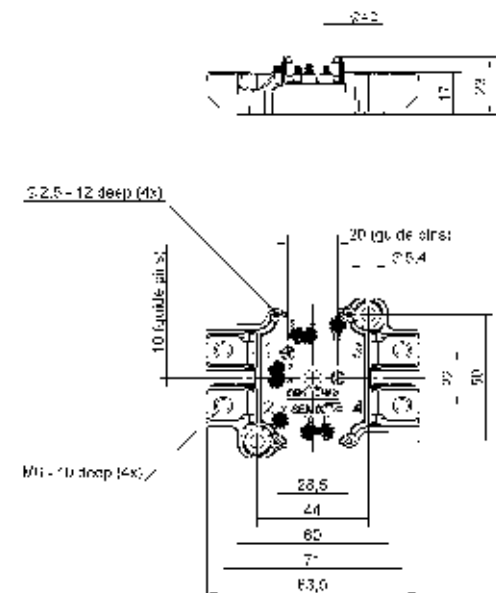
IGBT Modules / SEMiX

Type	IGBT						Diode				Module		
	$I_c @ T_c = 25^{\circ}C$	I_{Chom}	$V_{CE(sat)} @ T_j = 25^{\circ}C \text{ typ.}$	E_{on}	E_{off}	$R_{th(j-c)}$	$I_F @ T_c = 25^{\circ}C$	$V_F @ T_j = 25^{\circ}C \text{ typ.}$	E_{rr}	$R_{th(j-c)}$	Case	$R_{th(c-s)}$	Circuit
	A	A	V	mJ	mJ	K/W	A	V	mJ	K/W		K/W	
1700V - IGBT3 (Trench)													
SEMIx252GB176HDs	246	150	2.00	90	55	0.12	288	1.55	32	0.19	2s	0.045	
SEMIx302GB176HDs	308	200	2.00	130	77	0.1	389	1.50	43	0.15	2s	0.045	
SEMIx353GB176HDs	353	225	2.00	155	85	0.086	428	1.55	45	0.13	3s	0.04	
SEMIx452GB176HDs	437	300	2.00	180	110	0.073	389	1.70	46	0.15	2s	0.045	
SEMIx453GB176HDs	444	300	2.00	215	125	0.071	545	1.50	65	0.11	3s	0.04	
SEMIx604GB176HDs	567	400	2.00	215	165	0.058	740	1.50	95	0.081	4s	0.03	
SEMIx653GB176HDs	619	450	2.00	300	180	0.054	545	1.70	73	0.11	3s	0.04	
SEMIx854GB176HDs	779	600	2.00	300	250	0.045	740	1.70	170	0.081	4s	0.03	
SEMIx353GD176HDc	353	225	2.00	155	85	0.086	428	1.55	45	0.13	33c	0.014	
SEMIx453GD176HDc	444	300	2.00	215	125	0.071	545	1.50	65	0.11	33c	0.014	
SEMIx653GD176HDc	619	450	2.00	300	180	0.054	545	1.70	73	0.11	33c	0.014	

Footnotes: 1) Sample status / 2) In production new

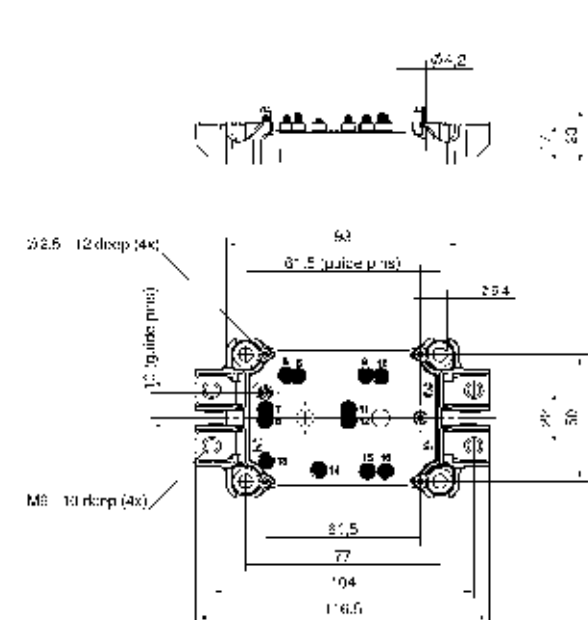
Cases

SEMIX 1s



Dimensions in mm

SEMIX 2s

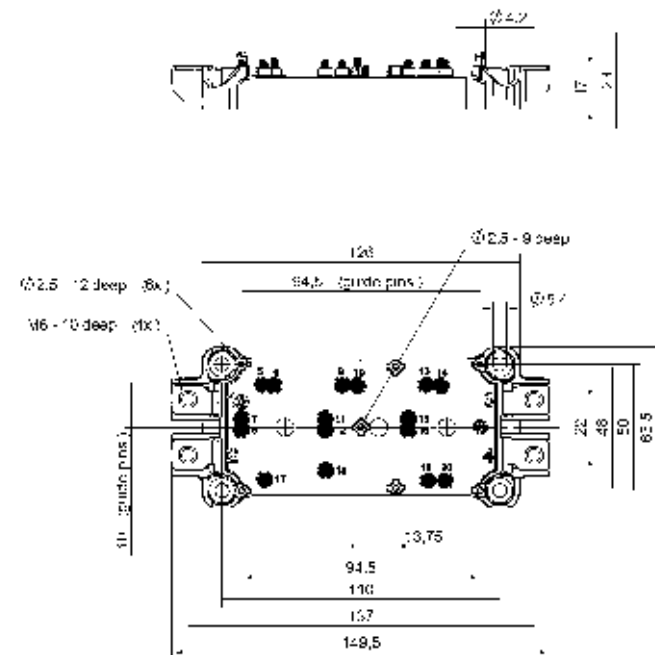


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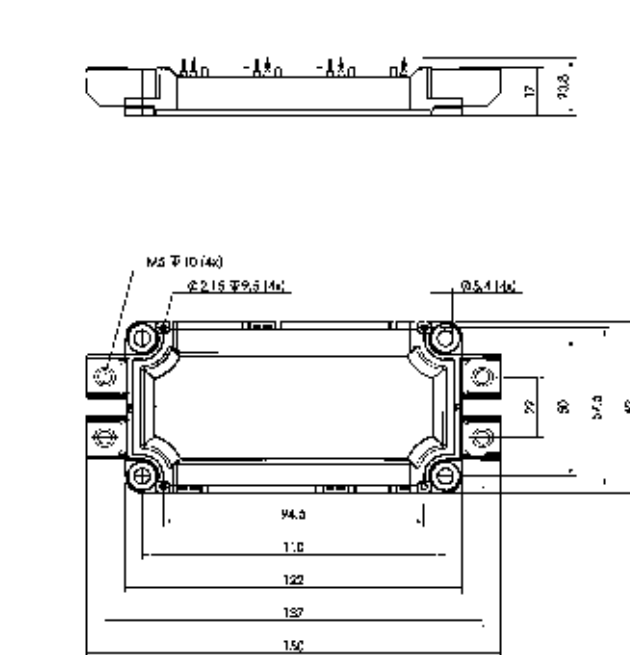
IGBT Modules / SEMiX

Cases

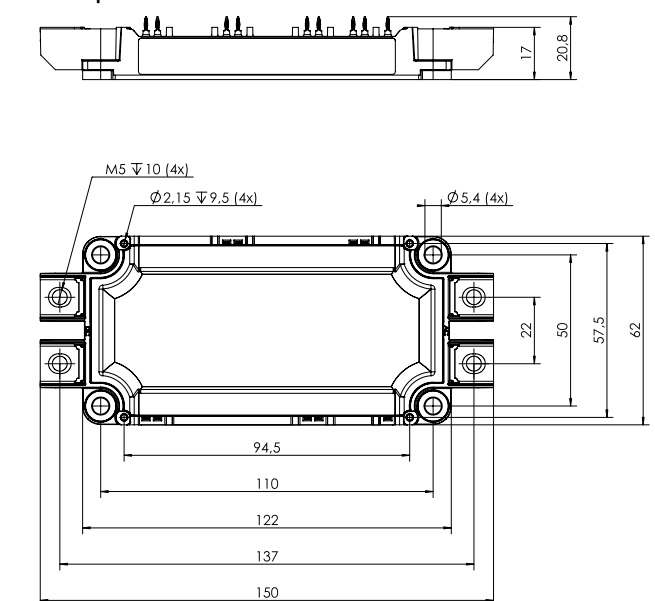
SEMIX 3s



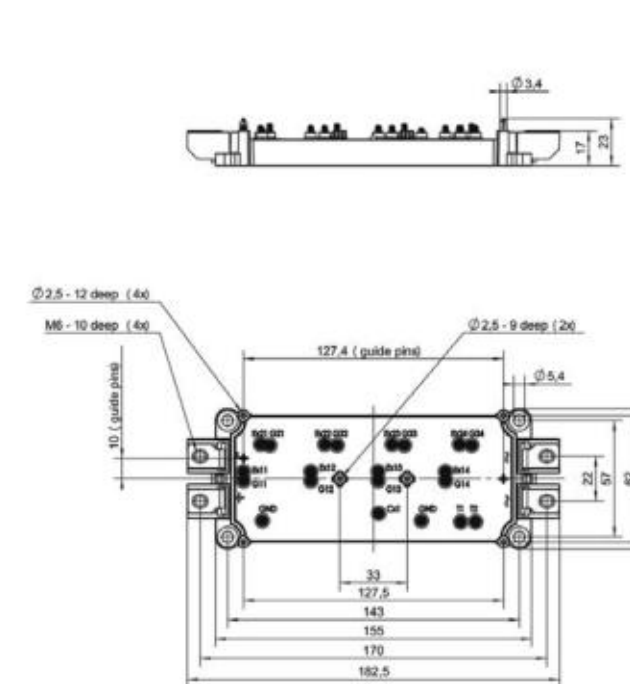
SEMIX 3p



SEMIX 3Ip



SEMIX 4s

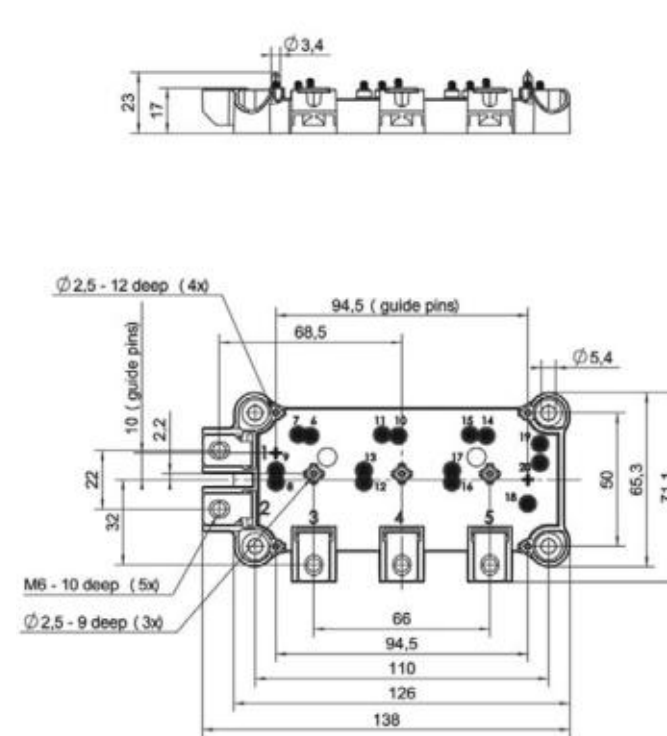


Dimensions in mm

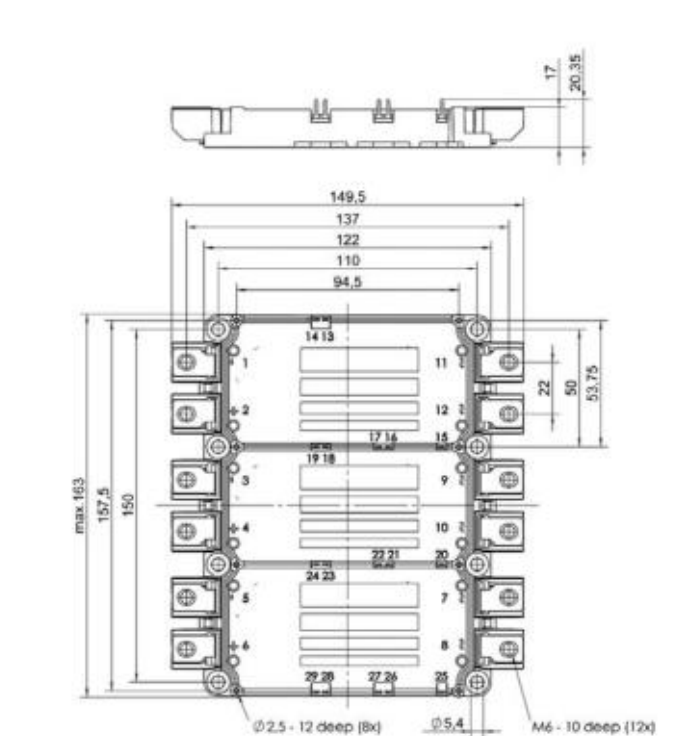
IGBT Modules / SEMiX

Cases

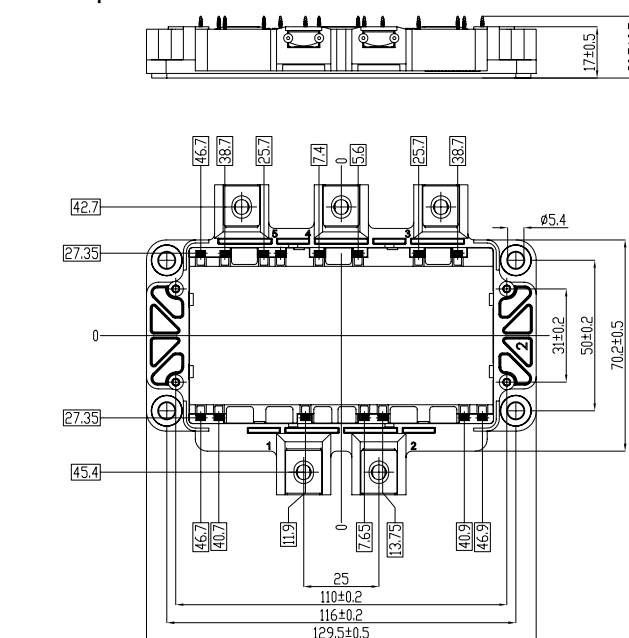
SEMIX 13



SEMIX 33c



SEMIX 5p



Dimensions in mm

SEMIX 6p

