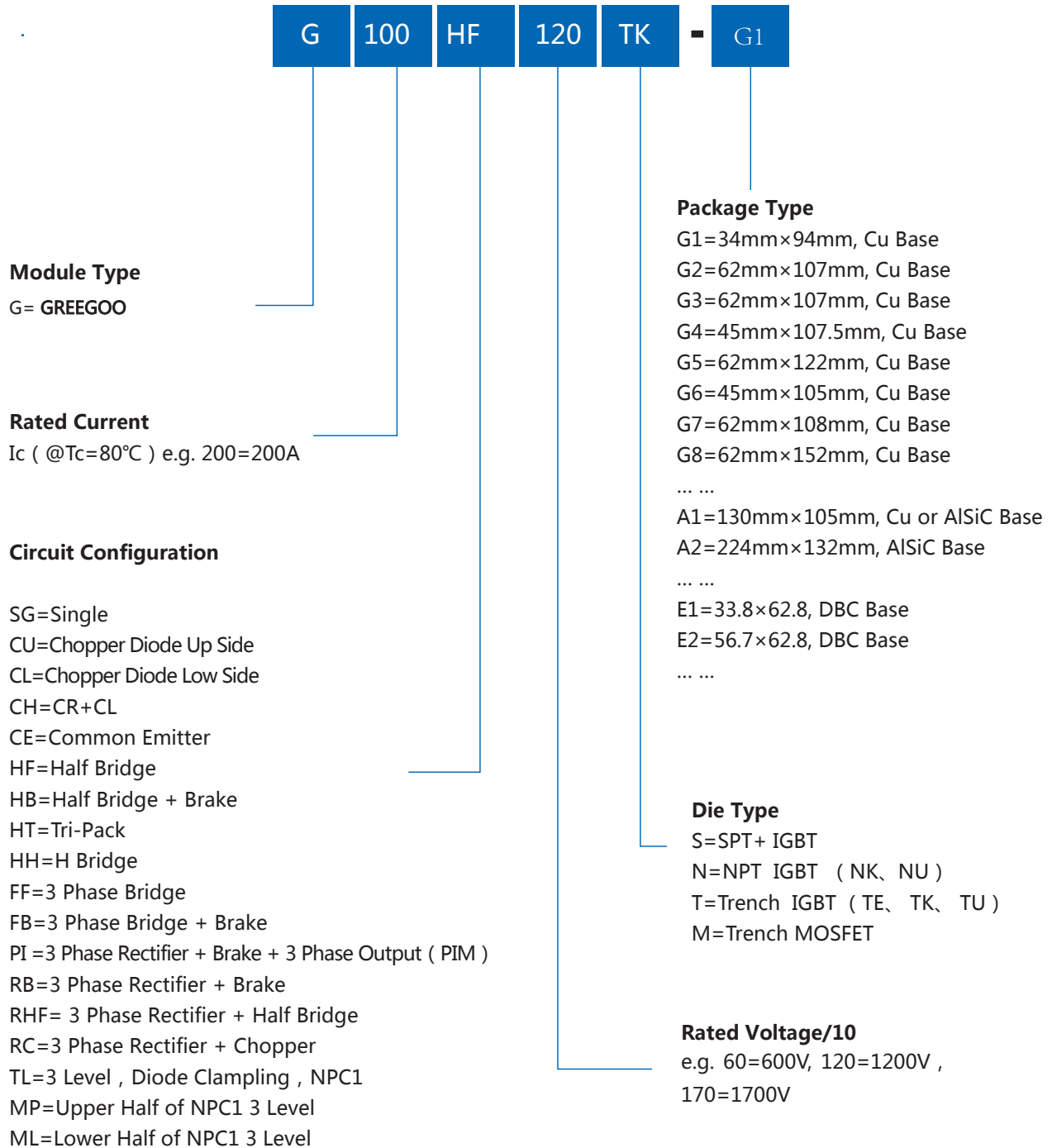
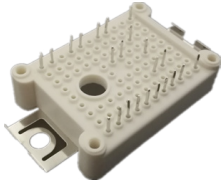
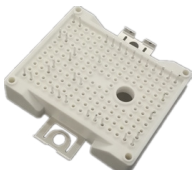
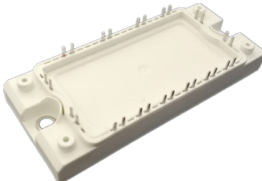

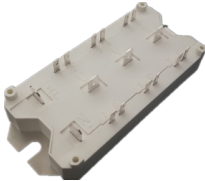


# IGBT MODULES


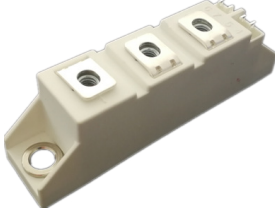




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# IGBT MODULES




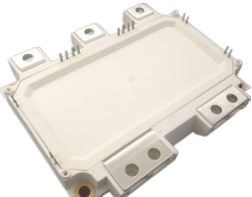
Package Type	V <sub>CES</sub> ( V )			I <sub>c</sub> ( A )						
	650	1200	1700	15	25	50	75	100	150	200
 E1 : full bridge/3 phase bridge/PIM/NPC	→			→						
 E2 : 3 phase bridge/PIM/NPC	→			→						
 G4 : full bridge/3 phase bridge/PIM	→			→						
 G5 : full bridge/3 phase bridge/PIM	→			→						
 G6 : full bridge/H bridge/3 phase bridge	→			→						

# IGBT MODULES

Package Type	V <sub>CES</sub> ( V )			I <sub>c</sub> ( A )						
	650	1200	1700	50	100	200	300	400	600	900
 F4 : single	→			→						
 M1: half bridge/chopper	→			→						
 G1: half bridge/chopper	→			→						
 G2: half bridge/chopper	→			→						

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# IGBT MODULES

Package Type	V <sub>CES</sub> ( V )			I <sub>c</sub> ( A )						
	650	1200	1700	50	100	200	300	400	600	900
 G3: single	→			→						
 G7: NPC/double copper	→			→						
 G8: half bridge/double copper	→			→						
 A1: 3 phase bridge/double copper	→			→						

# 600V/650V IGBT MODULES

Type	VCES	IC	VCE(sat)	E(on+off)	Rth(J-C)	Packages	Circuit	
	Tc=25°C	Tc=80°C	Tj=25°C	Tj=125°C				
	(V)	(A)	(V)	(mJ)				
G100SG60TK	600	100	1.9	3.70	0.20	F4		
G600SG60TK	600	600	1.7	32.50	0.25	G3		
G800SG60TK	600	800	1.7	38.00	0.25	G3		
G600SG60TK	600	600	1.9	25.00	0.10	G3		
G800SG60TK	600	800	1.9	32.90	0.08	G3		
G50HF60TE	600	50	1.7	2.00	0.47	G1		
G75HF60TE	600	75	1.7	6.00	0.60	G1		
G100HF60TE	600	100	1.7	9.00	0.45	G1		
G150HF60TE	600	150	1.7	14.00	0.30	G1		
G200HF60TE	600	200	1.7	19.00	0.25	G1		
G300HF60TE	600	300	1.7	32.50	0.25	G2		
G400HF60TE	600	400	1.7	38.00	0.25	G2		
G50HF60TK	600	50	1.9	3.00	0.25	G1		
G75HF60TK	600	75	1.9	4.50	0.21	G1		
G100HF60TK	600	100	1.9	7.00	0.17	G1		
G150HF60TK	600	150	1.9	11.50	0.14	G1		
G200HF60TK	600	200	1.9	16.40	0.12	G1		
G300HF60TK	600	300	1.9	25.00	0.10	G2		
G400HF60TK	600	400	1.9	32.90	0.08	G2		
G450HF60TE	650	450	1.7	45.00	0.09	G8		
G600HF60TE	650	600	1.7	57.00	0.07	G8		

# 600V/650V IGBT MODULES

Type	VCES	IC	VCE(sat)	E(on+off)	Rth(J-C)	Packages	Circuit
	Tc=25°C	Tc=80°C	Tj=25°C	Tj=125°C			
	(V)	(A)	(V)	(mJ)			
G20FF60TE	600	20	1.7	1.20	1.27	E1-FF	
G30FF60TE	600	30	1.7	1.80	0.85	E1-FF	
G50FF60TE	600	50	1.7	2.70	0.75	E1-FF	
G20FF60TK	600	20	1.9	1.00	0.06	E1-FF	
G30FF60TK	600	30	1.9	1.50	0.71	E1-FF	
G50FF60TK	600	50	1.9	3.00	0.65	E1-FF	
G20PI60TE	600	20	1.7	1.20	0.98	E1-PI	
G30PI60TE	600	30	1.7	1.80	0.55	E1-PI	
G50PI60TE	600	50	1.7	2.70	0.39	E2-PI	
G20PI60TK	600	20	1.9	1.07	0.76	E1-PI	
G30PI60TK	600	30	1.9	1.50	0.42	E1-PI	
G50PI60TK	600	50	1.9	3.00	0.39	E2-PI	
G50FF60TE	600	50	1.7	2.30	0.50	G4-FF	
G75FF60TE	600	75	1.7	5.90	0.38	G4-FF	
G100FF60TE	600	100	1.7	9.00	0.30	G4-FF	
G100FF60TE	600	100	1.7	9.00	0.30	G5-FF	
G150FF60TE	650	150	1.7	14.30	0.24	G5-FF	
G200FF60TE	650	200	1.7	19.50	0.19	G5-FF	
G50FF60TK	600	50	1.9	3.10	0.62	G4-FF	
G75FF60TK	600	75	1.9	4.52	0.50	G4-FF	
G100FF60TK	600	100	1.9	7.00	0.38	G5-FF	
G150FF60TK	600	150	1.9	11.60	0.28	G5-FF	
G200FF60TK	600	200	1.9	16.50	0.24	G5-FF	

# 600V/650V IGBT MODULES

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Type	VCES	IC	VCE(sat)	E(on+off)	Rth(J-C)	Packages	Circuit
	Tc=25°C	Tc=80°C	Tj=25°C	Tj=125°C			
	(V)	(A)	(V)	(mJ)			
G50PI60TE	600	50	1.7	2.70	0.93	G4-PI	
G75PI60TE	600	75	1.7	6.00	0.60	G4-PI	
G100PI60TE	600	100	1.7	13.60	0.45	G5-PI	
G150PI60TE	600	150	1.7	25.00	0.36	G5-PI	
G50PI60TK	600	50	1.9	3.15	0.55	G4-PI	
G50PI60TK	600	50	1.9	3.15	0.55	G5-PI	
G75PI60TK	600	75	1.9	4.50	0.40	G5-PI	
G100PI60TK	600	100	1.9	7.10	0.30	G5-PI	
G150ML60TE	600	150	1.7	14.00	0.21	E2	
G200ML65TE	650	200	1.7	19.00	0.16	G7	
G300ML65TE	650	300	1.7	32.50	0.11	G7	
G150ML65TK	650	150	1.9	11.50	0.14	E2	
G200ML65TK	650	200	1.9	16.40	0.12	G7	
G300ML65TK	650	300	1.9	25.00	0.10	G7	
G300MP65TE	650	300	1.7	32.6	0.146	G8	
G400MP65TE	650	400	1.7	38	0.12	G8	
G300MP65TE	650	500	1.7	32.6	0.146	G8	
G400MP65TE	650	600	1.7	38	0.12	G8	

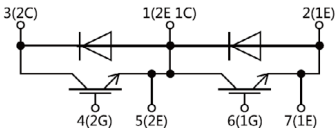
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# 1200V IGBT MODULES

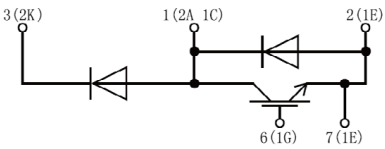
Type	VCES	IC	VCE(sat)	E(on+off)	Rth(J-C)	Packages	Circuit
	Tc=25°C	Tc=80°C	Tj=25°C	Tj=125°C			
	(V)	(A)	(V)	(mJ)	(K/W)		
G50SG120TE	1200	50	1.9	12.50	0.3	F4	
G75SG120TE	1200	75	1.9	16.80	0.19	F4	
G300SG120TE	1200	300	1.9	36.00	0.12	G3	
G400SG120TE	1200	400	1.9	39.00	0.11	G3	
G600SG120TE	1200	600	1.9	64.80	0.08	G3	
G50SG120TK	1200	50	2.2	9.90	0.28	F4	
G75SG120TK	1200	75	2.2	12.90	0.16	F4	
G300SG120TK	1200	300	2.2	25.00	0.13	G3	
G400SG120TK	1200	400	2.2	30.00	0.10	G3	
G600SG120TK	1200	600	2.2	48.00	0.07	G3	



# 1200V IGBT MODULES

Type	VCES	IC	VCE(sat)	E(on+off)	Rth(J-C)	Packages	Circuit
	Tc=25°C	Tc=80°C	Tj=25°C	Tj=125°C			
	(V)	(A)	(V)	(mJ)			
G50HF120S	1200	50	1.9	11.60	0.35	G1	
G75HF120S	1200	75	1.9	18.40	0.29	G1	
G100HF120S	1200	100	1.9	19.60	0.25	G1	
G150HF120S	1200	150	1.9	33.00	0.12	G2	
G200HF120S	1200	200	1.9	44.00	0.09	G2	
G300HF120S	1200	300	1.9	64.00	0.60	G2	
G50HF120TE	1200	50	1.9	12.50	0.28	G1	
G75HF120TE	1200	75	1.9	16.80	0.23	G1	
G100HF120TE	1200	100	1.9	18.40	0.19	G1	
G150HF120TE	1200	150	1.9	36.00	0.12	G2	
G200HF120TE	1200	200	1.9	39.00	0.11	G2	
G300HF120TE	1200	300	1.9	64.80	0.08	G2	
G400HF120TE	1200	400	1.9	85.00	0.51	G2	
G50HF120TK	1200	50	2.2	9.90	0.29	G1	
G75HF120TK	1200	75	2.2	12.90	0.23	G1	
G100HF120TK	1200	100	2.2	13.60	0.20	G1	
G150HF120TK	1200	150	2.2	25.00	0.13	G2	
G200HF120TK	1200	200	2.2	30.00	0.10	G2	
G300HF120TK	1200	300	2.2	48.00	0.07	G2	
G400HF120TK	1200	400	2.2	64.00	0.05	G2	
G40HF120NU	1200	40	3.1	8.10	0.38	M1	
G50HF120NU	1200	50	3.1	8.60	0.35	G1	
G75HF120NU	1200	75	3.1	9.20	0.30	G1	
G100HF120NU	1200	100	3.1	12.70	0.25	G1	
G150HF120NU	1200	150	3.1	19.00	0.12	G2	
G200HF120NU	1200	200	3.1	30.00	0.09	G2	
G300HF120NU	1200	300	3.1	51.00	0.06	G2	

**1 1200V IGBT MODULES**

Type	V <sub>CE(S)</sub>	I <sub>C</sub>	V <sub>CE(sat)</sub>	E <sub>(on+off)</sub>	R <sub>th(J-C)</sub>	Packages	Circuit
	T <sub>c</sub> =25°C	T <sub>c</sub> =80°C	T <sub>j</sub> =25°C	T <sub>j</sub> =125°C			
	(V)	(A)	(V)	(mJ)	(K/W)		
G50CU120S	1200	50	1.9	11.60	0.35	G1	
G75CU120S	1200	75	1.9	18.40	0.29	G1	
G100CU120S	1200	100	1.9	19.60	0.25	G1	
G150CU120S	1200	150	1.9	33.00	0.12	G2	
G200CU120S	1200	200	1.9	44.00	0.09	G2	
G300CU120S	1200	300	1.9	64.00	0.60	G2	
G50CU120TE	1200	50	1.9	12.50	0.28	G1	
G75CU120TE	1200	75	1.9	16.80	0.23	G1	
G100CU120TE	1200	100	1.9	18.40	0.19	G1	
G150CU120TE	1200	150	1.9	36.00	0.12	G2	
G200CU120TE	1200	200	1.9	39.00	0.11	G2	
G300CU120TE	1200	300	1.9	64.80	0.08	G2	
G400CU120TE	1200	400	1.9	85.00	0.51	G2	
G50CU120TK	1200	50	2.2	9.90	0.29	G1	
G75CU120TK	1200	75	2.2	12.90	0.23	G1	
G100CU120TK	1200	100	2.2	13.60	0.20	G1	
G150CU120TK	1200	150	2.2	25.00	0.13	G2	
G200CU120TK	1200	200	2.2	30.00	0.10	G2	
G300CU120TK	1200	300	2.2	48.00	0.07	G2	
G400CU120TK	1200	400	2.2	64.00	0.05	G2	
G40CU120NU	1200	40	3.1	8.10	0.38	M1	
G50CU120NU	1200	50	3.1	8.60	0.35	G1	
G75CU120NU	1200	75	3.1	9.20	0.30	G1	
G100CU120NU	1200	100	3.1	12.70	0.25	G1	
G150CU120NU	1200	150	3.1	19.00	0.12	G2	
G200CU120NU	1200	200	3.1	30.00	0.09	G2	
G300CU120NU	1200	300	3.1	51.00	0.06	G2	

# 1200V IGBT MODULES

Type	VCES	IC	VCE(sat)	E(on+off)	Rth(J-C)	Packages	Circuit
	Tc=25°C	Tc=80°C	Tj=25°C	Tj=125°C			
	(V)	(A)	(V)	(mJ)			
G50CU120S	1200	50	1.9	11.60	0.35	G1	
G75CU120S	1200	75	1.9	18.40	0.29	G1	
G100CU120S	1200	100	1.9	19.60	0.25	G1	
G150CU120S	1200	150	1.9	33.00	0.12	G2	
G200CU120S	1200	200	1.9	44.00	0.09	G2	
G300CU120S	1200	300	1.9	64.00	0.60	G2	
G50CU120TE	1200	50	1.9	12.50	0.28	G1	
G75CU120TE	1200	75	1.9	16.80	0.23	G1	
G100CU120TE	1200	100	1.9	18.40	0.19	G1	
G150CU120TE	1200	150	1.9	36.00	0.12	G2	
G200CU120TE	1200	200	1.9	39.00	0.11	G2	
G300CU120TE	1200	300	1.9	64.80	0.08	G2	
G400CU120TE	1200	400	1.9	85.00	0.51	G2	
G50CU120TK	1200	50	2.2	9.90	0.29	G1	
G75CU120TK	1200	75	2.2	12.90	0.23	G1	
G100CU120TK	1200	100	2.2	13.60	0.20	G1	
G150CU120TK	1200	150	2.2	25.00	0.13	G2	
G200CU120TK	1200	200	2.2	30.00	0.10	G2	
G300CU120TK	1200	300	2.2	48.00	0.07	G2	
G400CU120TK	1200	400	2.2	64.00	0.05	G2	
G40CU120NU	1200	40	3.1	8.10	0.38	M1	
G50CU120NU	1200	50	3.1	8.60	0.35	G1	
G75CU120NU	1200	75	3.1	9.20	0.30	G1	
G100CU120NU	1200	100	3.1	12.70	0.25	G1	
G150CU120NU	1200	150	3.1	19.00	0.12	G2	
G200CU120NU	1200	200	3.1	30.00	0.09	G2	
G300CU120NU	1200	300	3.1	51.00	0.06	G2	

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# 1200V IGBT MODULES

Type	VCES	IC	VCE(sat)	E(on+off)	Rth(J-C)	Packages	Circuit
	Tc=25°C	Tc=80°C	Tj=25°C	Tj=125°C			
	(V)	(A)	(V)	(mJ)			
G300HF120S	1200	300	1.9	64.00	0.05	G8	
G450HF120S	1200	450	1.9	96.00	0.04	G8	
G300HF120TE	1200	300	1.9	48.00	0.06	G8	
G450HF120TE	1200	450	1.9	98.00	0.05	G8	
G600HF120TE	1200	600	1.9	142.00	0.03	G8	
G300HF120TK	1200	300	2.2	45.00	0.06	G8	
G450HF120TK	1200	450	2.2	92.00	0.05	G8	
G600HF120TK	1200	600	2.2	136.00	0.03	G8	
G25FF120TK	1200	25	2.2	5.46	0.72	E1-FF	
G35FF120TK	1200	35	2.2	7.90	0.45	E1-FF	
G50FF120TK	1200	50	2.2	11.60	0.36	E2-FF	
G75FF120TK	1200	75	2.2	18.40	0.28	E2-FF	
G15PI60TK	1200	15	2.2	2.95	0.85	E1-PI	
G25PI60TK	1200	25	2.2	5.46	0.72	E2-PI	
G30PI60TK	1200	30	2.2	7.90	0.45	E2-PI	
G75FF120TE	1200	75	1.9	12.80	0.29	G5-FF	
G100FF120TE	1200	100	1.9	13.60	0.23	G5-FF	
G150FF120TE	1200	150	1.9	24.60	0.18	G5-FF	
G25FF120TK	1200	25	2.2	5.46	0.60	G4-FF	
G35FF120TK	1200	35	2.2	7.80	0.45	G4-FF	
G50FF120TK	1200	50	2.2	11.50	0.35	G4-FF	
G75FF120TK	1200	75	2.2	18.40	0.25	G5-FF	
G100FF120TK	1200	100	2.2	19.60	0.18	G5-FF	

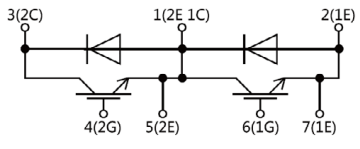
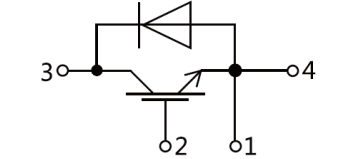
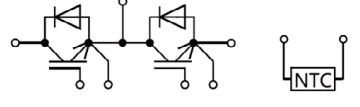
# 1200V IGBT MODULES

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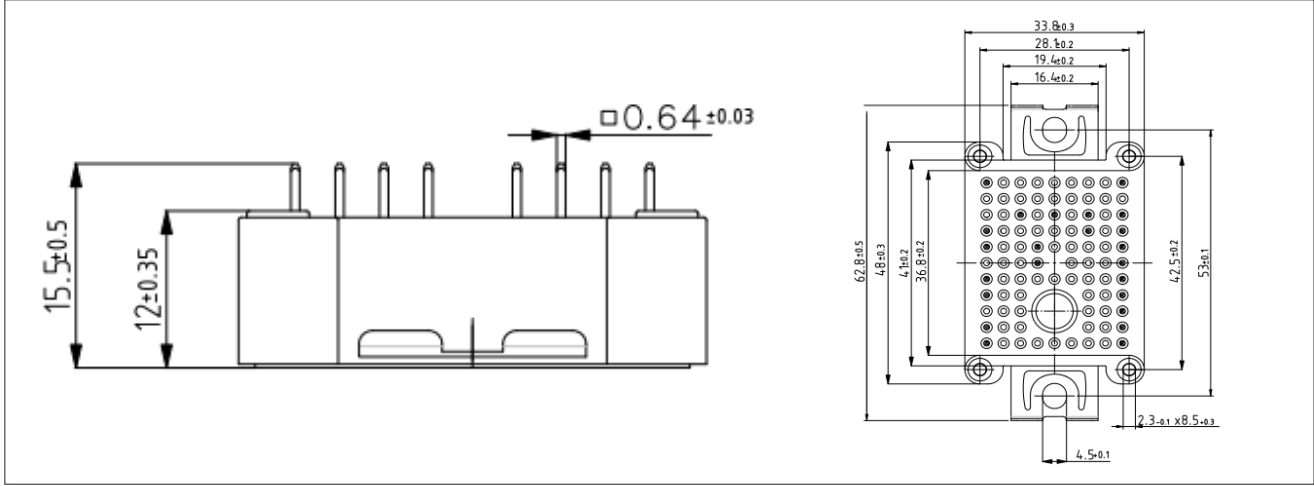
Type	VCES	IC	VCE(sat)	E(on+off)	Rth(J-C)	Packages	Circuit
	Tc=25°C	Tc=80°C	Tj=25°C	Tj=125°C			
	(V)	(A)	(V)	(mJ)			
G50PI120TE	1200	50	1.9	10.00	0.42	G5-PI	
G75PI120TE	1200	75	1.9	13.00	0.29	G5-PI	
G100PI120TE	1200	100	1.9	13.60	0.22	G5-PI	
G15PI120TK	1200	15	2.2	3.00	0.80	G4-PI	
G25PI120TK	1200	25	2.2	5.50	0.60	G4-PI	
G40PI120TK	1200	40	2.2	8.40	0.42	G4-PI	
G50PI120TK	1200	50	2.2	11.50	0.35	G5-PI	
G75PI120TK	1200	75	2.2	18.50	0.25	G5-PI	
G150CH120S	1200	150	1.9	28.5	0.11	G7	
G200CH120S	1200	200	1.9	32	0.08	G7	
G150CH120TE	1200	150	1.9	29	0.12	G7	
G200CH120TE	1200	200	1.9	32.8	0.09	G7	
G300CH120TE	1200	300	1.9	66	0.07	G7	
G300CH120TE	1200	300	1.9	66	0.06	G8	
G400CH120TE	1200	400	1.9	98	0.05	G8	
G450CH120TE	1200	450	1.9	93	0.04	A1	
G600CH120TE	1200	600	1.9	138	0.03	A1	
G150TL120TE	1200	150	1.9	25.00	0.13	G7	
G200TL120TE	1200	200	1.9	30.00	0.10	G7	
G300TL120TE	1200	300	1.9	48.00	0.07	G7	
G150TL120TK	1200	150	2.2	33.00	0.12	G7	
G200TL120TK	1200	200	2.2	44.00	0.09	G7	
G300TL120TK	1200	300	2.2	64.00	0.07	G7	

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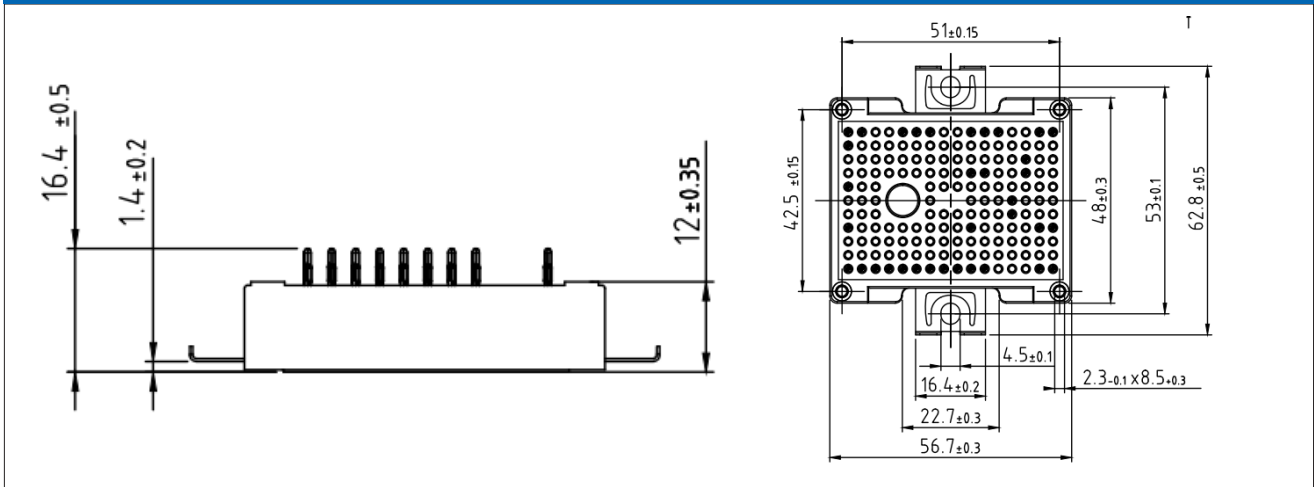
# 1700V IGBT MODULES

Type	VCES	IC	VCE(sat)	E(on+off)	Rth(J-C)	Packages	Circuit
	Tc=25°C	Tc=80°C	Tj=25°C	Tj=125°C			
	(V)	(A)	(V)	(mJ)			
G50HF170S	1700	50	2.3	40.5	0.23	G1	
G75HF170S	1700	75	2.3	59	0.18	G1	
G100HF170S	1700	100	2.3	80	0.13	G1	
G150HF170S	1700	50	2.3	116	0.08	G2	
G200HF170S	1700	75	2.3	155	0.05	G2	
G300HF170S	1700	100	2.3	220	0.045	G2	
G200SG170S	1700	200	2.3	155	0.08	G3	
G300SG170S	1700	300	2.3	225	0.06	G3	
G400SG170S	1700	400	2.3	205	0.06	G3	
G600SG170S	1700	600	2.3	245	0.04	G3	
G150HF170S	1700	150	2.3	110	0.085	G8	
G225HF171S	1700	225	2.3	161	0.075	G8	
G300HF172S	1700	300	2.3	221	0.045	G8	
G450HF173S	1700	450	2.3	310	0.042	G8	

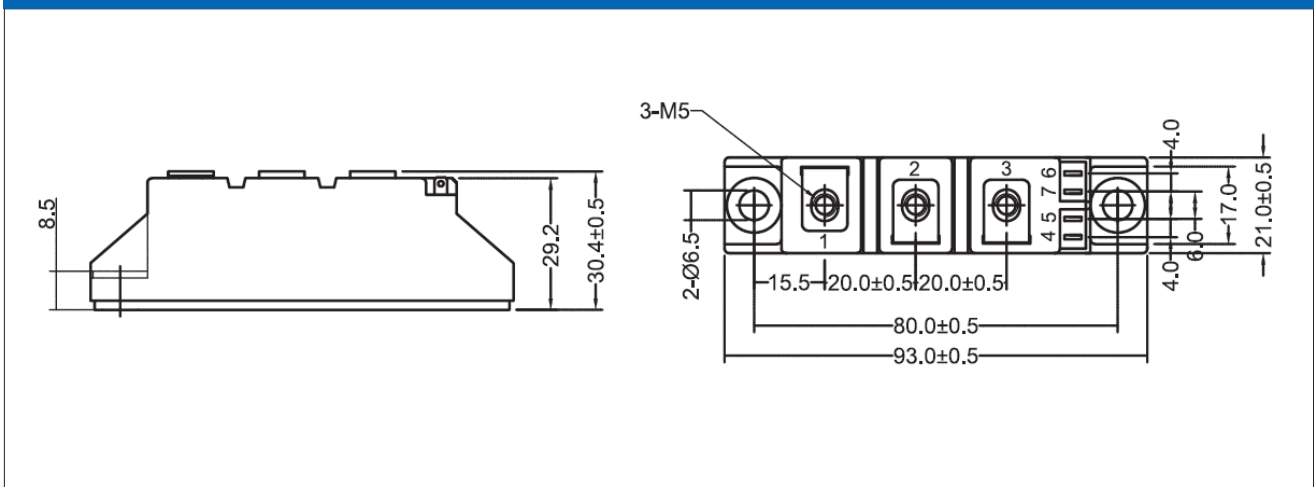
**E1**



**E2**

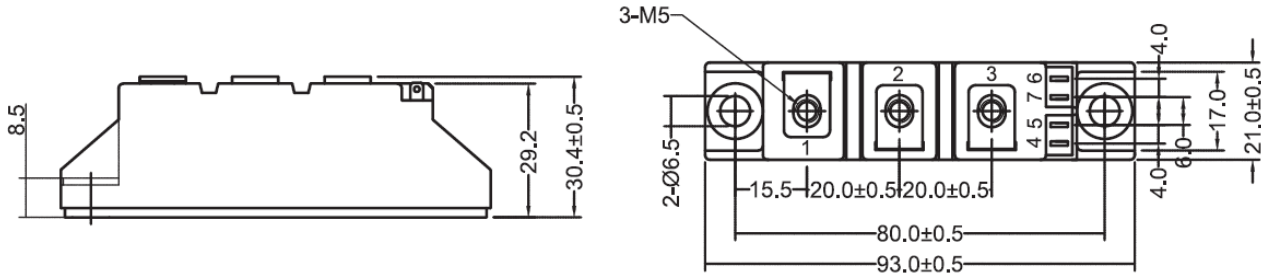


**F4**

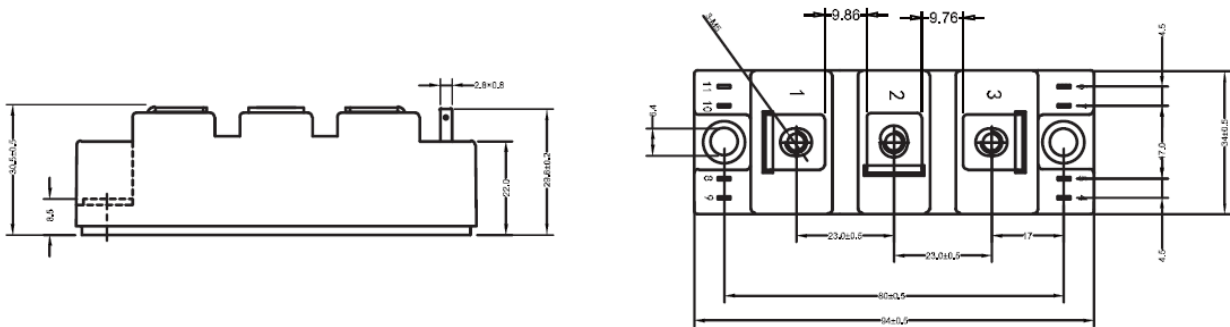


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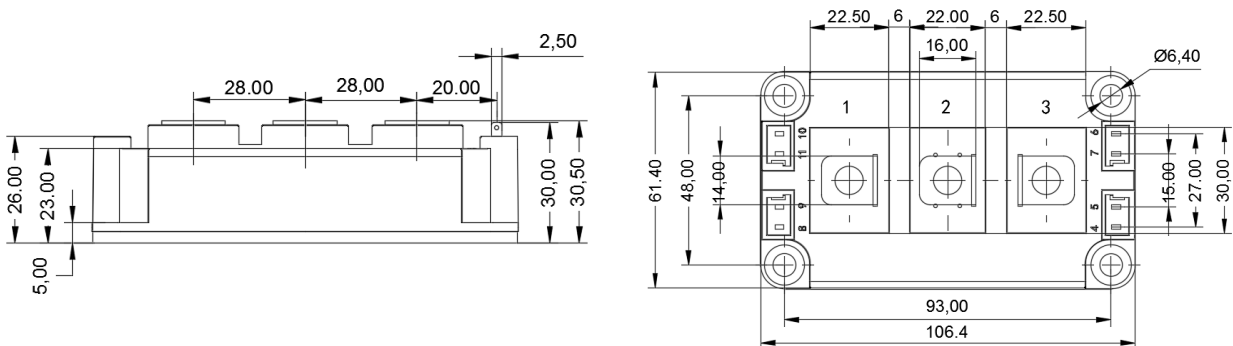
**M1**



**G1**

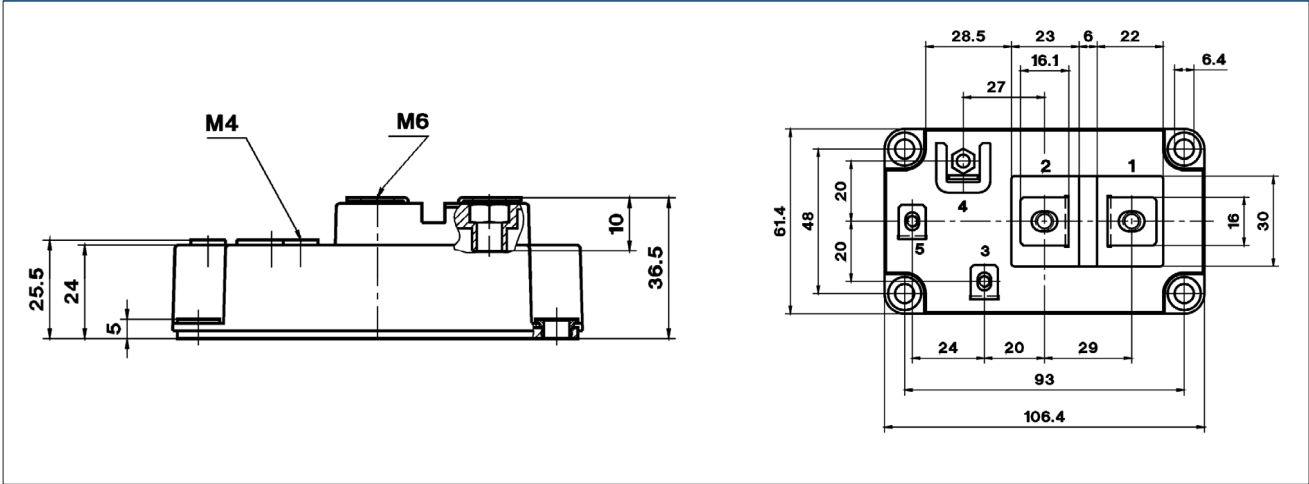


**G2**

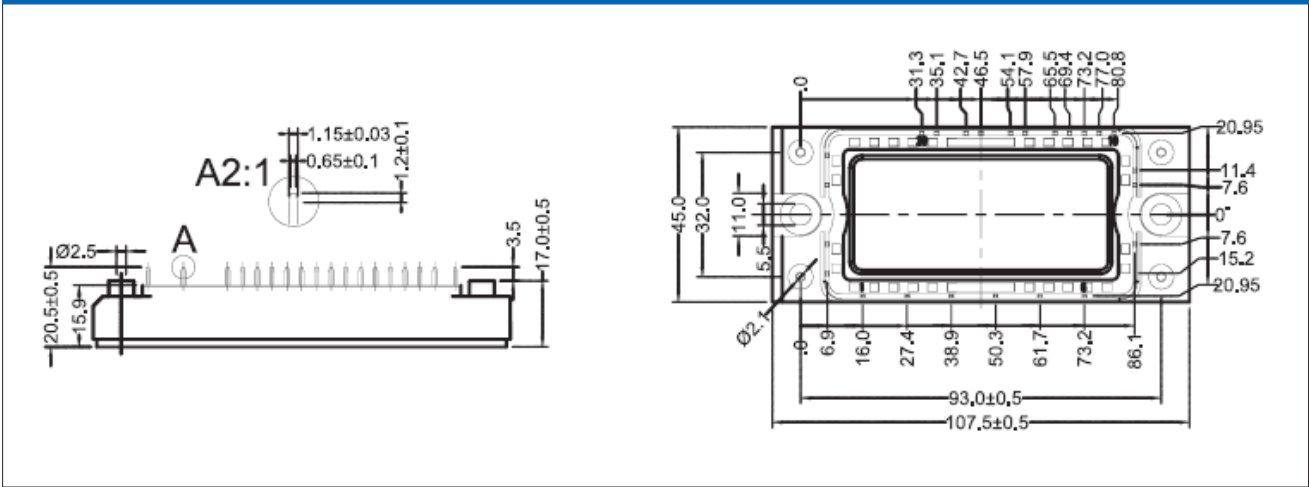




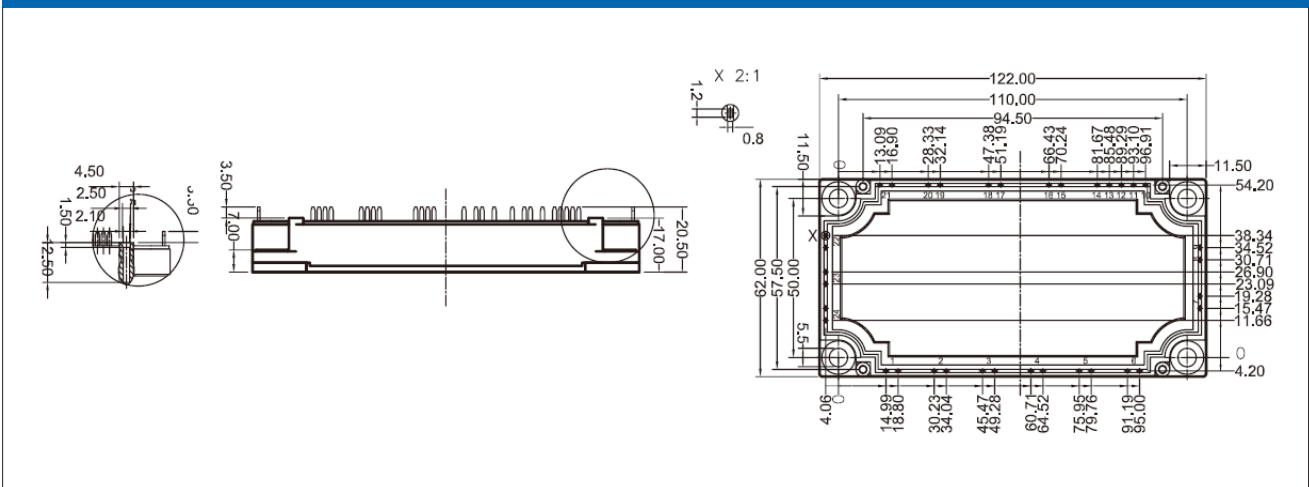
**G3**



**G4**

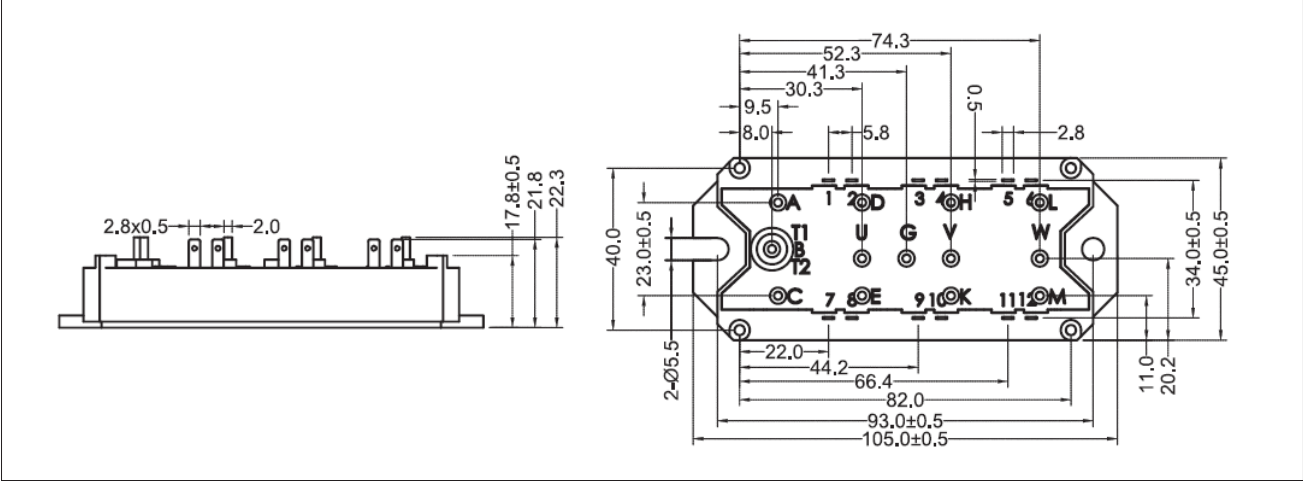


**G5**

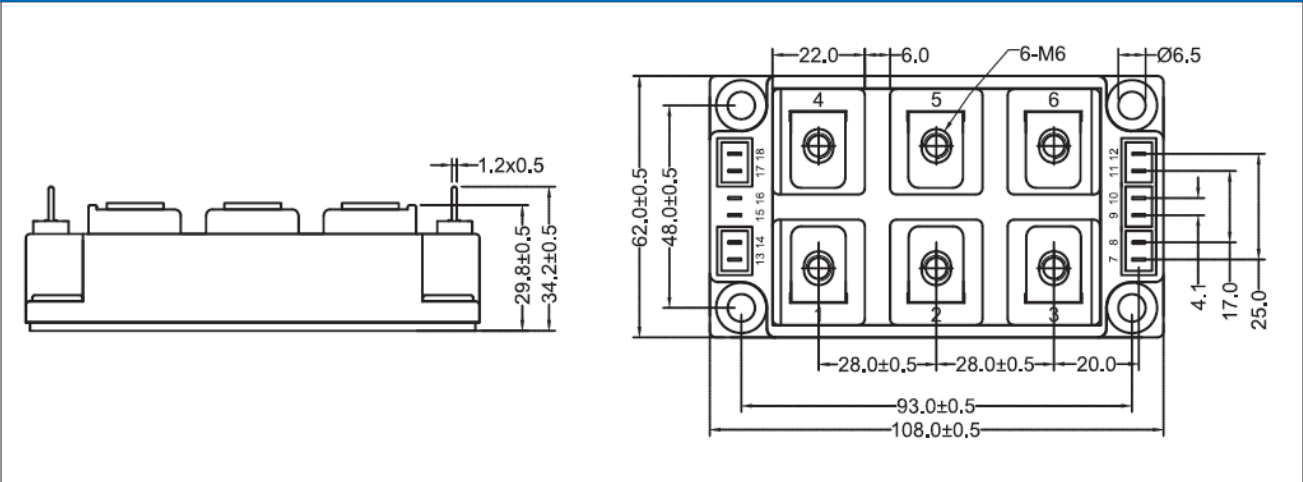


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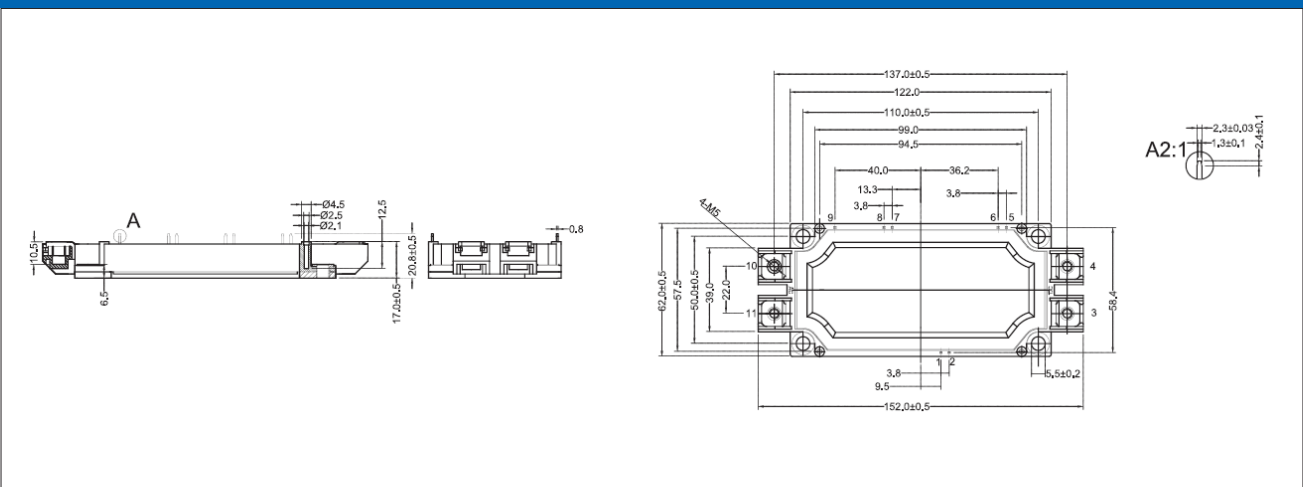
**G6**



**G7**



**G8**



**A1**

**1**

