2026
Selection Guide

inergyo

inergyTechnology Inc.

Established
November, 2007

Capital Stock
USD 15.5 Million

Operating Revenue
USD 34.2 Million
2024

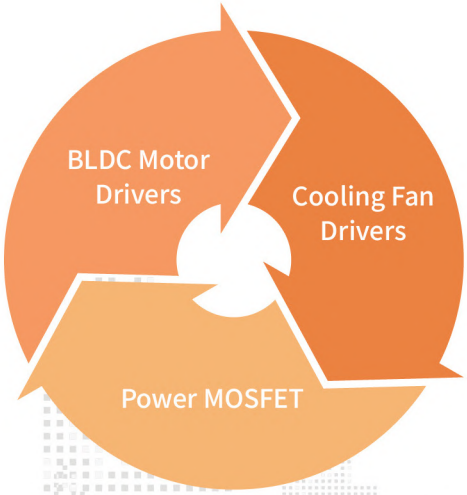
Operating Profit
USD 3.8 Million
2024

Number of Employees
92

Service Locations
Headquarters - Hsinchu
Shenzhen Office

inergy Technology is a fabless IC design company, dedicate in energy-efficiency technologies. “inergy” is stand to innovation and energy, dedicated to pioneering new ways of utilizing energy. Our major products are Power MOSFET, BLDC Motor Driver, Cooling Fan Driver. We provide innovative solutions and services in Motor, BMS, and Power Management fields.

inergy Technology Inc. was founded in 2007, and officially listed on Taipei Exchange (Taipei Exchange,TPEx) in 2022, with the Taiwan OTC stock code 6693.TWO.



China
India
Vietnam
Taiwan
South Korea
Japan
Headquarters & R&D Centers
Headquarters
Distributor Locations

History

2007
Company established

2008
- Power MOSFET products introduced for Li-ion battery protection.
- ISO9001 quality system certification

2009
Li-ion battery protection IC in mass production

2010
600V ballast IC approved and mass-produced by 1st tier customers.

2011
High power factor LED driver in mass production.

2012
BLDC driver modules introduced for home appliances.

2013
High Voltage BLDC driver modules mass-produced by top air conditioner company.

2014
Power MOSFETs approved and mass-produced by major Korean mobile phone company.

2015
Collaborated with Japan 1st tier company on motor drivers development and mass production.

2016
Subsidiary in China established.

2017
- Completes 2nd Generation of Ultra-Low RDS(ON) PowerDevices for Fast Charging Smartphones.
- Completes 2nd Generation of highly integrated motor driver IPM.

2018
Registration for the Emerging Stock Market

2019
- SGT MOSFET products launched, introduced into power supply and motor applications.
- Highly integrated SOC Fan Driver IC, developed and approved by worldwide known companies.
- BLDC motor driver module used in several new white goods applications and mass production.

2020
- SGT Power MOSFETs applied to new generation of energy-efficient power supplies.
- SoC Cooling Fan Driver ICs certified for CPU cooling system and mass production by CPU worldwide known companies.

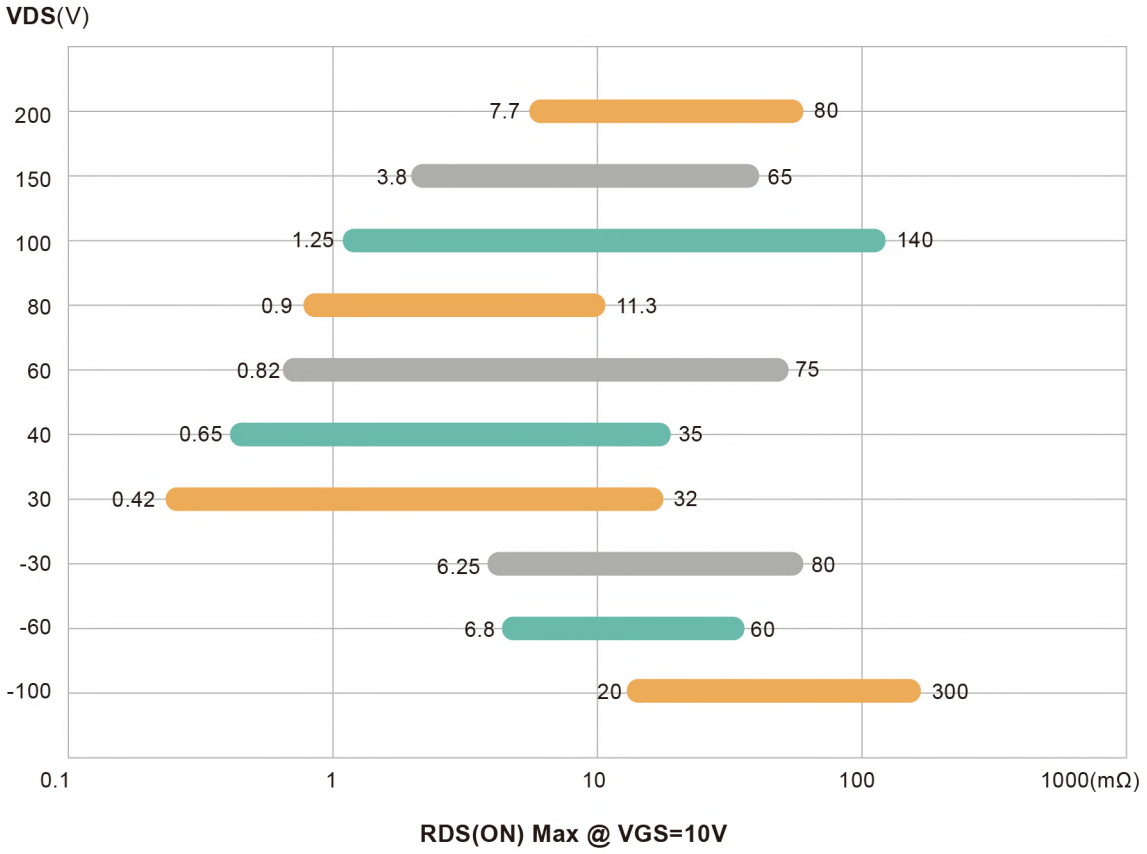
2021
High performance power devices for power batteries approved by serveralcustomers and mass production.

2022
Company listed on Taipei Exchange

2023
2nd Generation SoC Cooling Fan IC development completed.

2024
With ultra-low on-resistance (RDS(ON)) & high current rating Power MOSFET series MP.

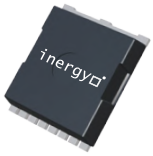
Power MOSFET (Si)



(Optional MSL1)

DFN2x2	SOT23-3L	SOP-8L	DFN3x3	PDFN3.3x3.3
2 x 2 mm	2.9 x 2.9 mm	4.9 x 6 mm	3 x 3 mm	3.3 x 3.3 mm

TO252-3L	TO252-4L	LFPAK	PDFN5x6	TO263-3L
6.6 x 10 mm	6.6 x 9.9 mm	5.1 x 6.1 mm	5.3 x 6.1 mm	10.1 x 15.2 mm

TO263-7L	sTOLL	TOLL	TOLT	TO220-3L
				
9.9 x 15.2 mm	7 x 8 mm	9.9 x 11.7 mm	9.9 x 15 mm	10.1 x 28.6 mm

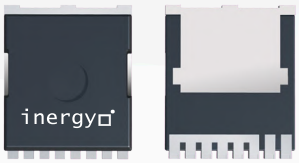
Satisfied the key requirements of power electronic systems for **high power density**, **high efficiency**, and **high switching speed**

High Thermal Performance
Raising current capability and power output capability.

Low Inductance
Enhance the efficiency and reliability of high-frequency switches.

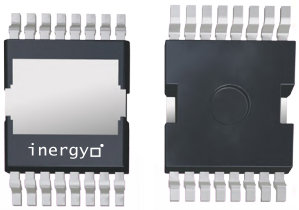
Top Side Cooling
Benefits to PCB layout size and space saving.

Packaging Technology



TOLL

Advantages	Applications	Features
• Ultra Low Ron (On-Resistance) • Higher Current Rating • Low Thermal Resistance • Low Inductances	• Electric 2/3-wheelers • Cordless Power Tool • E-Bike • BMS • High Performance Power Management	• Small Package, dedicated for Compact Design 30% Reduction of Footprint(compared to TO-263) 50% Reduction of Height (compared to TO-263) Package Size 9.9mm x 11.68mm x 2.3mm (normal) • Excellent System Reliability



TOLT

Advantages	Applications	Features
• Ultra Low Ron (On-Resistance) • Higher Current Rating • Low Thermal Resistance • Low Inductances • Top side Cooling	• Electric 2/3-wheelers • Cordless Power Tool • E-Bike • High Performance Power Management	• Small Package, dedicated for Compact Design Package Size : 9.9mm x 15.1mm x 2.3mm (normal) • Reduction in Conduction Losses • Excellent System Reliability • Top-side Cooling, Better Thermal Conductivity and Lower System Material Costs

N-channel 20 - 30 V

* :New

Part Number	Package	Type	V_{DS}(V)	V_{GS}(±V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
iM1101	DFN1006-3L	NMOS	20	±10	1.2	0.76		500	31	0.8
iM18129*	DFN2x2-6L	NMOS	20	±12	12	12		14	1036	12
iM1837	DFN3.3x3.3-8L	NMOS	20	±12	54			3.2	7914	139
iM1819	PDFN5x6-8L	NMOS	20	±10	124		1.5	1.7	9681	270
iM18121	PDFN5x6-8L	NMOS	20	±12	100	94		2.3	5503	60
iM2302	SOT23-3L	NMOS	20	±12	4.2	2.6		37	260	4.5
iM2309	SOT23-3L	NMOS	20	±12	4.4			35	278	4
iM2311	SOT23-3L	NMOS	20	±10	4.5	2.8		27	466	6.3
iM2319	SOT23-3L	NMOS	20	±12	6.8	4.3		20	1074	30
iM18125	PDFN5x6-8L	NMOS	24	±12	100	88		2.6	5746	57
iM1885	DFN3.3x3.3-8L	NMOS	30	±20	64	59	3.1	4.5	2363	44
iMF409*	LFPAK	NMOS	30	±20	273	193	0.63	1.1	14707	266
iMN004N03LF	LFPAK	NMOS	30	±20	300	300	0.42	0.78	8366	141
iM1841	PDFN3.3x3.3-8L	NMOS	30	±20	48		6	9	2213	43
iM1841A	PDFN3.3x3.3-8L	NMOS	30	±20	49		5.7	8.5	2550	47
iM1883	PDFN3.3x3.3-8L	NMOS	30	±20	43		7.2	11.7	724	14
iM1887	PDFN3.3x3.3-8L	NMOS	30	±20	64	40	4.4	6.8	3608	64
iM1813	PDFN5x6-8L	NMOS	30	±20	100		1.8	2.9	7400	173
iM1817	PDFN5x6-8L	NMOS	30	±20	44		12	26	1050	19
iM1833C	PDFN5x6-8L	NMOS	30	±20	100	64	2.3	3.4	2423	48
iM1843	PDFN5x6-8L	NMOS	30	±20	62		6	9	2524	48
iM1869	PDFN5x6-8L	NMOS	30	±20	58	37	6.9	11.7	724	13
iM1875	PDFN5x6-8L	NMOS	30	±20	78	50	3.8	6.1	3699	66
iM1877	PDFN5x6-8L	NMOS	30	±20	52	33	8.5	14.3	1258	23
iM1879	PDFN5x6-8L	NMOS	30	±20	105		2.1	3.2	2700	47
iM1881A	PDFN5x6-8L	NMOS	30	±20	139	88	1.2	1.8	5623	100
iMN007N03G	PDFN5x6-8L	NMOS	30	±20	502	316	0.6	0.95	8010	142
iMN008N03G	PDFN5x6-8L	NMOS	30	±20	460	325	0.7	1.1	5571	100
iM2121	SOT23-3L	NMOS	30	±20	4.2	2.7	30	48	370	7.7
iM2323	SOT23-3L	NMOS	30	±20	5.6		20	31	862	16
iM3099	SOT23-3L	NMOS	30	±12	1.1	0.7	408	518	61	1.72
iM3400	SOT23-3L	NMOS	30	±12	4.1	2.6	32	37	778	19
iM4011	SOP-8L	NMOS	30	±20	16	10	5.3	7.3	4738	88
iM4013	SOP-8L	NMOS	30	±20	13	8.7	7	10.5	2414	44
iM5231	TO-252-3L	NMOS	30	±20	48	46	6	9	2300	43

N-channel 40 V

* :New

Part Number	Package	Type	V_{DS}(V)	V_{GS}(±V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
iMF403*	LFPAK	NMOS	40	±20	212	150	0.95	1.48	14692	262
iMN005N04LFH	LFPAK	NMOS	40	±20	325	325	0.66		7204	121
iM18149*	PDFN3.3x3.3-8L	NMOS	40	±20	97	68	2	3.3	2325	51
iM1873	PDFN5x6-8L	NMOS	40	±20	65	41	5.4	7.8	3326	60
iM1895	PDFN5x6-8L	NMOS	40	±20	120	86	1.6		4727	77
iM18111	PDFN5x6-8L	NMOS	40	±20	111	70	2.5	5.4	2484	54
iM18133*	PDFN5x6-8L	NMOS	40	±20	80	74	3		2065	38
iMN008N04G	PDFN5x6-8L	NMOS	40	±20	200		0.65	1.08	8355	168
iMN009N04G	PDFN5x6-8L	NMOS	40	±20	297	210	1		4875	80
iM6211	TO-220-3L	NMOS	40	±20	120	109	2.9	3.7	14160	232
iM6225	TO-220-3L	NMOS	40	±20	90	90	2.5	3.7	2611	54
iM5221	TO-252-3L	NMOS	40	±20	25	16	35	55	650	11
iM5235	TO-252-3L	NMOS	40	±20	20	20	25	45	846	15
iM6303	TO-263-3L	NMOS	40	±20	60	60	2.4		4732	78
iM6309	TO-263-3L	NMOS	40	±20	150	150	1.06		13625	234
iM7201*	TOLL-8L	NMOS	40	±20	400	289	0.74		7214	112

N-channel 45 - 60 V

* :New

Part Number	Package	Type	V_{DS}(V)	V_{GS}(±V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
iM1867	PDFN5x6-8L	NMOS	45	±20	96	60	2.9	4.3	2487	53
iM1851	DFN3.3x3.3-8L	NMOS	60	±20	56		6.6	11	2084	37
iMF407*	LFPAK	NMOS	60	±20	246	174	0.82	1.5	7391	144
iM1849	PDFN3.3x3.3-8L	NMOS	60	±20	39	24.8	9	15	1527	26.6
iM1857	PDFN3.3x3.3-8L	NMOS	60	±20	40		8.5	15.6	1362	28
iM1829	PDFN5x6-8L	NMOS	60	±20	160	104	2.5	4.5	4894	99
iM1839B	PDFN5x6-8L	NMOS	60	±20	52	33.7	6.25	11	2002	40
iM1845	PDFN5x6-8L	NMOS	60	±20	50.9	32.4	9		1521	26
iM1847	PDFN5x6-8L	NMOS	60	±20	37	23.5	17		724	14
iM1871	PDFN5x6-8L	NMOS	60	±20	52	33	8.5	15.5	1362	27
iM18101*	PDFN5x6-8L	NMOS	60	±20	40	25	14	26	810	16
iM18109	PDFN5x6-8L	NMOS	60	±20	33	21	15	20	853	18
iMN009N06G	PDFN5x6-8L	NMOS	60	±20	320	320	1.05	1.69	7597	153
iM2308	SOT23-3L	NMOS	60	±20	2.5	1.6	75	100	479	9.4

N-channel 60 - 80 V

* :New

Part Number	Package	Type	V_{DS}(V)	V_{GS}(±V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
iM4007	SOP-8L	NMOS	60	±20	12.7	8	8.2	15.4	1351	28.6
iM4009	SOP-8L	NMOS	60	±20	9.2	5.8	15.5	31	746	14
iM6227	TO-220-3L	NMOS	60	±20	120	105	3.2	5.2	4749	82
iM5105	TO-251-3L	NMOS	60	±20	48	33	8.5	13	1244	26
iM5207	TO-252-3L	NMOS	60	±20	24	15	56	65	1200	20
iM5229B	TO-252-3L	NMOS	60	±20	60	47	6	11	2019	40
iM5233	TO-252-3L	NMOS	60	±20	31	19	34	43	1023	19.7
iM5239	TO-252-3L	NMOS	60	±20	48	48	3.1	4.9	4683	89
iMN006N06T*	TOLL-8L	NMOS	60	±20	300	298	0.83		16315	264
iM18115	PDFN3.3x3.3-8L	NMOS	80	±20	44	28	11.3	19	1421	32
iM1859	PDFN5x6-8L	NMOS	80	±20	56	36	7.2	12	1875	43
iM1861	PDFN5x6-8L	NMOS	80	±20	45	29	11.3	19	1199	28
iM1889	PDFN5x6-8L	NMOS	80	±20	78	49	3.75	5	5631	110
iMN1R5N08GH	PDFN5x6-8L	NMOS	80	±20	200	177	1.9		7999	131
iMN2R0N08G	PDFN5x6-8L	NMOS	80	±20	100	100	2.6		5531	105
iM6213	TO-220-3L	NMOS	80	±20	80		6		5500	84.3
iM6219	TO-220-3L	NMOS	80	±20	96	70	7.8		2406	45
iM7203*	TOLL-8L	NMOS	80	±20	306	216	1.68		8900	166
iMN007N08T	TOLL-8L	NMOS	80	±20	500	355	0.9		20427	338

N-channel 100 V

* :New

Part Number	Package	Type	V_{DS}(V)	V_{GS}(±V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
iM18113	DFN3.3x3.3-8L	NMOS	100	±20	51	32	10	14	1919	43
iM18127*	DFN3.3x3.3-8L	NMOS	100	±20	24	15	18		1163	22
iMF401*	LFPAK	NMOS	100	±20	109	77	2.7	4.3	5345	90
iM1821A	PDFN5x6-8L	NMOS	100	±20	54		6		3408	59
iM1821B	PDFN5x6-8L	NMOS	100	±20	54	34	6	8.5	3229	57.3
iM1823	PDFN5x6-8L	NMOS	100	±20	61	38	4.7	7.2	3458	75
iM1825B	PDFN5x6-8L	NMOS	100	±20	44	28	9	13.5	2222	42
iM1827B	PDFN5x6-8L	NMOS	100	±20	38	24	11.8	17.5	1632	30
iM1863	PDFN5x6-8L	NMOS	100	±20	13	8.7	125	135	1037	19
iM18103	PDFN5x6-8L	NMOS	100	±20	100	63	5.6	11	3071	51
iM18105	PDFN5x6-8L	NMOS	100	±20	78	49	7.8	12.3	2738	63

N-channel 100 V

* :New

Part Number	Package	Type	V_{DS}(V)	V_{GS}(±V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
iM18107	PDFN5x6-8L	NMOS	100	±20	39	24	14	22	1180	23
iM18137*	PDFN5x6-8L	NMOS	100	±20	103	65	3.75		5329	95
iM18139*	PDFN5x6-8L	NMOS	100	±20	79	56	4.8	8	3651	79
iMN03N10GM	PDFN5x6-8L	NMOS	100	±20	90		3.4	4.8	4808	96
iM2303	SOT23-3L	NMOS	100	±20	1.7	1.1	136	143	1013	19
iM4008	SOP-8L	NMOS	100	±20	11	7	10.5	14	2094	41
iM6217	TO-220-3L	NMOS	100	±20	120	95	4.4		5354	88
iM6221	TO-220-3L	NMOS	100	±20	86	54	2.6		13355	218
iM6223	TO-220-3L	NMOS	100	±20	45	29	18		1147	23
iM6229	TO-220-3L	NMOS	100	±20	120	78	5.2	8.5	3583	77
iM5101	TO-251-3L	NMOS	100	±20	30	23	13	16	3380	58
iM5103	TO-251-3L	NMOS	100	±20	40	25	10.8	15.6	1681	33
iM5223	TO-252-3L	NMOS	100	±20	11	6.9	140	150	1095	19
iM5227	TO-252-3L	NMOS	100	±20	60	38	9	12.5	2066	41
iM5241	TO-252-3L	NMOS	100	±20	45	28	18	28	1060	26
iM6301	TO-263-3L	NMOS	100	±20	80	72	6	8.5	3050	68
iM6307	TO-263-3L	NMOS	100	±20	120	120	1.8	2.7	11921	239
iM6313	TO-263-3L	NMOS	100	±20	120	100	4.4		5328	94
iM6315	TO-263-3L	NMOS	100	±20	150	150	2.2		13576	237
iMN03N10DM	TO-263-3L	NMOS	100	±20	90	90	3.7	5.7	4748	96
iM7127*	TOLL-8L	NMOS	100	±20	120	103	3.6		5335	95
iMN01N10T	TOLL-8L	NMOS	100	±20	300	300	1.4		13574	233
iMN009N10T*	TOLL-8L	NMOS	100	±20	300	266	1.25		13766	284
iMN016N10CT*	TOLL-8L	NMOS	100	±20	324	230	1.6		9790	173
iM7L01*	TOLT-16L	NMOS	100	±20	250	216	1.43		13348	225

N-channel 120 V

* :New

Part Number	Package	Type	V_{DS}(V)	V_{GS}(±V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
iM1897	PDFN5x6-8L	NMOS	120	±20	99	62	7.2		4779	80
iM6231*	TO-220-3L	NMOS	120	±20	150	140	4.5		9016	143
iM7121*	TOLLB-8L	NMOS	120	±20	175	123	3.4		9041	146

N-channel 150 - 200 V

* :New

Part Number	Package	Type	V_{DS}(V)	V_{GS}(±V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
iM1865A	PDFN5x6-8L	NMOS	150	±25	46	29	53		1133	23
iM18119	PDFN5x6-8L	NMOS	150	±12	18	12	51	56	1364	26
iM18141*	PDFN5x6-8L	NMOS	150	±12	60	42	9.7		4628	73
iM4015	SOP-8L	NMOS	150	±25	4.2	2.6	53		1128	23
iM5237	TO-252-3L	NMOS	150	±25	19	12	65		1041	14.6
iM5245	TO-252-3L	NMOS	150	±12	21	15	52		1405	34
iM7117	TOLL-8L	NMOS	150	±20	148	94	5.1		5535	99
iM7123*	TOLL-8L	NMOS	150	±20	128	91	6		9198	137
iMN035N15T	TOLL-8L	NMOS	150	±20	203	143	3.8		11947	211
iM18135*	PDFN3.3x3.3-8L	NMOS	200	±20	11	7.2	80		1102	21
iM18143*	PDFN5x6-8L	NMOS	200	±20	15	10	77		1106	20
iMN220N20G	PDFN5x6-8L	NMOS	200	±20	35	24	19		3869	64
iMN08N20T	TOLL-8L	NMOS	200	±20	114	81	7.7		9182	186

P-channel 20 - 30 V

* :New

Part Number	Package	Type	V_{DS}(V)	V_{GS}(+V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
iM1891	DFN3.3x3.3-8L	PMOS	-20	±12	-54		6.6	9.5	8537	82
iM1802	PQFN5x6-8L	PMOS	-20	±12	-100		2.4	2.9	15400	299
iM2132A	SOT23-3L	PMOS	-20	±12	-4.3			30	1380	15
iM3415	SOT23-3L	PMOS	-20	±8	-4			37	1081	13
iM3415D	SOT23-3L	PMOS	-20	±8	-3.5			43	902	10
iM1804	DFN3.3x3.3-8L	PMOS	-30	±25	-54		7.5	11.5	5963	126
iM1808	PDFN3.3x3.3-8L	PMOS	-30	±20	-39		9	16	3503	60
iM1814	PDFN3.3x3.3-8L	PMOS	-30	±20	-25.6		21	36	1882	30
iM1810	PDFN5x6-8L	PMOS	-30	±20	-33	-21	21	36	1800	31.6
iM1812	PDFN5x6-8L	PMOS	-30	±20	-47	-30	10.5	18.5	3848	62
iM1812A	PDFN5x6-8L	PMOS	-30	±20	-47	-30	10.5	18.5	3835	62.5
iM2307	SOT23-3L	PMOS	-30	±20	-3	-2	80	140	650	10
iM2312*	SOT23-3L	PMOS	-30	±10	-3.3	-2.1		58	1095	11
iM3401	SOT23-3L	PMOS	-30	±12	-4.3	-2.7	50	60	750	17
iM3407	SOT23-3L	PMOS	-30	±20	-3	-1.9	60	100	619	11
iM4004	SOP-8L	PMOS	-30	±20	-11	-7	10.5	16	3477	64
iM4010	SOP-8L	PMOS	-30	±20	-14.6	-9	6.25	9	7142	146

P-channel 30 - 100 V

* :New

Part Number	Package	Type	V_{DS}(V)	V_{GS}(+V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
iM4012	SOP-8L	PMOS	-30	±20	-7.9	-5	21	34	1801	31
iM9435	SOP-8L	PMOS	-30	±25	-5.7	-3.6	50	80	630	12
iM5208	TO-252-3L	PMOS	-30	±20	-48	-30	10	16	3500	61
iM5222	TO-252-3L	PMOS	-30	±20	-42	-27	18	32	1903	34
iMN70P03K	TO-252-3L	PMOS	-30	±20	-70		6.5	11	7060	106
iM1824*	PDFN5x6-8L	PMOS	-40	±20	-65	-46	9	13.5	6102	98
iM5204	TO-252-3L	PMOS	-40	±20	-20	-13	50	75	1156	20
iM1806	DFN3.3x3.3-8L	PMOS	-60	±20	-31		28	35	3431	61
iM1822*	PDFN5x6-8L	PMOS	-60	±20	-33.7	-21	21.5	31	4607	75
iM1893	PDFN5x6-8L	PMOS	-60	±20	-71	-45	6.8	9	12542	222
iM5212	TO-252-3L	PMOS	-60	±20	-23	-14	60	80	1463	25
iM5214	TO-252-3L	PMOS	-60	±20	-38	-24	23	33	4548	72.3
iM1820	DFN3.3x3.3-8L	PMOS	-100	±20	-11	-7	74	83	4363	76
iM1816	PDFN5x6-8L	PMOS	-100	±20	-10	-6.9	200	220	1487	26.6
iM1818	PDFN5x6-8L	PMOS	-100	±20	-21	-13	73	83	4292	73
iMN180P10G	PDFN5x6-8L	PMOS	-100	±20	-73	-51	20	24	14265	245
iM2304	SOT23-3L	PMOS	-100	±20	-1.1	-0.73	300	330	963	18
iM5210	TO-252-3L	PMOS	-100	±20	-10	-6.6	215	230	1546	26.7
iM5216	TO-252-3L	PMOS	-100	±20	-17.5	-11	97	115	3049	54
iM5218	TO-252-3L	PMOS	-100	±20	-23	-14	74	83	4258	73
iM5224*	TO-252-3L	PMOS	-100	±20	-32	-20	39	64	1244	27

Dual N 30 - 40 V

Part Number	Package	Type	V_{DS}(V)	V_{GS}(±V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
iM1625	PDFN3.3x3.3-8L	Dual N	30	±20	33		12	20	1106	20.6
iM1627	PDFN3.3x3.3-8L	Dual N	30	±20	16.5	16.5	17	26	942	16.9
iM1623T	PDFN5x6-8L	Dual N	30	±20	10		15	26	1090	21
iM1635	PDFN5x6-8L	Dual N	30	±20	72/96	48/92	4.6/2.3	7.8/3.6	954/2292	18/42
iM4504	SOP-8L	Dual N	30	±20	7.7	4.9	22	30	663	13
iM4505	SOP-8L	Dual N	30	±20	6.7	4.2	29	48	380	7.5
iM4507	SOP-8L	Dual N	30	±20	10.5	6.6	12	19	1183	23
iM4503	SOP-8L	Dual N	36	±20	6.2	3.9	35	52	500	12
iM1621	PDFN5x6-8L	Dual N	40	±20	28		29	46	624	11.8
iM4506	SOP-8L	Dual N	40	±20	8.7	5.5	17.5	24	1055	20

Dual N 60 - 100 V

* :New

Part Number	Package	Type	V_{DS}(V)	V_{GS}(±V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
iM4946	SOP-8L	Dual N	60	±20	6.2	3.9	34	45	1111	20
iM1641*	DFN2x2-6L	Dual N	100	±20	5.7	3.7	112	156	156	4.4
iM1631	PDFN3.3x3.3-8L	Dual N	100	±20	9		125	135	1006	18.8
iM1629	PDFN5x6-8L	Dual N	100	±20	31	19.8	18	28	1065	24
iM1637	PDFN5x6-8L	Dual N	100	±20	7.5	4.8	125	135	1096	21
iM1639	PDFN5x6-8L	Dual N	100	±20	9.4	5.9	80	90	1618	29
iM4508*	SOP-8L	Dual N	100	±20	3	1.9	108	152	157	5

Dual P 30 V

Part Number	Package	Type	V_{DS}(V)	V_{GS}(±V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
iM4953	SOP-8L	Dual P	-30	±20	-5.1	-3.2	50	80	665	12

Complementary N+P 30 - 40 V

Part Number	Package	Type	V_{DS}(V)	V_{GS}(±V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
iM1703	PDFN3.3x3.3-8L	N+P	±30	±20	16/-16	13/-12	29/34	50/55	370/1202	7.3/21
iM1709	PDFN3.3x3.3-8L	N+P	±30	±20	20/-20	19.5/-13.5	14.5/30	22/50	1179/1231	22/22
iM1712	PDFN3.3x3.3-8L	N+P	±30	±20	20/-15	14.6/-10	26/55	41/85	382/660	7.6/11
iM1713	PDFN3.3x3.3-8L	N+P	±30	±20	20/-17	14.6/-10.8	26/47	41/72	395/787	7.7/14
iM1717	PDFN3.3x3.3-8L	N+P	±30	±20	24/-24	23/-15	8.7/20	12.3/32	724/1987	14/33
iM1701	PDFN5x6-8L	N+P	±30	±20	42/-28	27/-18	13/29	21/50	1070/1199	20/21
iM1706	PDFN5x6-8L	N+P	±30	±20	39/-22	25/-14	7.5/25	10.5/42	2596/1838	47/31
iM1706A	PDFN5x6-8L	N+P	±30	±20	39/-22	25/-14	7.5/25	10.5/42	2596/1838	47/31
iM1718	PDFN5x6-8L	N+P	±30	±20	45/-28	28/-18	7.2/19	10.5/32	721/1985	14/33
iM2704A	SOT23-6L	N+P	±30	±20	3.9/-2.9	2.5/-1.8	35/65	55/100	620/636	11/13.4
iM4711A	SOP-8L	N+P	±30	±20	6/-4.5	3.9/-2.8	35/65	55/120	600/629	11.9/11.2
iM4713	SOP-8L	N+P	±30	±20	6/-4.5	3.9/-2.8	35/65	55/120	600/629	11/11.9
iM4714	SOP-8L	N+P	±30	±20	9.4/-6.6	5.9/-4.2	15/30	26/58	1143/1021	21/20
iM4719	SOP-8L	N+P	±30	±20	7.4/-6.7	4.7/-4.2	24/29	40/46	389/1260	7.6/23
iM4720	SOP-8L	N+P	±30	±20	6.7/-5.3	4.2/-3.3	26/47	41/78	383/722	8/14
iM4711	SOP-8L	N+P	±32	±20	6/-4.5	3.9/-2.8	35/65	55/120	690/585	11.9/10.5
iM5300	TO-252-4L	N+P	±32	±20	25/-18	16/-12	35/65	55/120	650/590	11/10
iM1705	DFN3x3-8L	N+P	±40	±20	17/-17	13.8/-12.5	29/35	37/52	653/1700	13/27
iM1710	PDFN3.3x3.3-8L	N+P	±40	±20	20/-17.7	14/-11.2	28/44	50/67	676/1132	12/20.6

Complementary N+P 40 - 100 V

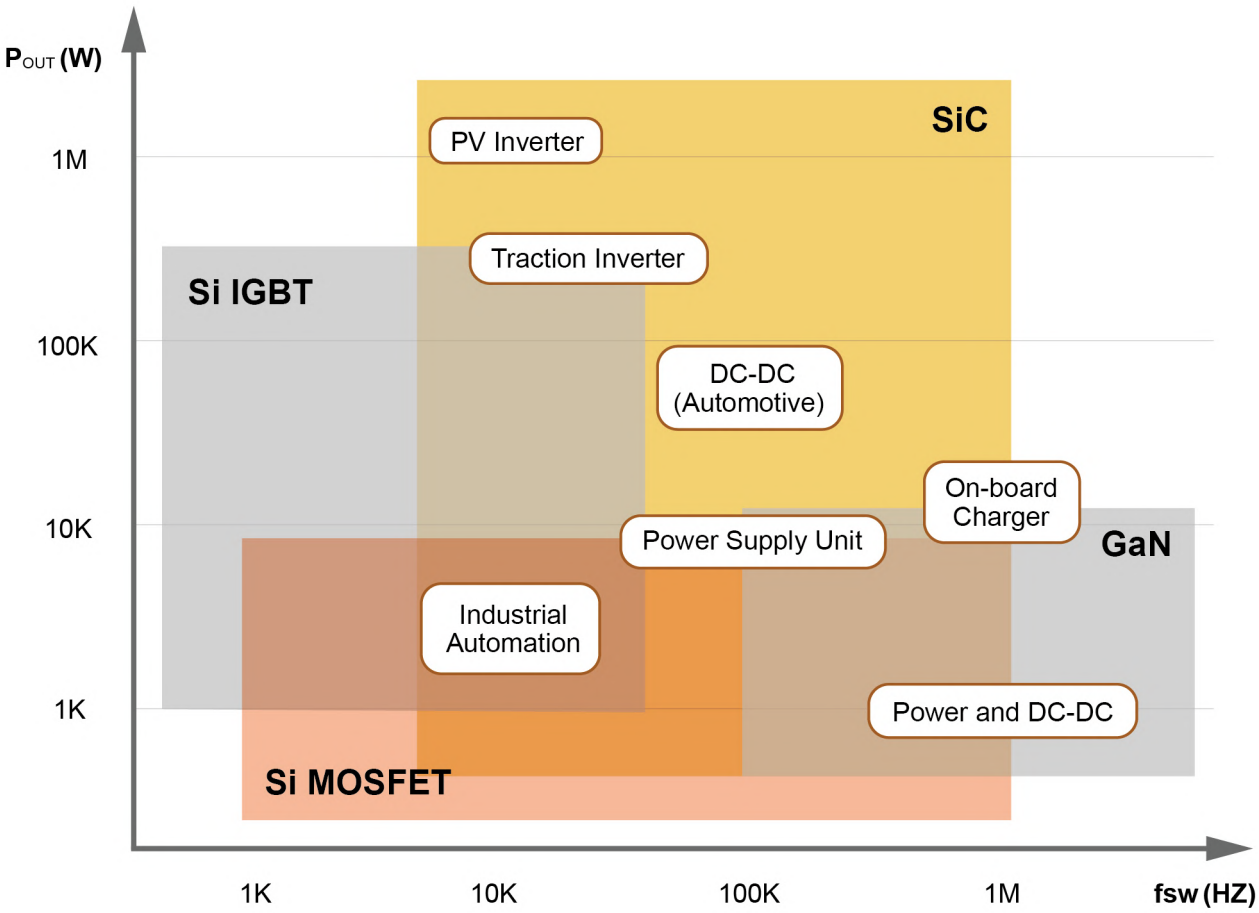
Part Number	Package	Type	V_{DS}(V)	V_{GS}(±V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
iM1711	PDFN3.3x3.3-8L	N+P	±40	±20	20/-16	13.8/-10.6	29/49	45/70	613/1161	11.8/20.4
iM1700	PDFN5x6-8L	N+P	±40	±20	29/-29	18/-18	27/43	38/65	658/1094	12/19
iM1704	PDFN5x6-8L	N+P	±40	±20	44/-27	28/-17	12/32	17/45	1586/1632	29/27
iM1704A	PDFN5x6-8L	N+P	±40	±20	36/-26	28/-16	13/34	18/53	1584/1759	31/28
iM4712	SOP-8L	N+P	±40	±20	6/-5.1	3.9/-3.2	35/50	55/75	600/1100	12/19.5
iM4715	SOP-8L	N+P	±40	±20	6.6/-5.1	4.2/-3.2	30/50	36/70	651/1159	13/20
iM5303	TO-252-4L	N+P	±40	±20	24/-24	23/-19	17/31	24/46	1081/1690	21/28
iM5304	TO-252-4L	N+P	±40	±20	24/-24	24/-13	12/32.5	17/53	1609/1764	31/28
iM5305	TO-252-4L	N+P	±40	±20	24/-24	21/-17	20/31	27/47	1115/1640	20/27
iM5306	TO-252-4L	N+P	±40	±20	24/-22	23/-14	17/46	24/70	1069/1163	20/20
iM1714	DFN3x3-8L	N+P	±60	±20	17/-14	11/-9	40/66	50/85	1071/1449	18/25
iM1714A	PDFN3.3x3.3-8L	N+P	±60	±20	15.7/-12.2	9.9/-7.8	40/66	50/85	1061/1428	19/24
iM1702	PDFN5x6-8L	N+P	±60	±20	25/-15	16/-9	35/100	45/132	1017/918	19/16
iM1708	PDFN5x6-8L	N+P	±60	±20	26/-18	16.6/-12	34/67	45/88	1041/1420	19.4/24
iM1708A	PDFN5x6-8L	N+P	±60	±20	24/-19	15.5/-12.4	39/61	46/79	1047/1457	20/25
iM4716	SOP-8L	N+P	±60	±20	5.9/-4.4	3.7/-2.8	38/67	50/88	1042/1325	19/25
iM4717	SOP-8L	N+P	±60	±20	5.9/-3.5	3.7/-2.2	38/107	50/136	1042/889	18.9/16
iM5301	TO-252-4L	N+P	+60	±20	24/-15.2	16.4/-9.7	35/100	45/132	997/923	19/16
iM5302	TO-252-4L	N+P	±60	±20	23/-17.8	14.8/-11.3	43/73	47/100	1025/1436	19/23.9
iM1716	PDFN3.3x3.3-8L	N+P	±100	±20	7.2/-6.7	4.5/-4.2	140/190	155/215	1128/1464	20/27
iM1707	PDFN5x6-8L	N+P	±100	±20	13.3/-10.8	8.5/-6.9	130/200	145/230	1051/1503	19/26
iM1715	PDFN5x6-8L	N+P	±100	±20	6.8/-12	4.3/-7.6	125/75	135/85	1114/4234	21/71
iM4718	SOP-8L	N+P	±100	±20	3.2/-2.0	2.0/-1.2	130/325	145/360	1084/946	19.2/18

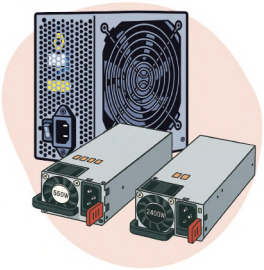
Small-signal

Part Number	Package	Type	V_{DS}(V)	V_{GS}(±V)	I_{DS}(A)		$R_{DS(ON)}$ (mΩ max) at V_{GS}=		Ciss (pF)	Qg (nC)
					TC=25°C	TC=100°C	10V	4.5V		
T2N7002ELT1G	SOT23-3L	NMOS	60	±20	0.43		3000	4000	30	305
iM2001	SOT23-3L	NMOS	100	±20	0.18		6000	9000	31	1.5
iM2313	SOT23-3L	PMOS	-60	±20	-0.35	-0.22	3300	4000	31	1.6

view more

Power Device Application Map



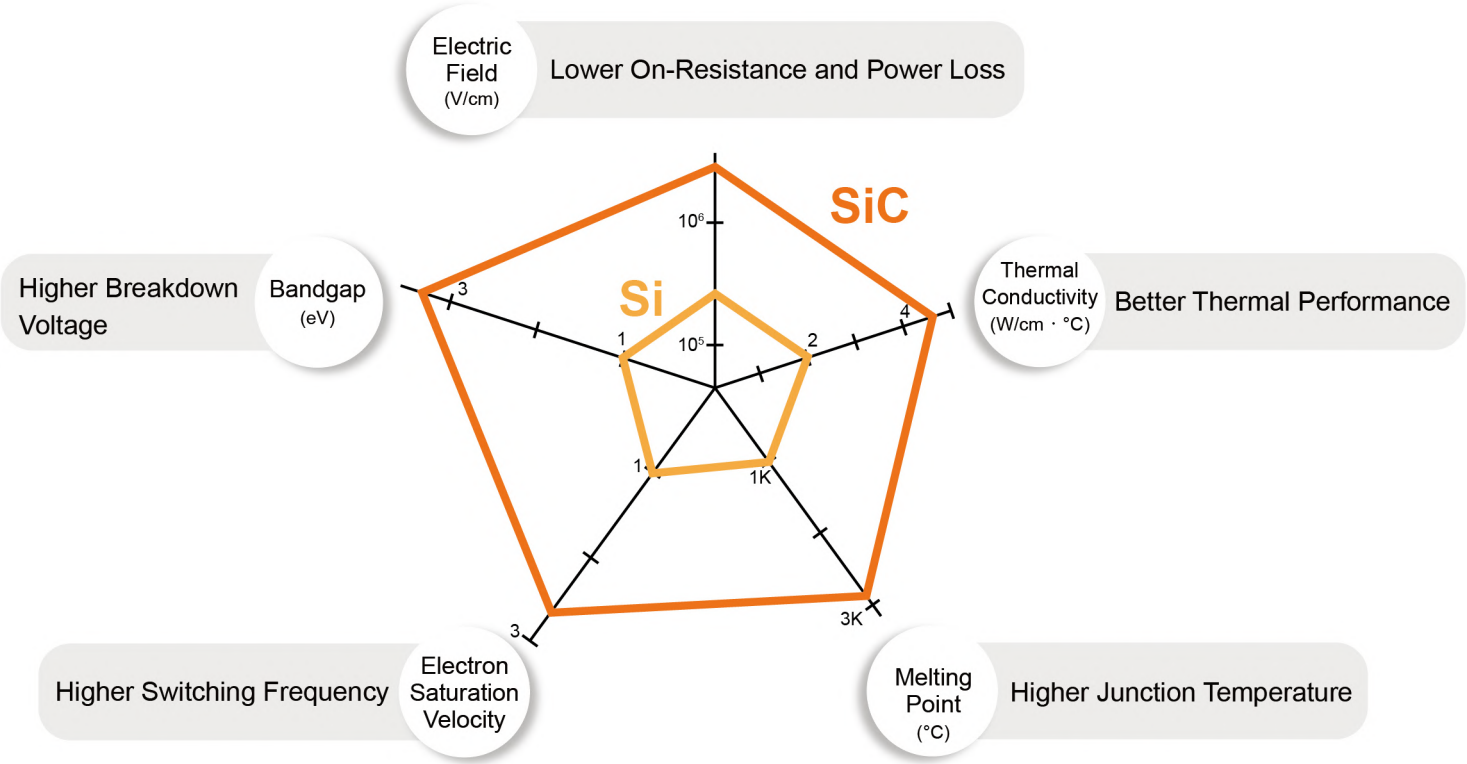


PSU

Charging Stations

PV Inverters

Wide Bandgap Materials



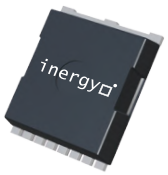
Electrical Characteristic	Effect	Silicon	Silicon-Carbide
		FRD	JBS
Withstand Voltage	Voltage Surge in Switching	●●●	●●●●●
Surge Current	Inrush Current	●●●●●	●●●●●●
Leakage Current	Losses / System Life	●●	●●●●●
Forward Voltage	Efficiency	●●●	●●●
Reverse Recovery Time	Efficiency	●	●●●●●

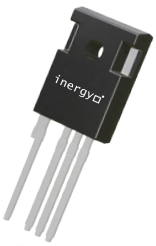
Note : More is better

Characteristics Comparison

- Excellent High-temp. Performance
- Enhanced Short-circuit Robustness
- Higher Voltage Rating
- Lower Power Loss
- Smaller Size

SiC Package


TOLL


TO-247-4L

TO-263-7L

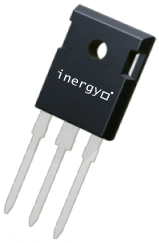
QDPAK

TO-252

DFN8X8

TO-220/F

TO-247-2L


TO-247-3L

SiC MOSFET

* : Coming Soon

Voltage Rating	Package / Ron	TOLL	TO-247-4L	TO-263-7L	QDPAK
650V	18mΩ	-	iM065C018BH*	-	-
	27mΩ	-	iM065C027BH*	-	-
	35mΩ	iM065C035AT	-	-	-
	50mΩ	iM065C050BT	-	-	-
	65mΩ	iM065C065BT*	-	-	-
750V	9mΩ	iM075C009BT*	-	-	-
1200V	14mΩ	-	iM120C014CH*	iM120C014CK*	iM120C014BX*
	32mΩ	-	iM120C032CH*	-	-
	40mΩ	-	iM120C040CH*	-	-
	75mΩ	-	iM120C075CH*	-	-

SiC Schottky Diode

* :Coming Soon

Voltage Rating	Package / IF	TO-252	DFN8X8	TO-220/F	TO-247-2L	TO-247-3L
650V	4A	iS065C04CD	iS065C04CM*	iS065C04CE	-	-
	6A	iS065C06CD	iS065C06CM*	iS065C06CE	-	-
	8A	iS065C08CD	iS065C08CM*	iS065C08CE	-	-
	10A	iS065C10CD	iS065C10CM*	iS065C10CE	-	-
	12A	-	-	iS065C12CE*	-	-
	16A	-	-	iS065C16CE*	iS065C16CH*	-
	20A	-	-	iS065C20CE*	iS065C20CH*	-
	30A	-	-	-	-	iS065C30CH*
	50A	-	-	-	-	iS065C50CH*

Voltage Rating	Package / IF	TO-220	TO-247-2L	TO-247-3L
1200V	5A	iS120C05CE*	-	-
	10A	iS120C10CE*	iS120C10CH*	-
	15A	iS120C15CE*	iS120C15CH*	-
	20A	iS120C20CE*	iS120C20CH*	-
	30A	-	iS120C30CH*	-
	40A	-	-	iS120C40CH*
	50A	-	-	iS120C50CH*

>50W

Charging Station

Server Fan

Server CDU

Air Conditioner

Hair Dryer

Leaf Blower

<50W

Telecom Station

Pedestal Fan

LV / HV Ceiling Fan

Robotic Vacuum

Air Purifier FAN

Water Heater

Air Conditioned Clothing

<20W

VGA, GPU Fan

VGA Liquid Pump

Refrigerator FAN

Essential Components of Motor Drive Systems

SoC

This design integrates MOSFETs, Gate drivers, Hall sensor, and control logic. The result is a compact and sophisticated design that delivers a robust and reliable motor drive solution.

Motor Driver

Our code-free BLDC motor drive solution accelerates time-to-market. This product supports both sensored and sensorless control, as well as trapezoidal, sine wave and Field-Oriented Control (FOC).

IPM

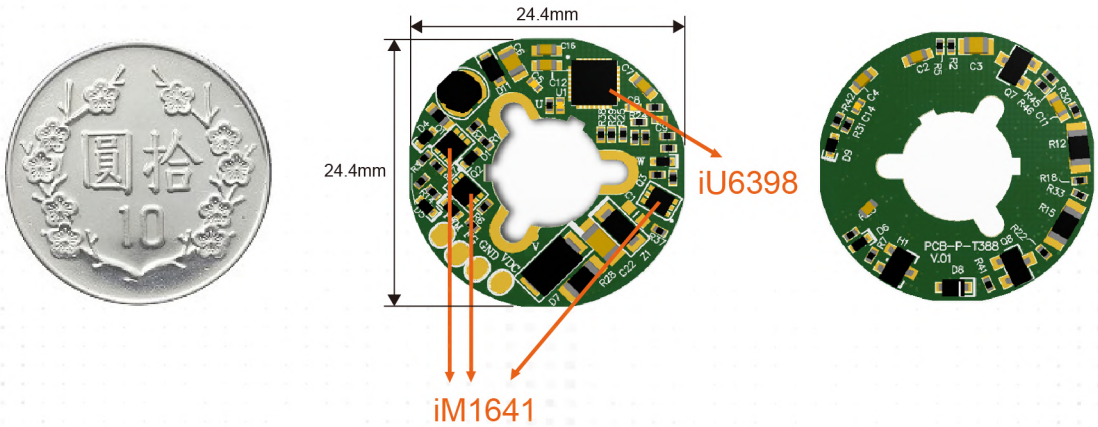
The product consolidates power components into a single package, maximizing energy efficiency and delivering superior power density. This significantly reducing the bill of materials and the PCB footprint.

Hall Sensor

Delivering precise reliable feedback, our Hall sensor features exceptional temperature stability and an advanced offset cancellation mechanism. Its superior ESD resilience ensures robust and efficient operation.

BLDC Motor Driver Products

	Single Phase	3-Phase			
48V	**Controller iU6291** • Voltage:7V~32V • Controller with LDO • QFN4x4-20L	**Controller iU6319** • Voltage:5V • Controller • 180° w/sensor • SSOP-20L	**Pre-driver iU6398** • Voltage:20V~80V • Gate Driver / Buck • FOC Sensor-less • QFN4x4-32L		**Controller iU6399** (HA) • Voltage:5.5V~24V • Controller with LDO • FOC Sensor-less • TSSOP-24L
24V 12V	**Pre-driver iU6291** • Voltage:7V~32V • P/N Driver • QFN4x4-20L	**Pre-driver iU6312** • Voltage:7V~32V • P/N Driver • 180° w/sensor • QFN5x5-32L **Pre-driver iU6321** • Voltage:4V~15V • P/N Driver • 120° Sensor-less • SSOP-24L	**Pre-driver iU6322** • Voltage:7V~32V • P/N Driver • 180° w/sensor • SSOP-28L **All-in-One iU6866** • Voltage:6V~32V • N/N MOSFET • 120° Sensor-less • QFN4x4-24L	**Pre-driver iU6391** • Voltage:7V~32V • P/N Driver • FOC Sensor-less • QFN4x4-28L	**Pre-driver iU6393** (HA) • Voltage:7V~32V • P/N Driver • FOC Sensor-less • QFN4x4-28L



4028 48V 1A FOC Solution

SoC

P/N	Package	Hall Sensor	Input Voltage	Output Current Limit	Speed Control	Speed Curve Fittling
iT1300E	DFN3x3-8L	Embedded	3.5-16V	1.2A	Direct PWM	N/A
iT1300T	TSOT23-6L	Embedded	3.5-16V	1.2A	Direct PWM	N/A
iT8300S	SOP8	Embedded	3.5-16V	1.2A	Direct PWM	N/A
iT8300T	TSOT23-6L	Embedded	3.5-16V	1.2A	Direct PWM	N/A
iT8320E	DFN3x3-8L	External	3.5-16V	2.1A	Direct PWM	3 points
iT8321E	DFN3x3-8L	Embedded	3.5-16V	2.1A	Direct PWM	3 points
iT8330E	DFN3x3-8L	External	3-28V	1.2A	Direct PWM & DC VSP	3 points

IPM

Half-Bridge IPM

*: Coming Soon

P/N	Package	Voltage Class	Configuration	RDS(ON)	Other Features
iT62241A	QFN7x7-23L	500V	HIN+EN	2 Ω	BS-Diode / Temp. Sensor
iT62245A	QFN7x7-23L	250V	HIN+EN	2 Ω	BS-Diode / Temp. Sensor
iT62216*	QFN7x7-23L	300V	HIN+EN	1 Ω	BS-Diode
iT62218*	QFN7x7-23L	600V	HIN+EN	3 Ω	BS-Diode

3-phase IPM

P/N	Package	Voltage Class	Current	Other Features
iT55031	SOP-23H	500V	3 A	BS-Diode / Temp. Sensor
iT56021	SOP-23H	600V	2 A	BS-Diode / Temp. Sensor
iT56041	SOP-23H	600V	4 A	BS-Diode / Temp. Sensor
iT56051	SOP-23H	600V	5 A	BS-Diode / Temp. Sensor

Hall Sensor

P/N	Package	Supply Voltage	Supply Current(MAX)	Operation Point	Release Point	Hysteresis (BOP-BRP)
iA1173S	SOT23-3L	2.5V~26V	5 mA	-60~-5 Gauss	5~60 Gauss	60 Gauss
iA1188D	SOT23-3L	2.5V~26V	5 mA	-25~-5 Gauss	5~25 Gauss	30 Gauss
iA1188I	SIP-3L	2.5V~26V	5 mA	-25~-5 Gauss	5~25 Gauss	30 Gauss
iA1188N	DFN1.6x1.6	2.5V~26V	5 mA	-25~-5 Gauss	5~25 Gauss	30 Gauss
iA1189S	SOT23-3L	2.5V~5.5V	3 mA	-35~-10 Gauss	10~35 Gauss	45 Gauss

Applications

Computing & Telecom

VGA Fan

AIO : iT1300

VGA Liquid Pump

AIO : iT8321 , iT8330

Controller with Pre-Driver :
iU6391 + P/N MOSFET

Features:

- High Integration
- Silence Operation
- High Efficiency

Server Fan

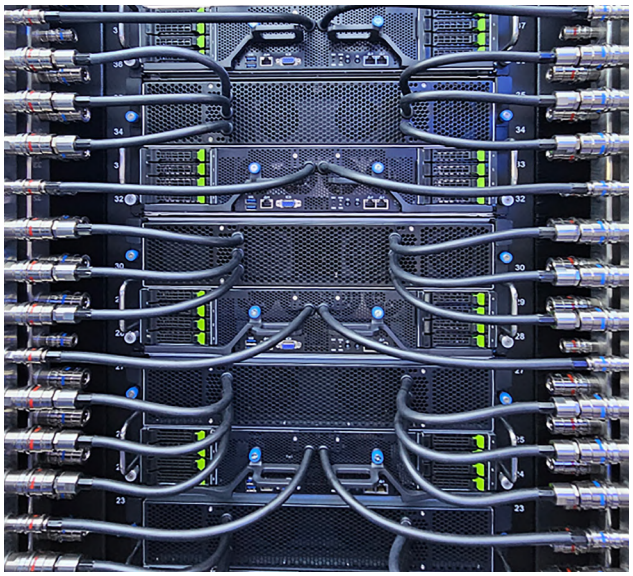
Controller with Pre-Driver :
iU6320 + N/P MOS

Features:

- Start Smoothly
- Quick Response
- High Efficiency

Applications

Computing & Telecom



Server CDU Pump

12V Controller with Pre-Driver：
iU6391 + N/P MOS

48V Controller with Pre-Driver：
iU6398 + N/N MOS

Features：

- Precision Control
- Quick Response
- High Efficiency

Telecom Station

12V Controller with Pre-Driver：
iU6391 + N/P MOS

48V Controller with Pre-Driver：
iU6398 + N/N MOS

Features：

- Precision Control
- Quick Response
- High Efficiency

Applications
White Goods

Refrigerator Fan

AIO：iT8300T / iT1300E

Features:

- High Integration
- Silence Operation
- High Efficiency

Air Conditioner

Controller + IPM：
iU6399 + iT56041/ iT56051

Features:

- Silence Operation
- High Efficiency

Water Heater

Controller：
iU6317 + Hall + N/P MOS

Controller with Pre-Driver：
iU6398 + N/N MOS

Features:

- Silence Operation
- High Efficiency
- High Current Accuracy

Applications
Home Appliances

Air Purifier

Controller with Pre-Driver：
iU6312 + Hall + N/P MOS

Features:

- Silence Operation
- High Efficiency

Robotic Vacuum

Controller with Pre-Driver：
iU6393 + N/P MOS

Features:

- Quick Response
- High Efficiency
- Constant Power

Applications

Home Appliances

Cordless Vacuum

Controller with Pre-Driver：
iU6393 + N/P MOS

Features：

- High Speed
- High Efficiency

Massage Chair

Controller：
iU6319 + N/P MOS

Features：

- Low Noise
- High Torque Capability

Applications

Home Appliances

Pedestal Fan

Controller with Pre-Driver：
iU6393 + N/P MOS

Features:

- Silence Operation
- High Efficiency

HV Ceiling Fan

Motor：iU6399 + IPM
Power HV-BUCK：iP7612S

LV Ceiling Fan

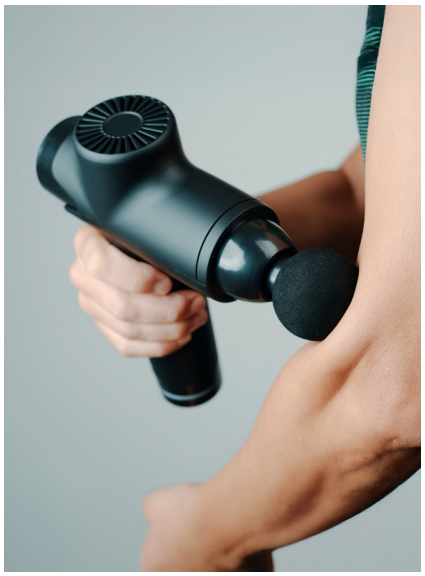
Motor：iU6393 + P/N MOSFET
Power Flyback：iP7306

Features:

- Non-Reversing Motor Start
- Auto Optimization
- High Efficiency

Applications

Home Appliances



Fascia Gun

Controller with Pre-Driver：
iU6312 + N/P MOS

Features:

- Quick Response
- Precision Current Protection

Hair Dryer

Controller + IPM：
iU6399 + iT62241A

Power HV Buck：iP7612S

Features:

- High Efficiency
- Constant Power
- Constant Speed

High Power Air Duster

Controller with Pre-Driver：
iU6321 + N/P MOS

Features:

- High Rotation Speed
- High Efficiency

Applications

Home Appliances

Smoothie Machine

Controller with Pre-Driver：
iU6393 + N/P MOS

Features:

- High Rotation Speed
- High Efficiency

High Power Blender

Total Solution

Features:

- High Rotation Speed
- High Torque Capability

RO Pump

Controller with Pre-Driver：
iU6393 + N/P MOS

Features:

- Silence Operation
- High Efficiency

Applications
Others

Bed Warmer

Controller with Pre-Driver：
iU6322 + N/P MOS

Features：

- Silence Operation
- Stable Airflow

Portable Wash Machine

Controller with Pre-Driver：
iU6322 + N/P MOS

Features：

- Rapid Motor Forward / Reverse Control

Applications
Others

Electric Curtains

Controller with Pre-Driver：
iU6322 + N/P MOS

Features:

- Silence Operation
- Precise Speed Control

Automatic Door

Controller with Pre-Driver：
iU6312 + N/P MOS

Features:

- Quick Response

Applications

Others

Cold Chain

- Controller + IPM：
  iU6399 + iT55031
- Power HV-BUCK：iP7612S
- UL60730-B：iP7708

Features:

- Speed Control
- High Efficiency
- UL60730-B Certificated

Air Conditioned Clothing

- AIO : iT8300 , iU6866

Features:

- Silence Operation
- High Efficiency

Applications
Others

Seat Comfort System

- AIO : iT8321E
- Controller with Pre-Driver : iU6391 + N/P MOS

Features:

- High Integration
- Silence Operation
- High Efficiency

Charging Station

- Controller + IPM : iU6319 + iT55031

Features:

- Silence Operation
- High Efficiency

Drone

- Controller with Pre-Driver : iU6398 + N/N MOS

Features:

- Quick Response
- High Power Integration
- High Efficiency

+886-3-5525766

www.inergy.com.tw

8F.-3, No. 8, Taiyuan 2nd St., Zhubei City Hsinchu County 302, Taiwan

R1505-1508, Block A, Xinian Center, No.6021 Shennan Rd, Shenzhen, China