

POWER MOSFET SOLUTIONS FOR AVIONICS, MILITARY, AND SPACE

Selector Guide

PACKAGE OPTIONS

- PowerPAK® SO-8L, single and dual
- PowerPAK® 8x8L
- PowerPAK® 1212-8W, single and dual
- DPAK (TO-252) and D²PAK (TO-263)
- SOT-23, TSOP6 (single and dual), and SO-8 (single and dual)

PRODUCT FEATURES

- Wide voltage range offering:
 - P-channel (-150 V to -12 V) and n-channel (20 V to 300 V)
- Includes latest Gen IV and Gen V TrenchFET® technologies
- Low $R_{DS(on)}$ for higher efficiency and increased power density
- Advanced packages for higher thermal efficiency
- IATF 16949-certified front-end and back-end manufacturing
- Targeted for non-hermetic avionics, military, and space applications with AEC-101 compliance as an alternative to the MIL-STD-11991 and MIL-PRF-19500 standards



AUTOMOTIVE POWER MOSFETs FOR AMS APPLICATIONS

Vishay's Automotive Grade power MOSFETs combine advanced silicon and package technologies that have been designed to satisfy the increasing demand for reliability, efficiency, and power density. With unmatched reliability and rugged process and package design, Vishay's power MOSFETs are the trusted choice for avionics, defense, and space systems requiring high performance in extreme environments. Engineered for excellence, our advanced low to medium voltage TrenchFET® silicon processes deliver superior performance, durability, and reliability for cutting-edge aerospace and defense systems.

RESOURCES

- For technical support, contact automostechsupport@vishay.com
- For further information, visit www.vishay.com/en/mosfets/automotive-mosfets/



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Platform Innovations and Value Propositions

High Performance Silicon Processes (N- and P-Channel)

- Generation IV TrenchFET® Silicon Process
 - Low $R_{DS(on)}$ devices minimize conduction losses in power delivery applications such as inverters and DC/DC converters
 - Up to a 60 % reduction in on-state resistance compared to the standard trench process
 - N-channel (40 V, 60 V, 80 V, and 100 V) and p-channel (-60 V and -80 V)
- Generation V TrenchFET® Silicon Process
 - Patented design optimized for low gate charge and on-state resistance to achieve the lowest figure of merit
 - Up to a 25 % and 50 % reduction in $R_{DS(on)}$ and Q_g , respectively, compared to the previous generation
 - Low gate charge reduces gate driver electrical stress, enabling additional MOSFET paralleling for higher power density and efficiency in motor drive applications
 - Reduced gate charges Q_g and Q_{gd} enable faster switching, addressing the demand for higher switching frequency DC/DC converters
 - Available in 40 V, 80 V, 100 V, and 150 V
- Standard Trench Silicon Processes
 - Excellent $R_{DS(on)}$ and Q_g trade-off
 - Enables higher breakdown voltages, including 200 V, 250 V, and 300 V
 - N-channel (20 V to 300 V) and p-channel (-2 V to -150 V) solutions for load switching, high side switches, ideal diodes, and signal / power steering applications
 - Logic level and lower threshold voltage devices





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Designed for High Reliability, High Quality, and Continuous Improvement

- Compliance to the AEC-Q101 Standard
 - All released devices pass test criteria set by AEC-Q101 (HTGB, HTRB, temperature cycling, pressure pot, power cycling, HAST, solder dunk, solderability, etc.), with level 3 PPAP available upon request
 - 2x the AEC-Q101 requirement for new technology platform development
- Comprehensive Board-Level Reliability (BLR) Testing and Reporting for PowerPAK® packages
 - Vibration, PCB bending, rapid thermal cycling (2000 cycles), and powered temperature cycling (2600 cycles)
- Continuous Improvement Mindset
 - < 20 PPB, continuous reliability monitoring

Broad Package Selection and Integrated Solutions for Higher Power Density

- PowerPAK® Surface-Mount Packages
 - Wired and bond-wireless packages to address various application needs
 - Gullwing leads (PowerPAK® SO-8L and 8x8L) provide stress relief for solder joints
 - PowerPAK® series offers higher current and power density compared to legacy transistor-outline packages
- Transistor-Outline (TO) Surface-Mount Packages
 - From high current traditional DPAK / D²PAK packages to smaller packages (SOT-23, TSOP6, and SO-8)
 - Footprint-compatible with various power MOSFET suppliers in the market



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N-Channel Power MOSFETs in PowerPAK® SO-8L (Single Die)

Series	Configuration	Package	Channel	V _{DS} (V)	V _{GS} (V)	I _D Max. (A)	R _{DS(on)} @10 V (Ω)	R _{DS(on)} @4.5 V (Ω)	Q _g @10 V (nC)	Q _{gs} (nC)	Q _{gd} (nC)	V _{GS(th)} Min. (V)	R _g Typ. (Ω)
SQJ120EP	Single	PowerPAK® SO-8L	N	30	20	202	0.0018		58	17	13	2	2
SQJ126EP	Single	PowerPAK® SO-8L	N	30	20	500	0.00094		101	26	24	2.5	1.6
SQJ128ELP	Single	PowerPAK® SO-8L	N	30	20	437	0.00115	0.00166	99	17	19	1.2	1.3
SQJA26EP	Single	PowerPAK® SO-8L	N	30	20	410	0.00077	0.00128	129	22	25	1.5	1.7
SQJ136ELP	Single	PowerPAK® SO-8L	N	40	20	350	0.00112	0.00161	107	17.5	19	1.2	1.48
SQJ138ELP	Single	PowerPAK® SO-8L	N	40	20	315	0.0015	0.0022	78	15	14	1.2	1.4
SQJ138EP	Single	PowerPAK® SO-8L	N	40	20	330	0.0018		58	17	9	2.5	2.3
SQJ140ELP	Single	PowerPAK® SO-8L	N	40	20	253	0.00214	0.00287	58	12	10	1.2	1.6
SQJ140EP	Single	PowerPAK® SO-8L	N	40	20	266	0.0021		49.2	14.6	11.8	2.5	1.85
SQJ144EP	Single	PowerPAK® SO-8L	N	40	20	130	0.0046		26	7.6	5.5	2.5	3.5
SQJ146EP	Single	PowerPAK® SO-8L	N	40	20	75	0.007		18	6	5	2.5	4
SQJ444EP	Single	PowerPAK® SO-8L	N	40	20	60	0.0032	0.0043	51	9	7	1.5	0.44
SQJ446EP	Single	PowerPAK® SO-8L	N	40	20	60	0.005	0.0075	48	7.4	11	1.5	0.6
SQJA36EP	Single	PowerPAK® SO-8L	N	40	20	350	0.00124		86	23.6	6	2.5	1.65
SQJA38EP	Single	PowerPAK® SO-8L	N	40	20	60	0.0039	0.0048	48.2	7.1	8	1.4	1.1
SQJ160EP	Single	PowerPAK® SO-8L	N	60	20	362	0.002		79	24	18	2.2	0.9
SQJ164ELP	Single	PowerPAK® SO-8L	N	60	20	75	0.012	0.013	38	8	6	1.5	1.8
SQJ170ELP	Single	PowerPAK® SO-8L	N	60	20	63	0.0163	0.028	12	4	2	1.5	1.3
SQJ174EP	Single	PowerPAK® SO-8L	N	60	20	293	0.0029		54	21	4	2.5	1.3
SQJ460AEP	Single	PowerPAK® SO-8L	N	60	20	58	0.0087	0.0094	71	9.7	12.5	1.5	1
SQJA00EP	Single	PowerPAK® SO-8L	N	60	20	30	0.013		20	6	3	2.5	0.5
SQJA02EP	Single	PowerPAK® SO-8L	N	60	20	75	0.0048		51	16	7	2.5	0.41
SQJA04EP	Single	PowerPAK® SO-8L	N	60	20	75	0.0062		35	10	5	2.5	0.46
SQJA16EP	Single	PowerPAK® SO-8L	N	60	20	278	0.003	0.0047	56	13	5	1.5	1.3
SQJA62EP	Single	PowerPAK® SO-8L	N	60	20	75	0.0045	0.0062	55	12	8	1.5	0.43
SQJ180EP	Single	PowerPAK® SO-8L	N	80	20	248	0.003		78	18	16	2.2	1
SQJ182EP	Single	PowerPAK® SO-8L	N	80	20	210	0.005		64	18	15	2.2	0.9
SQJ184EP	Single	PowerPAK® SO-8L	N	80	20	118	0.0075		46	12	13	2.2	1.2
SQJ186EP	Single	PowerPAK® SO-8L	N	80	20	60	0.015		24	7	6	2.5	1.5
SQJA80EP	Single	PowerPAK® SO-8L	N	80	20	60	0.007	0.01	40	8	6	1.5	0.41
SQJA82EP	Single	PowerPAK® SO-8L	N	80	20	60	0.0082	0.0112	40	8.5	5.5	1.5	0.43
SQJA84EP	Single	PowerPAK® SO-8L	N	80	20	46	0.0125	0.016	21	4	3	1.5	0.4
SQJA86EP	Single	PowerPAK® SO-8L	N	80	20	30	0.019	0.024	20	3.6	3.2	1.5	0.49
SQJA92EP	Single	PowerPAK® SO-8L	N	80	20	57	0.0095		30	9	5	2.5	0.45
SQJ110EP	Single	PowerPAK® SO-8L	N	100	20	170	0.0063		75	20	15	2	0.9
SQJ112EP	Single	PowerPAK® SO-8L	N	100	20	95	0.0077		58	18	9	2.5	0.8



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Series	Configuration	Package	Channel	V _{DS} (V)	V _{GS} (V)	I _D Max. (A)	R _{DS(on)} @10 V (Ω)	R _{DS(on)} @4.5 V (Ω)	Q _g @10 V (nC)	Q _{gs} (nC)	Q _{gd} (nC)	V _{GS(th)} Min. (V)	R _g Typ. (Ω)
SQJ114EP	Single	PowerPAK® SO-8L	N	100	20	61	0.0119		38	11	6	2.5	1
SQJ418EP	Single	PowerPAK® SO-8L	N	100	20	48	0.014		20	5	4.5	2.5	1.06
SQJ590EP	Single	PowerPAK® SO-8L	N	150	20	98	0.0098		34	15	2	2.2	1.5
SQJ872EP	Single	PowerPAK® SO-8L	N	150	20	24.5	0.0355		14	3.5	4	2.5	0.98
SQJ454EP	Single	PowerPAK® SO-8L	N	200	20	13	0.145	0.15	56	7	15	1.5	0.45
SQJA20EP	Single	PowerPAK® SO-8L	N	200	20	22.5	0.05		17.6	4.1	5.3	2.5	1.18

N-Channel Power MOSFETs in PowerPAK® SO-8L (Dual Die)

Series	Configuration	V _{DS} (V)	V _{GS} (V)	I _D Max. (A)	R _{DS(on)} @10 V (Ω)	R _{DS(on)} @4.5 V (Ω)	Q _g @10 V (nC)	Q _{gs} (nC)	Q _{gd} (nC)	V _{GS(th)} Min. (V)	R _g Typ. (Ω)
SQJ910AEP	Dual	30	20	30	0.007	0.0086	25.8	4.3	4.3	1.5	1.38
SQJ914EP	Dual	30	20	30	0.012	0.017	15	3	3	1.5	1.6
SQJ738EP	Dual	40	20	123	0.00317		37	11	8	2.5	2.2
SQJ742ELP	Dual	40	20	104	0.0044	0.006	33	7	6	1.2	1.5
SQJB44EP	Dual	40	20	30	0.0052	0.007	33.5	5.7	5.5	1.2	1.55
SQJB48EP	Dual	40	20	30	0.0052		25.3	7.3	5.1	2.3	1.84
SQJ746EP	Dual	40	20	85	0.006		17	6	4	2	4.1
SQJ748ELP	Dual	40	20	68	0.0073	0.01	19	4	4	1.2	3
SQJ912DEP	Dual	40	20	30	0.0073	0.0102	24	5	5	1.5	2.8
SQJB46ELP	Dual	40	20	30	0.008	0.01	26	4.3	4.3	1.2	2.54
SQJB46EP	Dual	40	20	30	0.008		21	5.8	4.5	2.3	2.54
SQJB04ELP	Dual	40	20	30	0.011	0.0146	13.1	2.4	2.1	1.2	3.33
SQJ504EP	N- and p-pair	40	20	30	0.0075	0.011	18	3.5	2.6	1.5	0.72
SQJ500AEP	N- and p-pair	40	20	30	0.0092	0.0112	25.5	4.4	4.3	1.3	1.37
SQJ764ELP	Dual	60	20	62	0.0105	0.0146	17	5	2	1.2	2
SQJB60EP	Dual	60	20	30	0.012	0.016	18	3.5	2.5	1.5	0.52
SQJB00EP	Dual	60	20	30	0.013		20	6	3	2.5	0.51
SQJ952EP	Dual	60	20	23	0.02	0.024	24	5	12	1.5	1.3
SQJ980AEP	Dual	75	20	17	0.05	0.066	14	2.3	2.9	1.5	2.67
SQJB80EP	Dual	80	20	30	0.019	0.024	20	3.6	3.2	1.5	0.46
SQJB90EP	Dual	80	20	30	0.0215		14	4	3	2.5	0.41
SQJB68EP	Dual	100	20	11	0.092	0.117	4.7	0.8	1.3	1.5	4
SQJB70EP	Dual	100	20	11.3	0.095		4	1	1.25	2.5	4.9
SQJ570EP	N- and p-pair	100	20	15	0.045	0.058	9	1.2	1.9	1.5	2.7



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P-Channel Power MOSFETs in PowerPAK® SO-8L (Single and Dual Die)

Series	Configuration	V _{DS} (V)	V _{GS} (V)	I _D Max. (A)	R _{DS(on)} @10 V (Ω)	R _{DS(on)} @6 V (Ω)	R _{DS(on)} @4.5 V (Ω)	R _{DS(on)} @2.5 V (Ω)	Q _g @10 V (nC)	Q _g @5 V (nC)	Q _{gs} (nC)	Q _{gd} (nC)	V _{GS(th)} — Min. (V)	R _g Typ. (Ω)
SQJ123ELP	Single	-12	8	-238			0.004	0.0064		120	15	38	-0.45	2.2
SQJ411EP	Single	-12	8	-60			0.0058	0.0087		99	12	29	-0.45	1.1
SQJ951EP	Dual	-30	20	-30	0.017		0.036		33		5.5	9.4	-1.5	6.31
SQJ131ELP	Single	-30	20	-300	0.003		0.0052		207		36	33	-1.5	2.3
SQJ407EP	Single	-30	20	-60	0.0044		0.0071		169		24	32	-1.5	1.05
SQJ433EP	Single	-30	20	-75	0.0081		0.017		72		12	20	-1.5	1.1
SQJ504EP	N- and p-pair	-40	20	-30	0.017		0.023		56		8.5	9.9	-1.5	2.37
SQJ500AEP	N- and p-pair	-40	20	-30	0.027		0.0435		30.2		4.1	7.4	-1.5	6.15
SQJ141ELP	Single	-40	20	-232	0.0048		0.0069		219		41	38	-1.5	2.3
SQJ409EP	Single	-40	20	-60	0.007		0.01		170		24	35	-1.5	1.08
SQJ963EP	Dual	-60	20	-8	0.085		0.115		26.5		3.8	5.8	-1.5	6.9
SQJ161ELP	Single	-60	20	-118	0.0088		0.0163		61		15	8	-1.5	1.6
SQJA61EP	Single	-60	20	-54.5	0.0121		0.0225		48		13	6.3	-1.5	0.8
SQJ457EP	Single	-60	20	-36	0.025		0.035		65		9.5	19	-1.5	1.19
SQJ181ELP	Single	-80	20	-128	0.0138		0.0204		59		15	7	-1.5	3
SQJA81EP	Single	-80	20	-46	0.0173		0.0265		52		13	5	-1.5	1
SQJ185ELP	Single	-80	20	-62	0.0195		0.029		46		12	6	-1.5	1.5
SQJ570EP	N- and p-pair	-100	20	-9.5	0.146		0.2065		12		2	3	-1.5	10.2
SQJ211ELP	Single	-100	20	-33.6	0.03		0.0435		45		9.2	8.7	-1.5	2.1
SQJ431AEP	Single	-200	20	-9.4	0.305	0.315			55		11	17	-2.5	1.25



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Automotive Grade TrenchFET® Guide

N-Channel Power MOSFETs in PowerPAK® 1212-8W (Single and Dual)

Series	Configuration	V _{DS} (V)	V _{GS} (V)	I _D Max. (A)	R _{DS(on)} @10 V (Ω)	R _{DS(on)} @4.5 V (Ω)	Q _g @10 V (nC)	Q _{gs} (nC)	Q _{gd} (nC)	V _{GS(th)} Min. (V)	R _g Typ. (Ω)
SQS482ENW	Single	30	20	16	0.0085	0.01	26	4.7	4.3	1.5	10
SQS940ELNW	Dual	40	20	6	0.0203	0.0246	13	3	3	1.5	5.5
SQS486CENW	Single	40	20	18	0.0051	0.0073	35.2	6.1	6	1.2	1.63
SQS488CENW	Single	40	20	16	0.0079	0.0105	22	4	3.7	1.5	1
SQS966ENW	Dual	60	20	6	0.036	0.048	6.2	1.4	0.8	1.5	0.9
SQS660CENW	Single	60	20	18	0.0112	0.016	17.4	4.8	1.1	1.5	0.54
SQ7414CENW	Single	60	20	18	0.023	0.028	19	2.6	3.6	1.5	1.12
SQS460CENW	Single	60	20	8	0.03	0.041	7.2	2.15	0.55	1.5	1.27
SQS462ENW	Single	60	20	8	0.063	0.082		1.3	1.6	1.5	0
SQSA80ENW	Single	80	20	18	0.021	0.027	17	3	2	1.5	0.45
SQSA84CENW	Single	80	20	16	0.032	0.037	14.1	2.6	2.6	1.5	0.72
SQSA82CENW	Single	80	20	12	0.046	0.07	6.4	1.65	0.66	1.5	0.98
SQSA12CENW	Single	100	20	18	0.022	0.025	31	6	5	1.5	0.5
SQSA70CENW	Single	150	20	18	0.0685		8	2.1	2.1	2.5	1.61

P-Channel Power MOSFETs in PowerPAK® 1212-8W (Single)

Series	V _{DS} (V)	V _{GS} (V)	I _D Max. (A)	R _{DS(on)} @10 V (Ω)	R _{DS(on)} @4.5 V (Ω)	R _{DS(on)} @2.5 V (Ω)	Q _g @10 V (nC)	Q _g @4.5 V (nC)	Q _{gs} (nC)	Q _{gd} (nC)	V _{GS(th)} Min. (V)	R _g Typ. (Ω)
SQS405CENW	-12	8	-16		0.015	0.022			4	9.6	-0.45	3.1
SQS407ENW	-30	20	-16	0.0108	0.017		59		8.6	11.5	-1.5	5
SQS423ENW	-30	20	-16	0.021	0.06			17	5.9	9.2	-1.5	3.43
SQS415ENW	-40	20	-16	0.0161	0.023		63		9	12	-1.5	4.6
SQS411ENW	-40	20	-16	0.0273	0.038		38		6	7	-1.5	4.2
SQ7415CENW	-60	20	-16	0.065	0.09		25.5		4.3	6.4	-1.5	5.6
SQS201CENW	-100	20	-16	0.08	0.11		17.4		3.5	3.3	-1.5	9.82
SQS481ENW	-150	20	-4.7	1.095			8		1.7	2.5	-2.5	4.7



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Automotive Grade TrenchFET® Guide

N-Channel Power MOSFETs in PowerPAK® 8 x 8L (Single)

Series	V _{DS} (V)	V _{GS} (V)	I _D Max. (A)	R _{DS(on)} @10 V (Ω)	R _{DS(on)} @4.5 V (Ω)	Q _g @10 V (nC)	Q _{gs} (nC)	Q _{gd} (nC)	V _{GS(th)} Min. (V)	R _g Typ. (Ω)
SQJQ130EL	30	20	445	0.00052	0.0007	310	53	56	1.5	1.9
SQJQ140E	40	20	701	0.00053		192	55	41	2.3	1.6
SQJQ146E	40	20	487	0.0007		159	49	33	2.2	1.6
SQJQ142E	40	20	345	0.00124		92	26	20.1	2	1.59
SQJQ148E	40	20	375	0.0016		69	35	24	2	1.6
SQJQ150E	40	20	233	0.0019		61	17	17	2	1.7
SQJQ160EL	60	20	461	0.0008	0.0011	206	42	31	1.5	1.6
SQJQ160E	60	20	602	0.00085		183	53	42	2	1.4
SQJQ184E	80	20	430	0.0014		181	51	36	2	1.3
SQJQ186E	80	20	245	0.0023		123	36	26	2.5	1.3
SQJQ510E	100	20	286	0.00186		86	39	3.6	2.2	2
SQJQ112E	100	20	296	0.00253		181	48	37	2	1.5
SQJQ118E	100	20	155	0.0036		122	30	26	2	1.1
SQJQ114EL	100	20	136	0.0055	0.0062	102	20	14	1.4	1.1
SQJQ116EL	100	20	61	0.0092	0.0103	70	13	12	1.4	1

P-Channel Power MOSFETs in PowerPAK® 8 x 8L (Single)

Series	V _{DS} (V)	V _{GS} (V)	I _D Max. (A)	R _{DS(on)} @10 V (Ω)	R _{DS(on)} @4.5 V (Ω)	Q _g @10 V (nC)	Q _{gs} (nC)	Q _{gd} (nC)	V _{GS(th)} Min. (V)	R _g Typ. (Ω)
SQJQ131EL	-30	20	-280	0.0014	0.0022	487	86	82	-1.5	2.1
SQJQ141EL	-40	20	-390	0.002	0.0029	487	89	82	-1.5	2.2
SQJQ143EL	-40	20	-192	0.004	0.0059	241	48	42	-1.5	1.7
SQJQ161EL	-60	20	-222	0.0035	0.0062	136	36	15	-1.5	1.9
SQJQ181EL	-80	20	-175	0.0055	0.0075	153	39	20	-1.5	1.8



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N-Channel Power MOSFETs in SO-8 (Single and Dual Die)

Series	Configuration	V _{DS} (V)	V _{GS} (V)	I _D Max. (A)	R _{DS(on)} @10 V (Ω)	R _{DS(on)} @6 V (Ω)	R _{DS(on)} @4.5 V (Ω)	Q _g @10 V (nC)	Q _{gs} (nC)	Q _{gd} (nC)	V _{GS(th)} Min. (V)	R _g Typ. (Ω)
SQ4946CEY	Dual	60	20	7	0.04		0.055	11.7	1.8	2.8	1.5	0
SQ9945CEY	Dual	60	20	5.4	0.064		0.082	8.9	1.5	2.1	1.5	0
SQ4284EY	Dual	40	20	8	0.0135		0.0148	30	5.5	5	1.5	4.53
SQ4940CEY	Dual	40	20	8	0.024		0.029	11.2	2.3	1.6	1.5	1.18
SQ4282EY	Dual	30	20	8	0.0123		0.0135	31.5	6.4	4	1.5	4.91
SQ4920EY	Dual	30	20	8	0.0145		0.0175	19.7	3.8	2.9	1.5	0
SQ4532AEY	N- and p-pair	30	20	7.3	0.031		0.042	5.9	1	1.9	1.5	3.4
SQ4080EY	Single	150	20	18	0.085			25	5.2	8.7	2.5	0.4
SQ4470EY	Single	60	20	16	0.012	0.014		45	9.9	11.2	2.5	0.87
SQ4064EY	Single	60	20	12	0.0198		0.0212	29	5.5	3.9	1.5	0.8
SQ4184EY	Single	40	20	29	0.0046		0.0056	72	13	11	1.5	1.6
SQ4050EY	Single	40	20	19	0.008		0.011	34	6.1	5.6	1.5	0.8
SQ4182EY	Single	30	20	32	0.0038		0.005	72	14	8	1.5	1.8
SQ4410EY	Single	30	20	15	0.012		0.02	35	4.9	5.4	1.5	0

P-Channel Power MOSFETs in SO-8 (Single and Dual Die)

Series	Configuration	V _{DS} (V)	V _{GS} (V)	I _D Max. (A)	R _{DS(on)} @10 V (Ω)	R _{DS(on)} @4.5 V (Ω)	R _{DS(on)} @2.5 V (Ω)	Q _g @10 V (nC)	Q _g @4.5 V (nC)	Q _{gs} (nC)	Q _{gd} (nC)	V _{GS(th)} Min. (V)	R _g Typ. (Ω)
SQ4949EY	Dual	-30	20	-7.5	0.035	0.065		19.5		3.1	4.7	-1.5	0
SQ4937EY	Dual	-30	20	-5	0.075	0.145		9.5		1.7	2.3	-1.5	0
SQ4917CEY	Dual	-60	20	-8	0.048	0.0612		36.3		5.3	8.9	-1.5	2.36
SQ4961CEY	Dual	-60	20	-4.4	0.085	0.115		21		3.4	5	-1.5	6.3
SQ4532AEY	N- and p-pair	-30	20	-5.3	0.07	0.19		7.9		1.1	2.7	-1.5	5.8
SQ4005EY	Single	-12	8	-15		0.016	0.022		29	4.2	8.4	-0.45	2.7
SQ4153EY	Single	-12	8	-25		0.00832	0.01		101	15	45	-0.4	2.2
SQ4483EY	Single	-30	20	-30	0.0085	0.02		75		9.5	19	-1.5	2
SQ4425EY	Single	-30	20	-18	0.012	0.019			33.6	8.6	15.2	-1.5	2.04
SQ4401CEY	Single	-40	20	-17.3	0.014	0.023		71		11.4	18.3	-1.5	1.9
SQ9407EY	Single	-60	20	-4.6	0.085	0.115		26.5		3.8	5.8	-1.5	7.1



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N-Channel Power MOSFETs in DPAK (TO-252) and D²PAK (TO-263)

Series	Package	V _{DS} (V)	V _{GS} (V)	I _D Max. (A)	R _{DS(on)} @10 V (Ω)	R _{DS(on)} @4.5 V (Ω)	Q _g @10 V (nC)	Q _{gs} (nC)	Q _{gd} (nC)	V _{GS(th)} — Min. (V)	R _θ Typ. (Ω)
SQM40022EM	D ² PAK (TO-263)	40	20	150	0.00163		106	33	21	2.5	2.75
SQM120N04-1m7L	D ² PAK (TO-263)	40	20	120	0.0017	0.002	190	29	27	1.5	1.07
SQM100N04-2m7	D ² PAK (TO-263)	40	20	100	0.0027		95.5	25.5	14.7	2.5	1.48
SQM50N04-4m0L	D ² PAK (TO-263)	40	20	50	0.004	0.0055	85	14	14	1.5	2.15
SQD100N04-3m6	DPAK (TO-252)	40	20	100	0.0036		70	16	13	2.5	1.86
SQM110N05-06L	D ² PAK (TO-263)	55	20	110	0.006	0.01	73	14.5	16.8	1.5	1.2
SQD30N05-20L	DPAK (TO-252)	55	20	30	0.02	0.026		4.1	4.8	1.5	2.1
SQM50020EL	D ² PAK (TO-263)	60	20	120	0.002	0.0025	128	33	11	1.5	1.68
SQM120N06-3m5L	D ² PAK (TO-263)	60	20	120	0.0035	0.0039	220	35	35	1.5	1.3
SQM60N06-15	D ² PAK (TO-263)	60	20	56	0.015		33	8.9	7.4	2.5	1.6
SQD50N06-09L	DPAK (TO-252)	60	20	50	0.009	0.013	48	7.1	13.5	1.5	1.7
SQD40N06-14L	DPAK (TO-252)	60	20	40	0.014	0.017	34	6	8.5	1.5	1.7
SQD25N06-22L	DPAK (TO-252)	60	20	25	0.022	0.033	33	5.3	6.8	1.5	1.3
SQD23N06-31L	DPAK (TO-252)	60	20	23	0.031	0.045	16	4	3	1.5	1.4
SQM120N10-3m8	D ² PAK (TO-263)	100	20	120	0.0038		125	28	46	2.5	3.3
SQM70060EL	D ² PAK (TO-263)	100	20	75	0.0059	0.008	66	14	12	1.5	1.92
SQM100N10-10	D ² PAK (TO-263)	100	20	100	0.0105	0.012	122	23	28	1.5	1.41
SQD50N10-8m9L	DPAK (TO-252)	100	20	50	0.0089	0.0112	46	7.5	10	1.5	12.3
SQD70140EL	DPAK (TO-252)	100	20	30	0.015	0.019	26.5	5.5	5.5	1.5	2.3
SQD25N15-52	DPAK (TO-252)	150	20	25	0.052		34	14.5	5.4	2.5	1
SQM90142E	D ² PAK (TO-263)	200	20	95	0.0153		55	14	16.5	2.5	2.74
SQM60N20-35	D ² PAK (TO-263)	200	20	60	0.035		90	16	29	2.5	0.8
SQM10250E	D ² PAK (TO-263)	250	20	65	0.03		50	12	15	2.5	2.84
SQD10950E	DPAK (TO-252)	250	20	11.5	0.162		10.6	3.1	2.8	2.5	3.8
SQD07N25-350H	DPAK (TO-252)	250	30	7	0.35		19	6.5	5	2.5	1
SQM35N30-97	D ² PAK (TO-263)	300	20	35	0.097		86	16	28	2.5	0.75
SQD10N30-330H	DPAK (TO-252)	300	30	10	0.33		31	8	9.6	3.4	0.8



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P-Channel Power MOSFETs in DPAK (TO-252) and D²PAK (TO-263)

Series	Package	V _{DS} (V)	V _{GS} (V)	I _D Max. (A)	R _{DS(on)} @10 V (Ω)	R _{DS(on)} @4.5 V (Ω)	Q _g @10 V (nC)	Q _{gs} (nC)	Q _{gd} (nC)	V _{GS(th)} — Min. (V)	R _θ Typ. (Ω)
SQM120P10-10m1L	D ² PAK (TO-263)	-100	20	-120	0.0101	0.015	125	25	30	-1.5	6.44
SQM100P10-19L	D ² PAK (TO-263)	-100	20	-93	0.019	0.0222	220	37	51	-1.5	2.2
SQD40P10-40L	DPAK (TO-252)	-100	20	-38	0.04	0.048	96	8.4	23.5	-1	3.13
SQD40031EL	DPAK (TO-252)	-30	20	-100	0.0032	0.0052	186	28	28	-1.5	3.5
SQD40061EL	DPAK (TO-252)	-40	20	-100	0.0051	0.0071	185	25	30	-1.5	3.6
SQD40081EL	DPAK (TO-252)	-40	20	-50	0.0085	0.0105	138	21	21	-1.5	3.15
SQM50063EL	D ² PAK (TO-263)	-60	20	-120	0.0058	0.011	98	33	11	-1.5	2.55
SQM110P06-8m9L	D ² PAK (TO-263)	-60	20	-110	0.0089	0.0132	130	25	33	-1.5	2.6
SQD50P06-15L	DPAK (TO-252)	-60	20	-50	0.0155	0.02	98	15	21	-1.5	2.9
SQD19P06-60L	DPAK (TO-252)	-60	20	-20	0.055	0.1	27	3.9	5.9	-1.5	4.7
SQD50P08-25L	DPAK (TO-252)	-80	20	-50	0.025	0.031	91	8.2	24	-1.5	3.26
SQD50P08-28	DPAK (TO-252)	-80	20	-48	0.028		95	19	26	-2.5	3.47



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N-Channel and P-Channel Power MOSFETs in SOT-23 (Single Die)

Series	Channel	V _{DS} (V)	V _{GS} (V)	I _D Max. (A)	R _{DS(on)} @10 V (Ω)	R _{DS(on)} @6 V (Ω)	R _{DS(on)} @4.5 V (Ω)	R _{DS(on)} @2.5 V (Ω)	Q _g @10 V (nC)	Q _g @4.5 V (nC)	Q _{gs} (nC)	Q _{gd} (nC)	V _{GS(th)} Min. (V)	R _g Typ. (Ω)
SQ2315CES	P	-12	8	-5			0.05	0.068		9.3	1.4	3	-0.45	4.9
SQ2301CES	P	-20	8	-3.9			0.12	0.18		5.4	0.81	1.75	-0.45	6
SQ2351CES	P	-20	12	-3.2			0.115	0.205		3.4	0.6	1.1	-0.6	6
SQ2303CES	P	-30	20	-2.5	0.17		0.37		4.5		0.8	1.1	-1.5	12.08
SQ2319CES	P	-40	20	-4.6	0.075		0.145		11		2.1	2.6	-1.5	4.4
SQ2389CES	P	-40	20	-4.1	0.094		0.188		8.2		1.1	3	-1.5	4.1
SQ2361CEES	P	-60	20	-2.8	0.17		0.23		10		1.5	5	-1.5	4.3
SQ2361CES	P	-60	20	-2.8	0.177		0.246		9		1.6	3.3	-1.5	4.1
SQ2309CES	P	-60	20	-1.7	0.37		0.5		5.5		0.8	1.3	-1.5	5.4
SQ2337CES	P	-80	20	-2.2	0.29	0.314					1.6	2.2	-1.5	4.2
SQ2325ES	P	-150	20	-0.84	1.77				7.4		1.1	2.9	-2.5	3.9
SQ2310CES	N	20	8	6			0.03	0.034		4.95	0.65	0.93	0.4	9.4
SQ2348CES	N	30	20	8	0.024		0.032		8.15		1.65	1.25	1.5	13
SQ2318CES	N	40	20	7	0.031		0.036		8.9		1.7	1.4	1.5	2.7
SQ2362CES	N	60	20	4.3	0.068		0.075		8.1		1.6	1	1.5	2.7
SQ2364EES	N	60	8	2			0.24			2	0.3	0.6	0.46	4.1
SQ2398ES	N	100	20	1.6	0.3				2.3		0.7	1.1	2.5	5.8



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N-Channel and P-Channel Power MOSFETs in TSOP-6 (Single and Dual Die)

Series	Configuration	V _{DS} (V)	V _{GS} (V)	I _D Max. (A)	R _{DS(on)} @10 V (Ω)	R _{DS(on)} @4.5 V (Ω)	R _{DS(on)} @2.5 V (Ω)	Q _g @10 V (nC)	Q _g @4.5 V (nC)	Q _{gs} (nC)	Q _{gd} (nC)	V _{GS(th)} Min. (V)	R _g Typ. (Ω)
SQ3426CEEV	Single	60	20	7	0.042	0.063		13		2.6	1.9	1.5	3.83
SQ3426CEV	Single	60	20	7	0.042	0.063			6.8	2.9	2	1.5	3.1
SQ3418EV	Single	40	20	8	0.032	0.042		8.5		1.1	2	1.5	2
SQ3410EV	Single	30	20	8	0.0175	0.0213		14		2.4	2.2	1.5	3.91
SQ3456CEV	Single	30	20	7.8	0.035	0.052		6		1.2	1	1.5	6.65
SQ3460EV	Single	20	8	8		0.03	0.034		9.3	1.1	1.4	0.4	12.4
SQ3985EV	Dual	-20	8	-3.9		0.145	0.2		3.1	0.5	0.9	-0.45	5.5
SQ3461EV	Single	-12	8	-8		0.025	0.032		21	2.5	7	-0.4	5.7
SQ3469CEV	Single	-20	20	-8	0.036	0.064		16.7		3.6	3.7	-1.5	6
SQ3493EV	Single	-20	12	-8		0.021	0.032		22.7	4.5	6.4	-0.6	5.9
SQ3481CEV	Single	-30	20	-7.5	0.043	0.07		15.5		3	3.9	-1.5	6.6
SQ3457CEV	Single	-30	20	-6.8	0.065	0.1		12.9		2.6	3.1	-1.5	5.9
SQ3419CEV	Single	-40	20	-6.9	0.058	0.092			8.35	2.9	4	-1.5	5.7
SQ3427CEEV	Single	-60	20	-5.3	0.095	0.135		15.3		2.5	5.4	-1.5	5.4
SQ3427CEV	Single	-60	20	-5.3	0.095	0.135		16.9		2.9	4.1	-1.5	5
SQ3585EV	N- and p-pair	20	12	3.57		0.077	0.12		1.8	0.3	0.4	0.6	0
SQ3585EV	N- and p-pair	-20	12	-2.5		0.166	0.318		2.4	0.4	0.7	-0.6	0