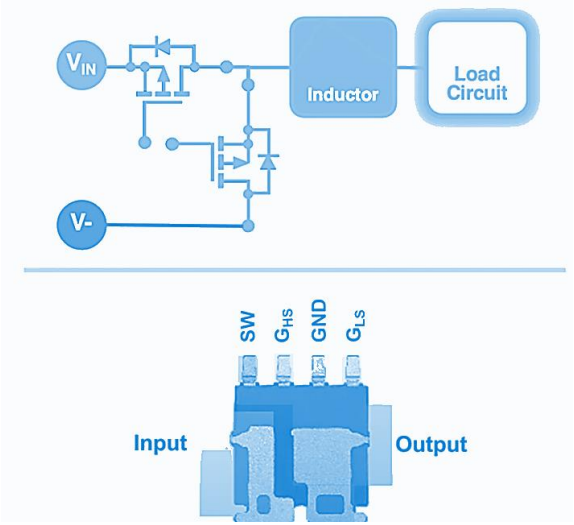
DUAL ASYMMETRICAL MOSFETs FOR BETTER ENERGY EFFICIENCY, POWER DENSITY AND RELIABILITY



Ideal for Synchronous Buck Converter with Duty Cycle <50%

The smaller MOSFET with lower Q_g for Control switch

- Turns on for a shorter duration, and the power loss from switching is more significant than conduction loss.

The larger MOSFET with lower $R_{DS(on)}$ for synchronous switch

- Stays on longer and the loss is dominated by conduction
- Lower $R_{DS(on)}$ reduces power loss from conduction

Datasheet PN	Status	Tech	Type	V_{DS} (V)	V_{GS} (V)	I_D (A) Max.		$R_{DS(ON)}$ (mΩ) Max. D2 / D1 @V_{GS} = 10V		4.5V		3.3V		Min. $V_{GS(th)}$ (V)
SQJ204EP	Released	Gen III	N + N	12	±12	20	60	8.3	3	9.3	3.5	10.3	4.1	0.5
SQJ202EP	Released	Gen III	N + N	12	±20	20	60	6.5	3.3	9.3	4.5			1.5
SQJ200EP	Released	Gen III	N + N	20	±20	20	60	8.8	3.7	12.4	5			1.5
SQJ940EP	Released	Gen III	N + N	40	±20	15	18	16	6.4	18.8	7.6			1.5
SQJ942EP	Released	Gen III	N + N	40	±20	15	45	22	11	26	13			1.5
SQJ208EP	Released	Gen IV	N + N	40	±20	20	60	39	9.4	48	11.73			1.5
SQJ244EP	Released	Gen IV	N + N	40	±20	20	60	45	11	60	15			1.5
SQJ260EP	Released	Gen IV	N + N	60	±20	20	54	19	8.5	24	11.5			1.5
SQJ264EP	Released	Gen IV	N + N	60	±20	20	54	20	8.6					2.5
SQJ262EP	Released	Gen IV	N + N	60	±20	15	40	35.5	15.5	48	20			1.5
SQJ990EP	Released	ThunderFET	N + N	100	±20	17	34	40	19	50.5	.23.5			1.5

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Source: https://www.vishay.com

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