



Product Brief

OptiMOS™ 5 60 V, 80 V and 100 V

New logic level MOSFETs for low V_{GS}

Available in three different voltage classes (60 V, 80 V and 100 V), Infineon's new logic level OptiMOS™ 5 Power MOSFETs are highly suitable for wireless charging, adapter and telecom applications.

The new devices' low gate charge (Q_g) reduces switching losses without compromising conduction losses. The improved figures of merit allow operations at high switching frequencies. Furthermore, the logic level drive provides a low gate threshold voltage ($V_{GS(th)}$) allowing the MOSFETs to be driven at 5 V and directly from microcontrollers.

Despite the low gate charge, the OptiMOS™ 5 logic level products achieve a lower $R_{DS(on)}$ compared to the next best alternatives.

Key features

- > Low $R_{DS(on)}$ in small package
- > Lower gate charge
- > Lower output charge
- > Logic level compatibility

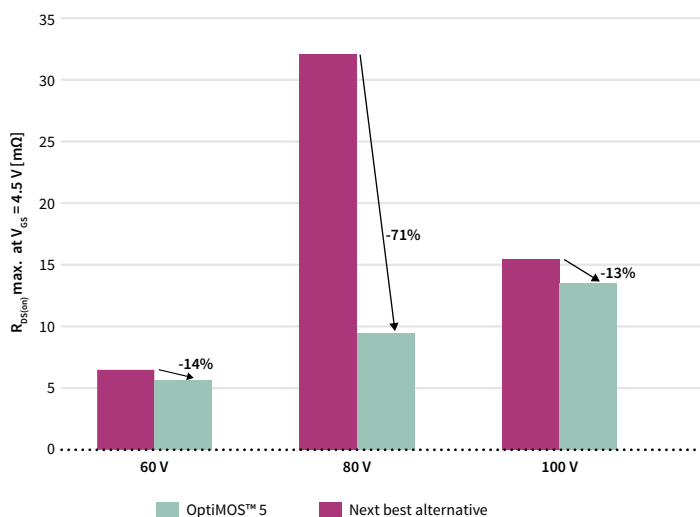
Key benefits

- > Higher power density designs
- > Higher switching frequency
- > Reduced parts count wherever 5 V supplies are available
- > Driven directly from microcontrollers (slow switching)
- > System cost reduction

Applications

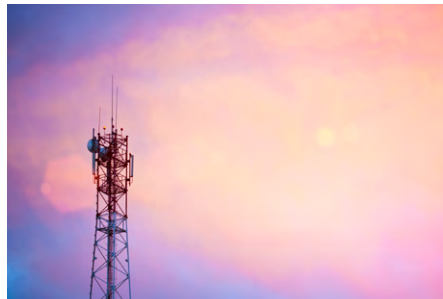
- > Wireless charging
- > Adapter
- > Telecom

OptiMOS™ 5 comparison of $R_{DS(on)}$ in 60 V, 80 V and 100 V

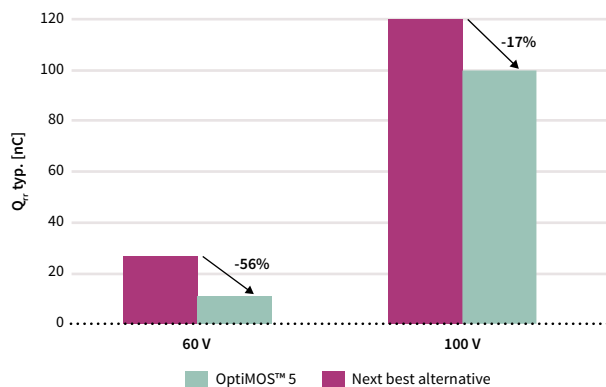


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OptiMOS™ 5 comparison of Q_{rr} in 60 V and 100 V



The new products offer low reverse recovery charge (Q_{rr}) and output charge (Q_{oss}) yielding low overshoot in synchronous rectification.

Product portfolio

Package	Voltage class [V]	Product type	$R_{DS(on)}$ max. at $V_{GS} = 10\text{ V}$ [m Ω]	$R_{DS(on)}$ max. at $V_{GS} = 4.5\text{ V}$ [m Ω]	
PQFN 3.3 x 3.3	60	BSZ040N06LS5	4.00	5.60	
		BSZ065N06LS5	6.50	9.40	
		BSZ099N06LS5	9.90	14.00	
	80	BSZ070N08LS5	7.00	9.40	
		100	BSZ096N10LS5	9.60	13.50
			BSZ146N10LS5	14.60	20.80

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