



Vishay Intertechnology Standard-Level 40 V MOSFETs Prevent False Triggering and Reduce Noise in Motor Control Circuits

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Offered in the PowerPAK® SO-8 Single Package, Devices Provide High $V_{th(min)} > 2.5\text{ V}$ and Q_{gd} / Q_{gs} Ratios < 1

MALVERN, Pa., July 07, 2026 (GLOBE NEWSWIRE) -- Vishay Intertechnology, Inc. (NYSE: VSH) today introduced four new 40 V TrenchFET® Gen IV standard-level n-channel power MOSFETs in the 6.15 mm by 5.15 mm PowerPAK® SO-8 single package. Optimized for the noisy environments of motor control circuits, the Vishay Siliconix [SIR5402DP](#), [SIR5404DP](#), [SIR5406DP](#), and [SIR5408DP](#) combine a high minimum gate-source threshold voltage of greater than 2.5 V with Q_{gd} / Q_{gs} ratios of less than 1.

The high minimum gate-source threshold voltage of the devices released today prevents false MOSFET triggering induced by the gate in motor control circuits, while their optimized Q_{gd} / Q_{gs} ratios reduce gate-induced voltage fluctuations and the impact of gate noise. Both characteristics make the devices ideal for providing synchronous rectification and DC/DC conversion in BLDC motors, power tools, drones, and automation systems.

To meet the requirements of specific applications, the SIR5402DP, SIR5404DP, SIR5406DP, and SIR5408DP are available with a range of typical on-resistance values from 0.9 mΩ to 2.5 mΩ at 10 V, and gate charge values from 32.6 nC to 82 nC. The MOSFETs are 100 % R_G- and UIS-tested, RoHS-compliant, and halogen-free.

Device Specification Table:

Part #	SIR5402DP	SIR5404DP	SIR5406DP	SIR5408DP	
V_{DS}	40	40	40	40	
V_{GS}	± 20	± 20	± 20	± 20	
$R_{DS(on)}$	@ 10 V (Typ.)	0.9 mΩ	1.55 mΩ	1.9 mΩ	2.5 mΩ
	@ 10 V (Max.)	1.2 mΩ	1.85 mΩ	2.5 mΩ	3.2 mΩ
Q_g	82	61.5	44	32.6	
Q_{gs}	26	20	14	10.5	
Q_{gd}	18	14.5	10.5	7.5	
Q_{gd} / Q_{gs} ratio	0.69	0.73	0.75	0.71	
$V_{th(min)}$	2.5	2.5	2.5	2.5	
Package	PowerPAK® SO-8 single				

Samples and production quantities of the new standard-level MOSFETs are available now, with a lead time of 13 weeks.

Vishay manufactures one of the world's largest portfolios of discrete semiconductors and passive electronic components that are essential to innovative designs in the automotive, industrial, computing, consumer, telecommunications, military, aerospace, and medical markets. Serving customers worldwide, Vishay is **The DNA of tech.**® Vishay Intertechnology, Inc. is a Fortune 1000 Company listed on the NYSE (VSH). More on Vishay at www.vishay.com.

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Links to product datasheets:

<http://www.vishay.com/ppg261684> (SIR5402DP)

<http://www.vishay.com/ppg261660> (SIR5404DP)

<http://www.vishay.com/ppg261690> (SIR5406DP)

<http://www.vishay.com/ppg261662> (SIR5408DP)

Link to product photo:

<https://www.flickr.com/photos/vishay/albums/72177720334480391/>

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