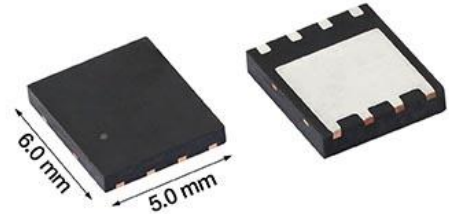




150 V SiRS5700DP MOSFET in PowerPAK[®] SO-8S Package Increases Efficiency With the Industry's Lowest $R_{DS(ON)}$ of 5.6 m Ω and $R_{DS(ON)}*Q_g$ FOM of 336 m Ω *nC, Offers Low R_{thJC} of 0.45 $^{\circ}$ C/W to Enable High I_D to 144 A and Increase Power Density

Product Benefits:

- Industry's lowest on-resistance of 5.6 m Ω at 10 V and on-resistance times gate charge FOM of 336 m Ω *nC
 - Minimizes power losses from conduction to increase efficiency
- Available in PowerPAK[®] SO-8S (QFN 6x5) package
 - Offers extremely low 0.45 $^{\circ}$ C/W R_{thJC} , enabling continuous drain current up to 144 A to increase power density, while providing robust SOA capability
- 100 % Rg and UIS tested
- Complies with IPC-9701 criteria for more reliable temperature cycling
- Standard 6 mm by 5 mm footprint is fully compatible with the PowerPAK SO-8 package
- RoHS-compliant and halogen-free



Market Applications:

- Synchronous rectification, DC/DC converters, hot swap switching, and OR-ing functionality
- Servers, edge computing, super computers, and data storage
- Telecom power supplies
- Solar inverters
- Motor drives and power tools
- Battery management systems

The News:

To provide higher efficiency and power density for telecom, industrial, and computing applications, Vishay Intertechnology introduces a new 150 V TrenchFET[®] Gen V n-channel power MOSFET in the PowerPAK SO-8S (QFN 6x5) package.

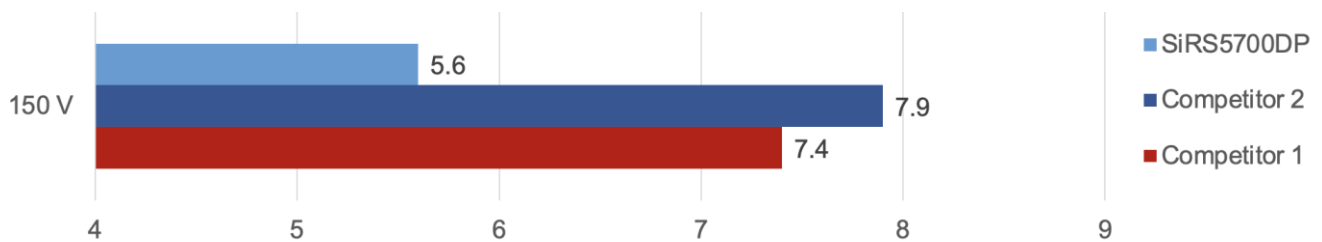
- Compared to previous-generation devices in the PowerPAK SO-8, the SiRS5700DP slashes overall on-resistance by 68.3 % and on-resistance times gate charge — a key figure of merit (FOM) for MOSFETs used in power conversion applications — by 15.4 %, while providing 62.5 % lower R_{thJC} and 179 % higher continuous drain current
- The device's low on-resistance and on-resistance times gate charge FOM allow designers to boost efficiency to meet next-generation power supply requirements, such as 6 kW AI server power systems



The Key Specifications:

Part #	SiRS5700DP	
V_{DS} (V)	150	
$R_{DS(ON)}$ @ 10 V (m Ω)	Typ.	4.6
	Max.	5.6
$R_{DS(ON)}$ @ 7.5 V (m Ω)	Typ.	4.8
	Max.	6.2
Q_g @ 10 V (nC)	Typ.	73
	Max.	110
Q_g @ 7.5 V (nC)	Typ.	55
	Max.	83
I_D (A)	144	

PowerPAK SO-8S Maximum $R_{DS(ON)}$ (m Ω) Benchmarking



Availability:

Samples and production quantities of the SiRS5700DP are available now. For lead time information, please contact your local sales office.

To access the product datasheet on the Vishay Website, go to <http://www.vishay.com/ppg?62299> (SiRS5700DP)

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