

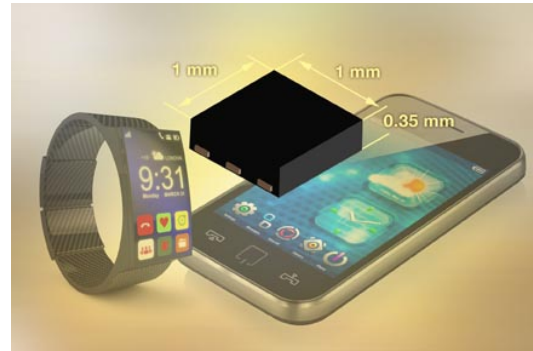
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New DG3257 Single SPDT Analog Switch Saves Space in Portable Consumer and Medical Devices

Device Offers -3 dB Bandwidth of 700 MHz and Power Down Protection in New Ultra Compact μ DFN6 Package

Product Benefits:

- Ultra compact 1 mm by 1 mm by 0.35 mm μ DFN6 package
- Low resistance of 5 Ω at 4.2 V
- -3 dB bandwidth of over 700 MHz
- Break-before-make switching with a 17 ns turn-on time and an ultra low 100 ps propagation delay
- -32 dB crosstalk at 240 MHz
- -33 dB off-isolation
- Low parasitic capacitance $C_{D(ON)}$ of 9 pF and $C_{S(OFF)}$ of 3 pF
- Guarantees less than 1 μ A of leakage current in the power-down condition
- 1.4 V logic threshold to ensure low voltage TTL/CMOS compatibility
- RoHS-compliant
- ESD tolerance > 6 kV (human body model)
- Latch up current of 300 mA per JESD78



Market Applications:

- Analog and digital signal switching in smartphones, tablets, and e-readers; wearable devices such as smart watches and fitness trackers; portable medical instrumentation; cameras and audio devices; IoT applications; computers and peripherals; and data storage devices

The News:

Vishay Intertechnology introduces a new single SPDT analog switch that is the company's first device in the new ultra compact μ DFN6 package. Ideal for analog and digital signal switching in portable consumer and medical devices, the Vishay Siliconix DG3257 achieves low resistance of 5 Ω at 4.2 V, while delivering improved high bandwidth, reduced parasitic capacitance, and a power down protection feature.

- To save valuable PCB space, the device is 29 % smaller and 36 % thinner than switches in the mQFN6
- 400 MHz higher bandwidth than previous generation devices
- 10 dB improvement in crosstalk over competing solutions
- Fabricated with a high density sub-micron CMOS process to deliver 50 % lower parasitic capacitance
- Handles bidirectional signal flow with minimal distortion and can be powered directly from a one-cell Li-ion battery



- Power down protection feature prevents excessive current from feeding into the switch when the power supply is removed
- When interfacing with low voltage MCUs, the switch offers guaranteed maximum power consumption of 1.5 μ A, which is 90 % lower than competing devices

The Key Specifications:

- On-resistance: 5 Ω at 4.2 V
- -3 dB bandwidth: 700 MHz
- Turn-on time: 17 ns
- Propagation delay: 100 ps
- Crosstalk: -32 dB at 240 MHz
- Off-isolation: -33 dB
- Parasitic capacitance:
 - $C_{D(ON)}$: 9 pF
 - $C_{S(OFF)}$: 3 pF
- Operating range: 1.65 V to 5.5 V
- High logic: 1.4 V

Availability:

Samples and production quantities of the new analog switch are available now, with lead times of 10 weeks for large orders.

To access the product datasheet on the Vishay Website, go to <http://www.vishay.com/ppg?75945> (DG3257)

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