



## 100W USB Power Delivery Switch Provides Comprehensive System Protection

The DPS1135 is part of a family of single-channel power switches optimized for USB Power Delivery (USB PD) and other hot-swap applications up to 24V. Rated for up to 5A, the DPS1135 is ideally suited for high-power applications up to 100W.

Featuring Fast Role Swap (FRS), the DPS1135 supports power switching to quickly maintain system power, such as supplying an external hub with connected USB Type-C® powered equipment.

The DPS1135 offers a comprehensive level of protection and recovery mechanisms, removing the need to create them separately. This drastically reduces overall system footprints, reduces BOM costs, and improves design time.

Protection for upstream devices from excessive voltages is handled by the built-in reverse current protection feature, which continuously monitors the IN and OUT ports. Short-circuit protection and overtemperature shutdown limit the impact to the system, for example caused by external fault conditions, to improve overall system robustness and reliability.

Configurable features maximize design flexibility and include independent quick-discharge of the IN and OUT ports to ensure timely safe states. Input voltage and output current limits may also be set, providing protection to downstream connected devices. Adjustable rise time minimizes inrush current and ensures system stability.

Packaged in the compact QFN4040, with 0.8mm low-profile height and 4mm x 4mm footprint, the DPS1135 is easily incorporated into end systems such as mobile computing, PC peripherals, home electronics, instrumentation, and many other USB Type-C applications.

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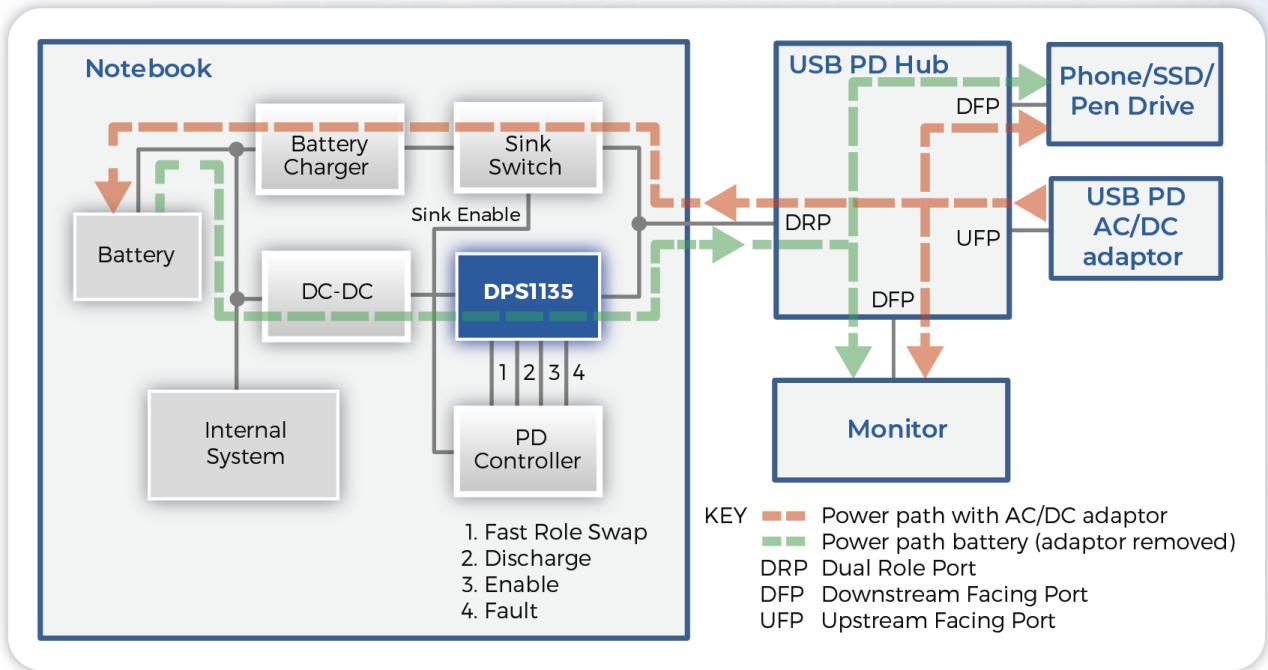
### The Diodes Advantage

- **100W High-Efficiency Power Switch**  
Embedded MOSFET with low on resistance (typ. 29mΩ)
- **Fast Role-Swap (FRS) Support**  
Ensures quick power switching within 60μs
- **System Protection & Recovery Mechanisms**  
Reverse current protects upstream devices from overvoltages
- **Configurable Voltage Input and Current Output Limits**  
Definable limits protect downstream connected devices
- **Fault Status and Current Monitor**  
Provides external status and monitoring to system controller
- **Self Protection**  
Thermal shutdown (125°C)  
Short-circuit protection
- **Thermally Efficient QFN4040 Package**  
Low thermal resistance reduces device temperature and improves reliability

### Applications

- Notebook & desktop computing
- Servers, storage devices
- USB hubs and docking stations
- PC monitors
- AR/VR headsets
- Power protection in industrial applications

### Typical Application



### Product Portfolio

Part Number	Switch Input Voltage (V)	Quiescent Current* (mA)	Output Load Current (A)	$R_{DS(ON)}$ * (m $\Omega$ )	Supports Fast Role-Swap	Package
<a href="#">DPS1135</a>	4.5 to 24	1.5	5	29	Y	V-QFN4040-17
<a href="#">DPS1133</a>	4.5 to 24	1.5	3.5	29	Y	V-QFN4040-17
<a href="#">DPS1113</a>	4.5 to 5.5	1.2	3.5	29	Y	V-QFN4040-17

\* Typ. @  $V_{IN} = 5V$

### Order Information

Part Number	Case	Packaging
<a href="#">DPS1135FIA-13</a>	V-QFN4040-17	4,000/Tape & Reel
<a href="#">DPS1133FIA-13</a>	V-QFN4040-17	4,000/Tape & Reel
<a href="#">DPS1113FIA-13</a>	V-QFN4040-17	4,000/Tape & Reel