

### Our USPs

- › Small, robust design according to OEM requirements
- › Very good efficiency with high operating temperature range up to max. +85 °C
- › Charging functionality according to USB Type-C Specification with max. 27 W
- › Additional power supply possible via  $V_{conn}$



### Your Advantages

- › Module according to common automotive standards
- › Full functionality up to an ambient temperature of +55 °C @ 27 W output power
- › Integrated short-circuit protection to  $V_{bus}$  /  $V_{bat}$  on all used connector pins incl. GND pin
- › Overvoltage protection

### Technical Information

#### Electrical

|                          |  |
|--------------------------|--|
| $V_{Supply}$             | 9 V – 18 V   |
| $V_{bus}$                | 4.75 V – 5.5 V (Type-C Standard)   |
| Supported PDOs           | 5 V @ 3 A / 9 V @ 3 A /<br>15 V @ 1.8 A / 20 V @ 1.35 A<br>PPS: 3.3 V – 11.0 V @ 3 A |
| Output current $V_{bus}$ | max. 3 A   |
| Output power $V_{conn}$  | max. 100 mW  |

#### Mechanical

|                      |                               |
|----------------------|-------------------------------|
| Dimensions l x w x h | approx. 56 mm x 40 mm x 26 mm |
|----------------------|-------------------------------|

#### Environmental

|                             |                     |
|-----------------------------|---------------------|
| Operating temperature range | -40 °C up to +85 °C |
| Tested according to         | LV 124              |

### Requirements

USB charging module according to automotive quality standards with one USB Type-C female connector incl. illuminated customer interface (optional).

### Applications

- › Designed for cockpit integration

### Protocols & Signals

- › Charging currents according to USB Type-C Standard and USB Power Delivery 3.0 Standard
- › Additional charging profiles
  - › Legacy charging profiles BC1.2 DCP
  - › Apple charging profile (2.4 A)
  - › 1.2 V Divider Mode
  - › USB Type-C charging (5 V / 3 A)
  - › PDOs 5 V / 9 V / 15 V / 20 V (max. 27 W)
  - › PD PPS 3.3 V – 11 V (max. 27 W)

|              |                           |
|--------------|---------------------------|
| PD           | Power Delivery            |
| PPS          | Programmable Power Supply |
| BC           | Battery Charging          |
| $V_{Supply}$ | Input supply voltage      |
| $V_{bus}$    | Supported output voltage  |



# MD in a Nutshell



The C.A.S.E. megatrend describes the four essential future topics for the automotive industry: Connected, Autonomous, Shared & Service and Electric. Data plays a central role and drives the future of the automotive industry. Data is generated, transferred, merged and evaluated. We are experts in the transmission of the rapidly increasing data volumes and have developed the latest technological solutions for this future topic.

# 25

years experience  
in the automotive industry



# 100 %

automotive



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more than 60 OEMs



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