

USB Type-C DFP Controller and Power Switch with OVP

1. General Description

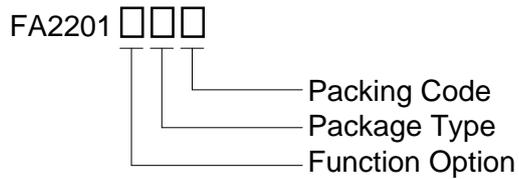
The FA2201 is a USB Type-C Downstream Facing Port (DFP) controller with an integrated 3A power switch. The FA2201 monitors the CC lines to determine when an USB device is attached. If an Upstream Facing Port (UFP) device is attached, the FA2201 applies power to VBUS and communicates the selectable VBUS current sourcing capability to the UFP via the pass-through CC line. If the UFP is attached using an electronically marked cable, the FA2201 also applies VCONN power to the cable CC pin. The FA2201 also identifies when Type-C audio or debug accessories are attached.

The FA2201 draws less than 1 μ A (typ.) when no device is attached. Additional system power saving is achievable in S4/S5 system power states by using the /UFP output to disable the high power 5V supply when no UFP is attached. In this mode the device is capable of running from lower 3.3V voltage supply for AUX. The FA2201 35m Ω power switch has three selectable current limits that support with the Type-C current levels.

Features

- USB Type-C Rev. 1.1 Compliant DFP Controller
- Connector Attach/Detach Detection
- STD/1.5A/3A Capability Advertisement via CC line
- Super Speed Polarity Determination
- V_{BUS} Application and Discharge
- V_{CONN} Application to Electronically Marked Cable
- Audio and Debug Accessory Identification
- 1 μ A (typ.) I_{AUX} When Port Unattached
- Three Input Voltage Range
 - IN1: USB Charging Supply, 4.5V~5.5V
 - IN2: V_{CONN} Supply, 3.0V~5.5V
 - AUX: Device Power Supply, 3.0V~5.5V
- On Resistance : 35m Ω (typ.)
- 28V Absolute Ratings at OUT
- Three Selectable Over Current Threshold
- 5.8V Output Over Voltage Protection
- Reverse Current Protection when Enable
- True Reverse Current Blocking when Shutdown
- Power Wake Supports Low Power in System Hibernate (S4) and OFF (S5) Power States
- Port Power Management Enables Power Resource Optimization Across Multi-Ports
- Package: QFN4x3-20L

Ordering Information



Function Option
Blank: Default Debug Accessory Mode
A: Specific Debug Accessory Mode
Package Type
NT: QFN4x3mm²-20L
Packing Code
R: Tape & Reel

Marking Information



FA2201: Product Code
YY: Year 2019→19、2020→20
WW: Week 01~53
ZZ: Series Code