# EMarker chip for USB Type-C PD3.2 100W/140W cable

## Product Features

- Compliant with PD 3.2: Supports SOP communication, integrated transceiver (BMC PHY), and also supports structured VDM version
- VIN has a wide operating voltage range of 2.9V to 42V
- VIN operates at a minimum of 2.9V and supports direct power supply from VCONN
- VIN operates at a maximum of 42V and supports direct VBUS power supply
- CC withstand voltage up to 36V
- Package: DFN1.6x1.6-4L

## Product Overview

FS332GL is an eMarker with USB Type-C interface. It complies with the USB PD 3.2 protocol.

FS332GL can be powered by VBUS and applied to 5-core single core solutions.

FS332GL can be powered by VCONN and applied to 5-core dual core solutions.

Using DFN1.6x1.6-4L mini package.

FS332GL is suitable for wires with fixed power of 100W 20V/5A.



## Application field

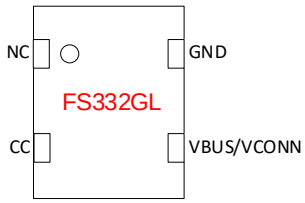
- USB Type-C cable

## Order information

| Part No | Package | Pcs/Reel |
|---|---|---|
| FS332GL | DFN1.6x1.6-4L | 3000 |

**V1.1(202504)**

## Chip packaging and pin definition




DFN1.6X1.6-4L

Pic 1. Pin definition

Table 1. FS332GL Pin function description

| FS332GL | Name of the pin | Description |
|---|---|---|
| 1 | NC | NC |
| 2 | CC | Connect to USB Type-C CC |
| 3 | VBUS/VCONN | Power supply, can be connected to VBUS or VCONN |
| 4 | GND | Chip ground |



## Extreme operating range

Table 2. Maximum operating range

| Parameter | Value |
|---|---|
| VBUS/VCONN | -0.5V~42V |
| CC | -0.5V~36V |
| Storage temperature | -65℃~150℃ |
| Working temperature (connector) | -40℃~125℃ |
| Anti static ability | ±2000 V |

**The maximum operating range listed in the table above, if the limit is exceeded, the chip may be permanently damaged. Users should try to avoid it.**

## Normal operating range

Table 3. Normal operating range

| Parameter | Value |
|---|---|
| VBUS/VCONN/CC | 2.9V~30V |
| Power consumption - working state (VBUS=5V) | <5mW |
| Working temperature (connector) | -40℃~125℃ |
| Ambient temperature | -40℃~85℃ |

## Function Description

FS332GL is an Emarker chip. Used for low-cost TYPE-C cables. FS332GL supports a wide range of input voltages, so it can be directly powered by VBUS or VCONN. FS332GL supports the latest USB PD 3.2 protocol. The ultra-high CC withstand voltage ensures that the chip will not be damaged.

FS332GL has adaptive function and is used for cables powered by VBUS or VCONN with a maximum voltage of 20V and a maximum current of 5A.

### VBUS/VCONN

Can work at 2.9~42V

0.1uF capacitor is optional to improve power supply stability.

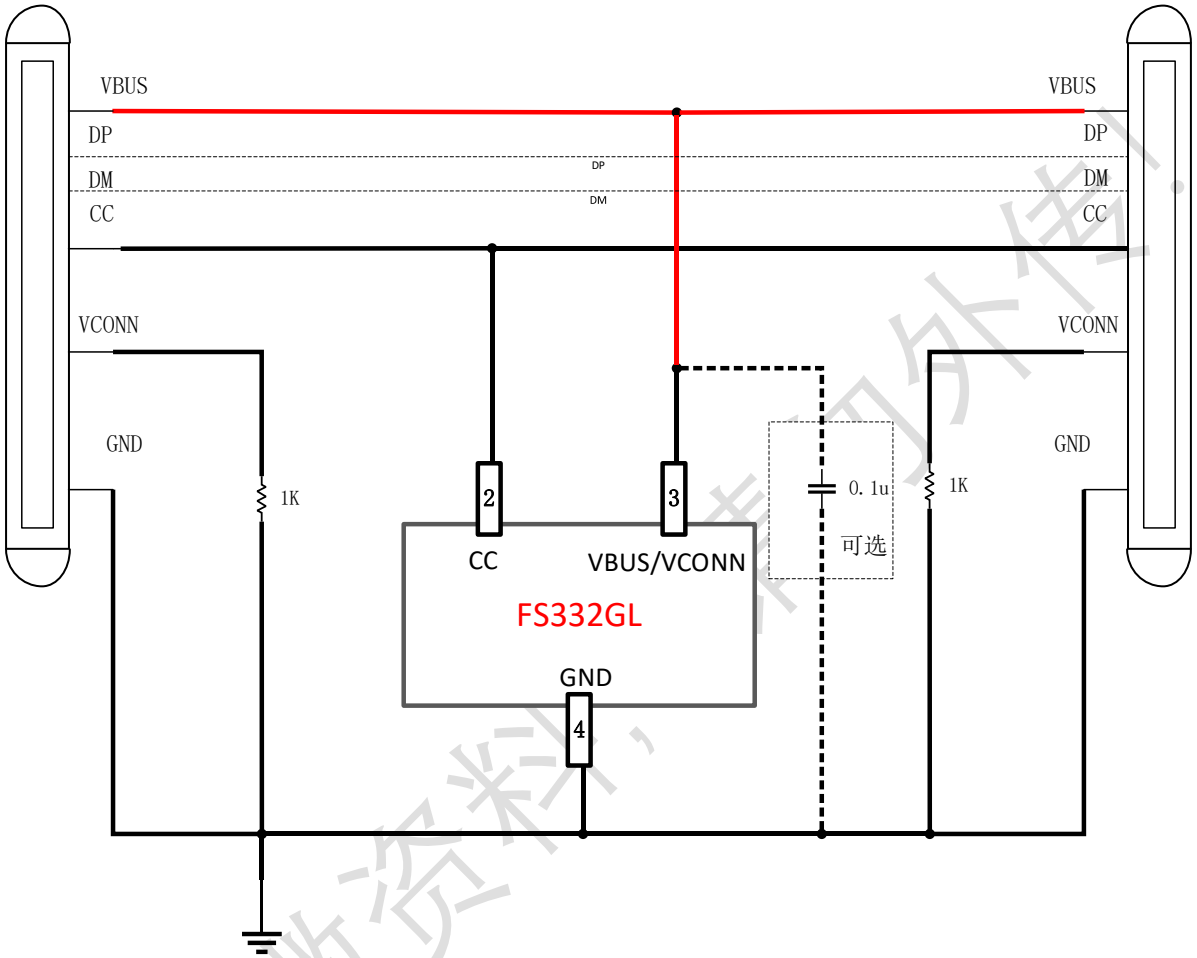
Can be connected to VBUS or VCONN

### CC

Can support 36V withstand voltage.

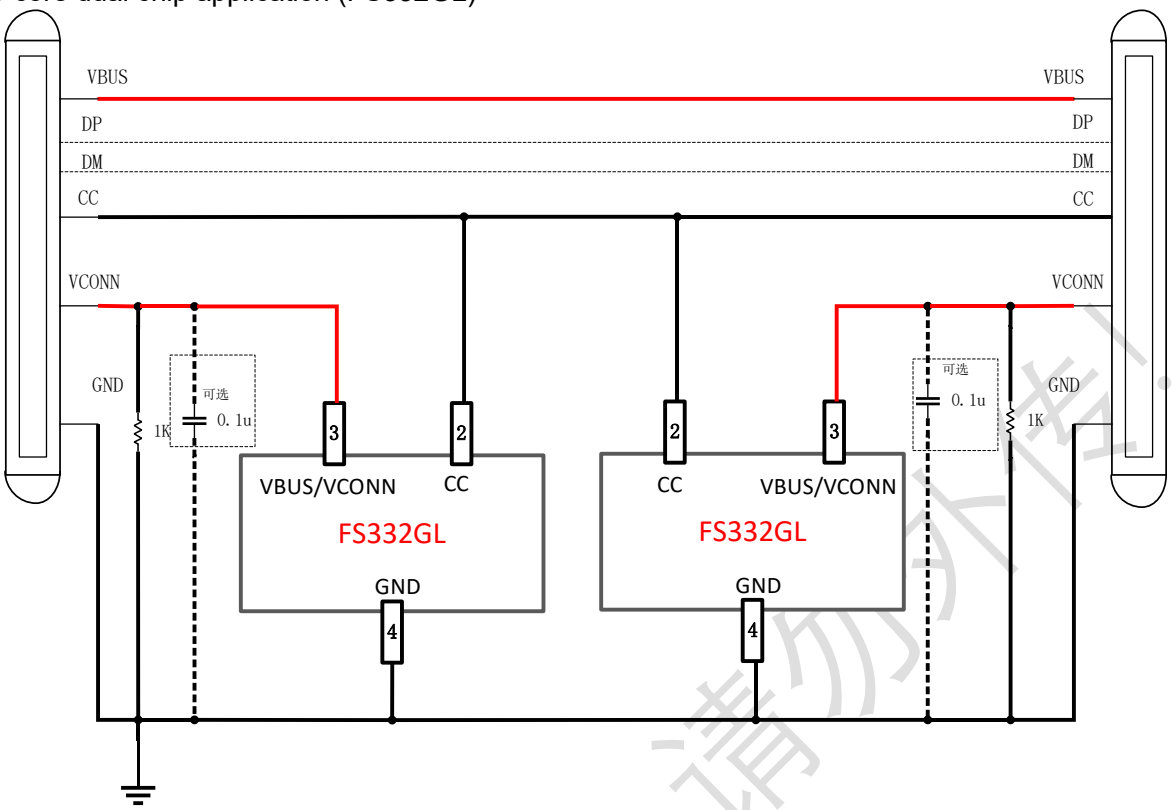
## Application example

5-core wire application (FS332GL)




FS332GL 5-core wire single-chip application diagram

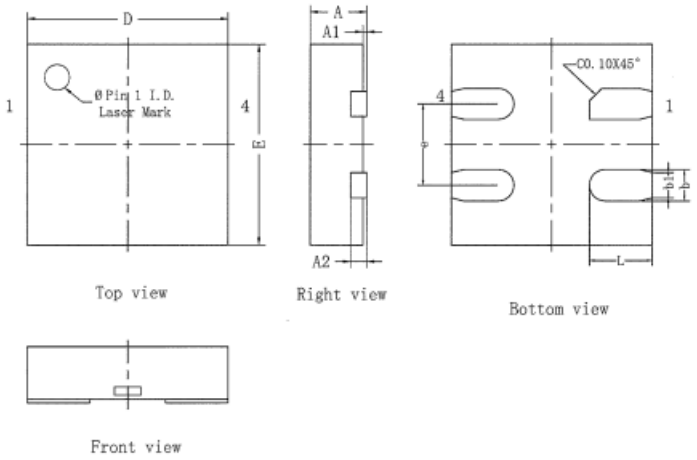
5-core dual chip application (FS332GL)




FS332GL 5-core dual chip application diagram

## Package outline drawing

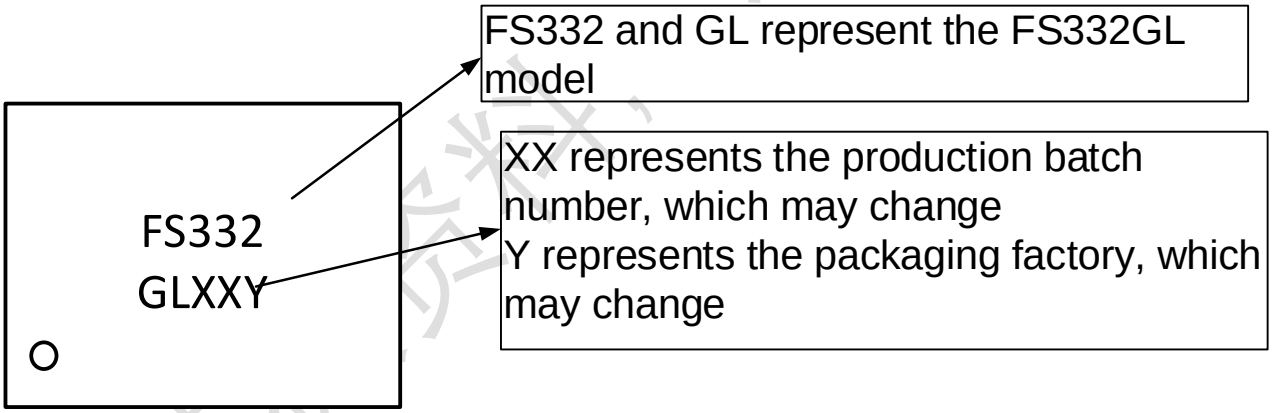
### DFN1.6x1.6-4L




COMMON DIMENSIONS
(UNITS OF MEASURE=MILLIMETER)

| SYMBOL | MIN | NOM | MAX |
|---|---|---|---|
| A | 0.40 | 0.45 | 0.50 |
| A1 | 0.00 | / | 0.05 |
| A2 | | 0.127 REF | |
| b | 0.20 | 0.25 | 0.30 |
| b1 | | 0.20 REF | |
| D | 1.50 | 1.60 | 1.70 |
| E | 1.50 | 1.60 | 1.70 |
| e | | 0.65 BSC | |
| L | 0.40 | 0.50 | 0.60 |

### Chip silk screen information




**1. FS332GL model information: FS332 and GL,constant**

**2. The production batch number code is used to distinguish the batch number information each time, based on changes in the production batch**

**3. The packaging factory code is used to distinguish packaging factory information and varies according to the packaging factory's changes**

# Company information and statement


## HQ

E2-503, China Internet of Things International Innovation Park, No. 200, Linghu Avenue, Xinwu District, Wuxi City

Website：www.fastsoc.com

Wechat public Account.：fastsoc

## Sales and technical support

Contact：Ms. Ge

Mobilephone：1895-248-8621

E-mail：gejing@fastsoc.com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