EMarker chip for USB Type-C PD3.2 240W 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
- After connecting a 1K resistor in series with VIN, it supports up to 50V
- After connecting a 2K resistor and a 0.1uF capacitor in series with VIN, it supports up to 60V
- CC withstand voltage up to 36V
- Support FUNC settings to meet different wire requirements
- Package: DFN2x2-6L

Product Overview

FS332H is an eMarker with USB Type-C interface. It complies with the USB PD 3.2 protocol.

FS332H can be powered by VCONN and applied to 6-core solutions.

Use DFN2x2-6L minimalist packaging.

FS332H is suitable for wires with a power of 240W 48V/5A.

Application field

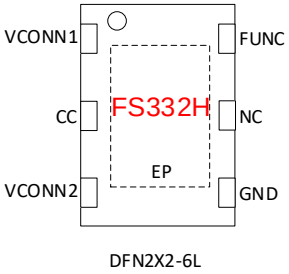
- USB Type-C cable

Order information

Part No	Package	Pcs/Reel
FS332H	DFN2x2-6L	3000

V1.1(202410)

Chip packaging and pin definition



DFN2X2-6L

Pic 1. Pin definition

Table 1. FS332H Pin function description

FS332H	Name of the pin	Description
1	VCONN1	Power supply, can be connected to VBUS or VCONN
2	CC	Connect to USB Type-C CC
3	VCONN2	Power supply, can be connected to VBUS or VCONN
4	GND	Chip ground
5	NC	NC
6	FUNC	External resistor, choose different cable configurations, suspended: 100W, grounded: 240W
EP	EP	NC

Extreme operating range

Table 2. Maximum operating range

Parameter	Value
VCONN	-0.5V~42V <55V(Connect 1K resistors in series) <65V (Connected in series with 2K resistor)
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
VCONN	2.9V~30V <50V（Connect 1K resistors in series） <60V (connected in series with 2K resistor and 0.1uF capacitor)
CC	0~5V
Power consumption - working status（VBUS=5 V）	<5mW
Working temperature (connector)	-40℃~125℃
Environmental temperature	-40℃~85℃

Function Description

FS332H is an Emarker chip. Used for low-cost TYPE-C cables. FS332H supports a wide range of input voltages, so it can be directly powered by VBUS or VCONN. FS332H supports the latest USB PD 3.2 protocol. The ultra-high CC withstand voltage ensures that the chip will not be damaged.

FS332H has FUNC selection, allowing for the selection of different wire configurations. Used for 240W 48V/5A applications.

VCONN

0.1uF capacitor is optional to improve power supply stability.

Can be directly connected to TYPEC VCONN.

CC

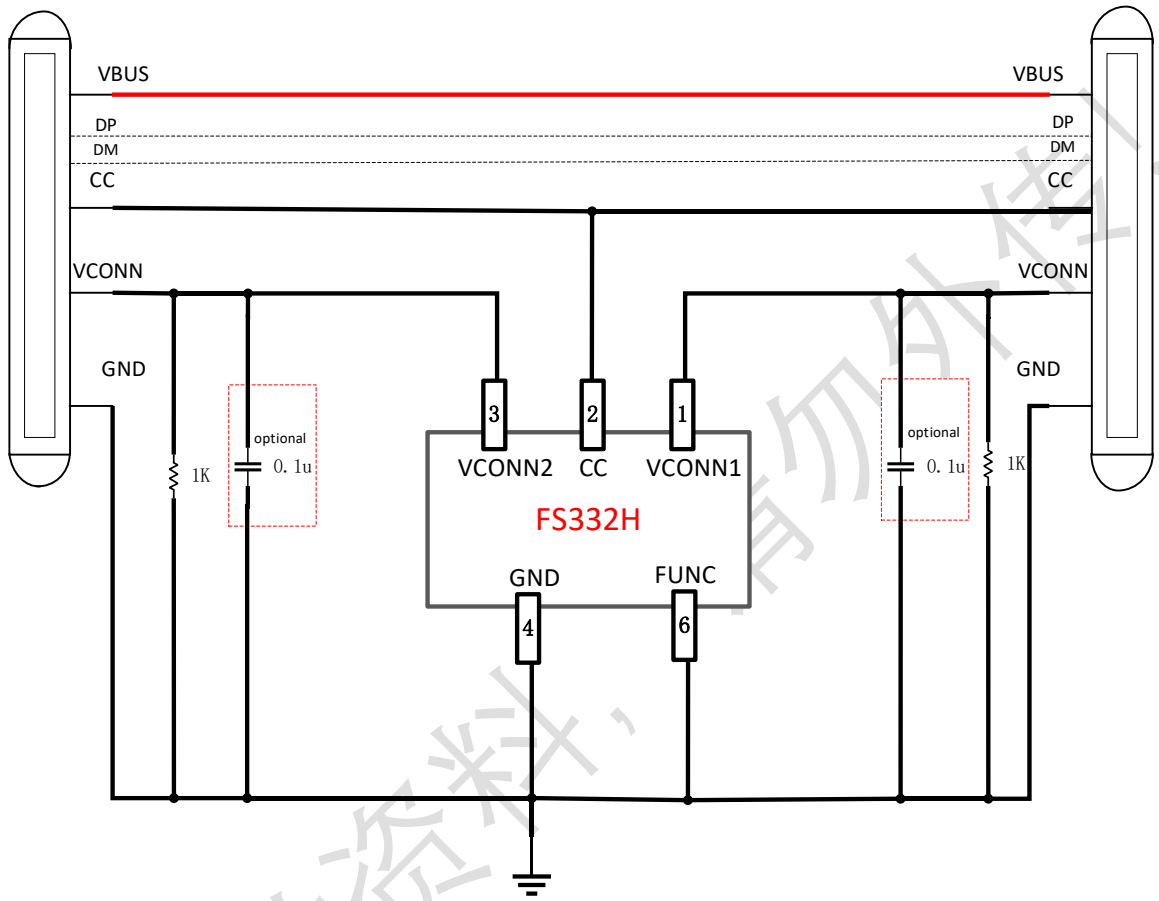
Can support 36V withstand voltage.

FUNC

Connect to the ground

Application example

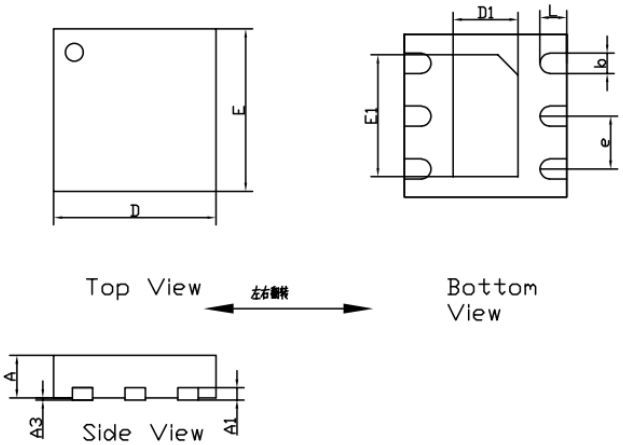
6-core wire application (FS332H)



FS332H application diagram (6-core wire)

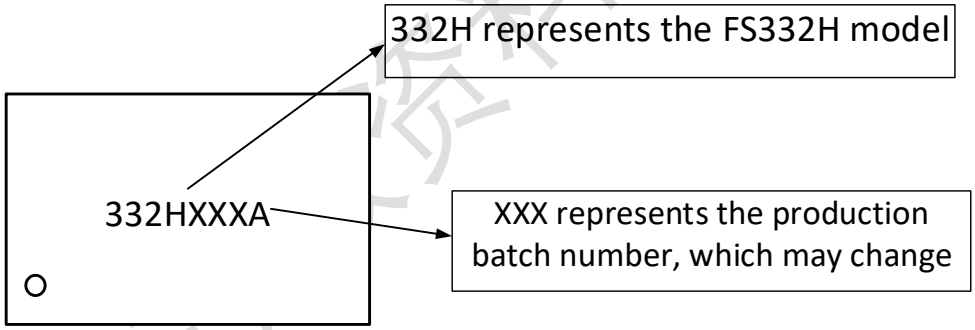
Package outline drawing

DFN2x2-6L



DIM	Millimeters	
	Min	Max
A	0.50	0.60
A1	0.15REF	
A3	0.00	0.05
D	1.95	2.05
E	1.95	2.05
D1	0.75	0.85
E1	1.45	1.55
L	0.28	0.38
b	0.25REF	
e	0.65BSC	

Chip silk screen information



1. FS332H model information: 332H, fixed and unchanged
2. The production batch number code is used to distinguish the batch number information each time, based on changes in the production batch

Company information and statement

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