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
- CC withstand voltage up to 36V
- Support FUNC settings to meet different wire requirements
- Built in high voltage protection: The protection cable operates reliably at a maximum voltage of 28V
- Package: DFN2x2-6L

Product Overview

FS332L is an eMarker with USB Type-C interface. It complies with the USB PD 3.2 protocol.

FS332L can be powered by VCONN and applied to 6-core solutions.

Use DFN2x2-6Lminimalist packaging.

FS332L is suitable for wires with fixed power of 100W 20V/5A and 140W 28V/5A.

Application field

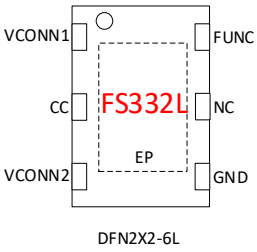
- USB Type-C cable

Order information

Part No	Package	Pcs/Reel
FS332L	DFN2x2-6L	3000

V1.1(202410)

Chip packaging and pin definition



DFN2X2-6L

Pic 1. Pin definition

Table 1. FS332L Pin function description

FS332L	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
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

FS332L is an Emarker chip. Used for low-cost TYPE-C cables. FS332L supports a wide range of input voltages, so it can be directly powered by VBUS or VCONN. FS332L supports the latest USB PD 3.2 protocol. The ultra-high CC withstand voltage ensures that the chip will not be damaged.

FS332L has FUNC selection and can choose different wire configurations for 100W and 140W wire applications.

FS332L has built-in overvoltage protection, which prevents the device from applying voltages higher than 28V and keeps the cable within a safe working range.

VCONN

Can work at 2.9~42V

0.1uF capacitor is optional to improve power supply stability.

Can be connected to VCONN

CC

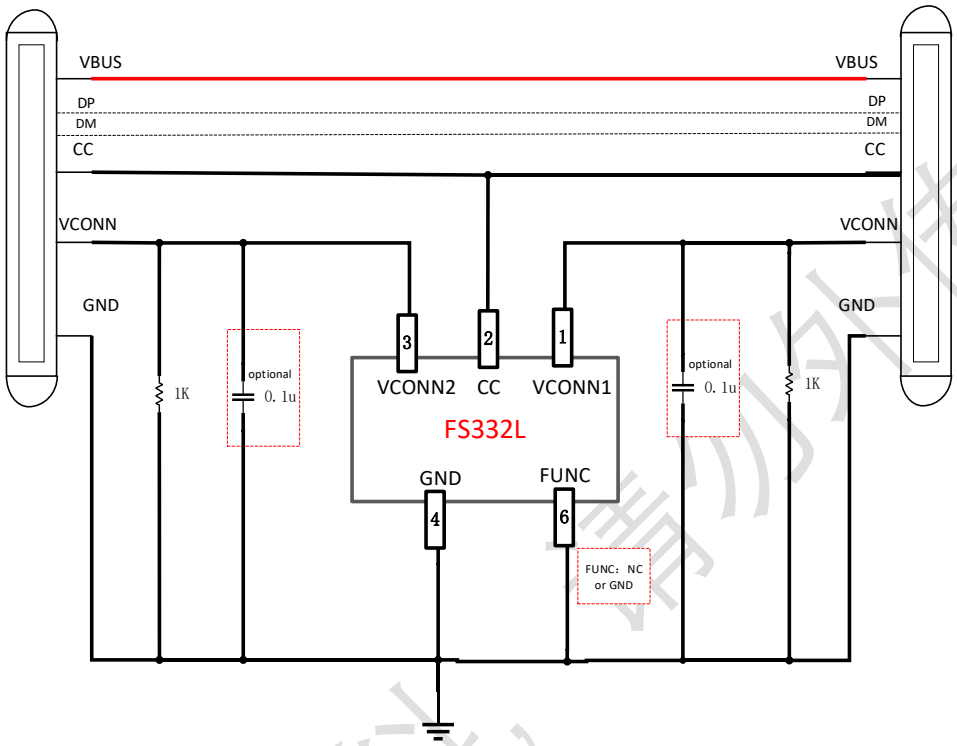
Can support 36V withstand voltage.

FUNC

NC: 100W, GND: 240W.

Application example

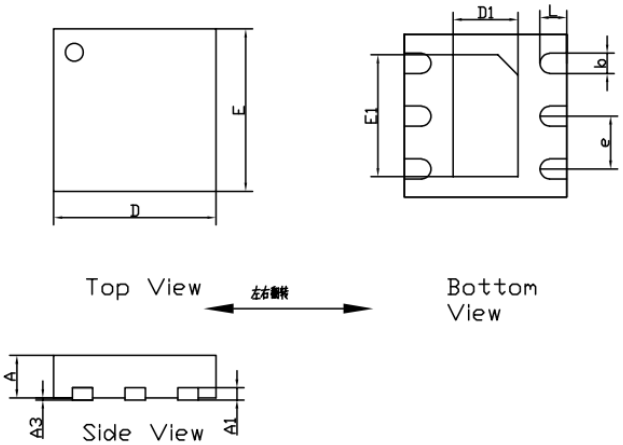
6-core wire application (FS332L)



FS332L application diagram (6-core wire)

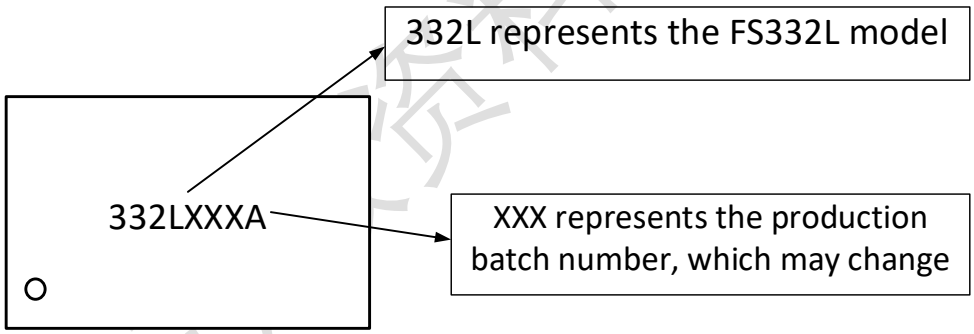
Package outline drawing

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. FS332L model information: 332L, 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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