General Description

BF1288 Chipset is a USB Type C interface controller, it mainly used in the interface voltage detection and control a P-channel MOSFET to turn on or turn off the mobile phone chargers. The on and off state is base on the voltage detecting form Pin CC1 and CC2. It can be used for up to 15W charger using Type-C protocols.

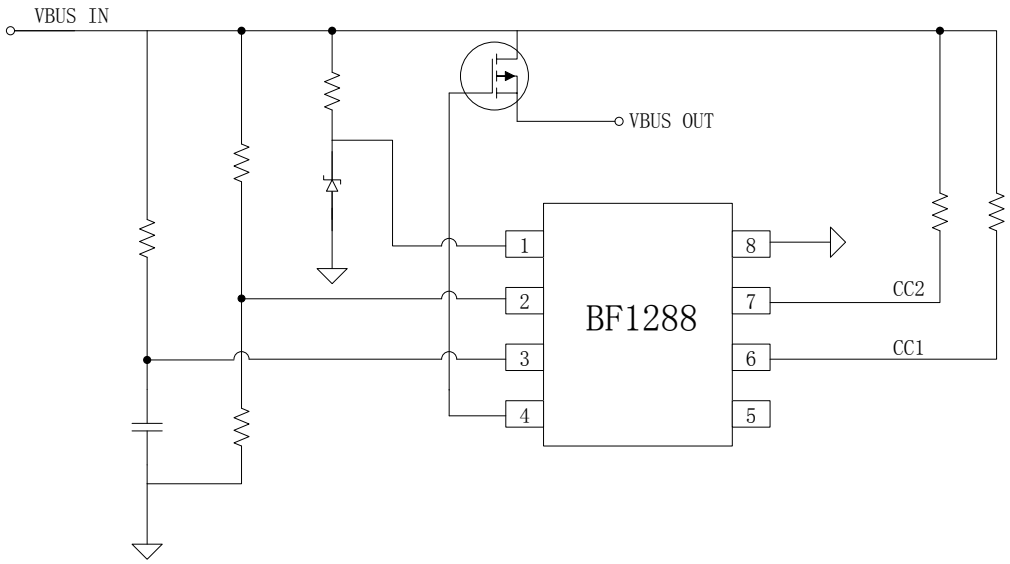
Features

- Input Voltage Range: 2.5 – 5.5V
- Meet USB Type C Specification 1.1 Requirement
- Under Voltage Protection
- External PMOS
- Small MSOP Package

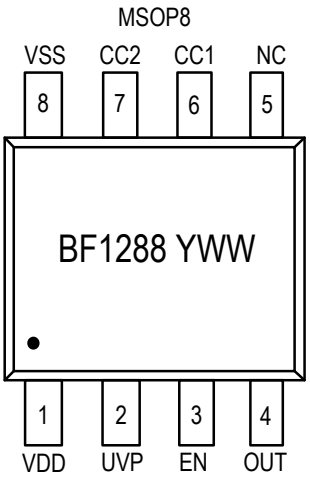
Applications

- Cell Phone Charger
- Mobile Device Charger

Typical application



Package Type and marking information



Y: Year Code(0-9)
WW: Week Code(01-52)

Pin Description

Pin Num	Pin Name	Description
1	VDD	Power Supply
2	UVP	Under Voltage Detection
3	EN	Enable Pin of the chipset
4	OUT	Output PMOS control Pin
5	NC	No connect
6	CC1	Type C USB signal interface CC1 Pin
7	CC2	Type C USB signal interface CC2 Pin
8	VSS	Ground

Electrical Characteristic

(T_A = 25°C, unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Supply voltage						
Stand-by Current (PMOS OFF State)	$I_{DD\ ST}$	VCC=5V		250	350	μA
Operation Current (PMOS ON State)	$I_{DD\ op}$	VCC=5V		800	1000	μA
Under Voltage Protect Threshold	UVP		0.9	1	1.1	V
VDD Operation Voltage	Vop		2.5	5	5.5	V
CC Pin Voltage Detection						
CC1 Operation Range	Vcc1		0.85		2.45	V

CC2 Operation Range	Vcc2		0.85		2.45	V
Delay Time						
PMOS Turn-on Delay Time	T_{on}		100	150	200	ms
PMOS Turn-off Delay Time	T_{off}		10	15	20	ms

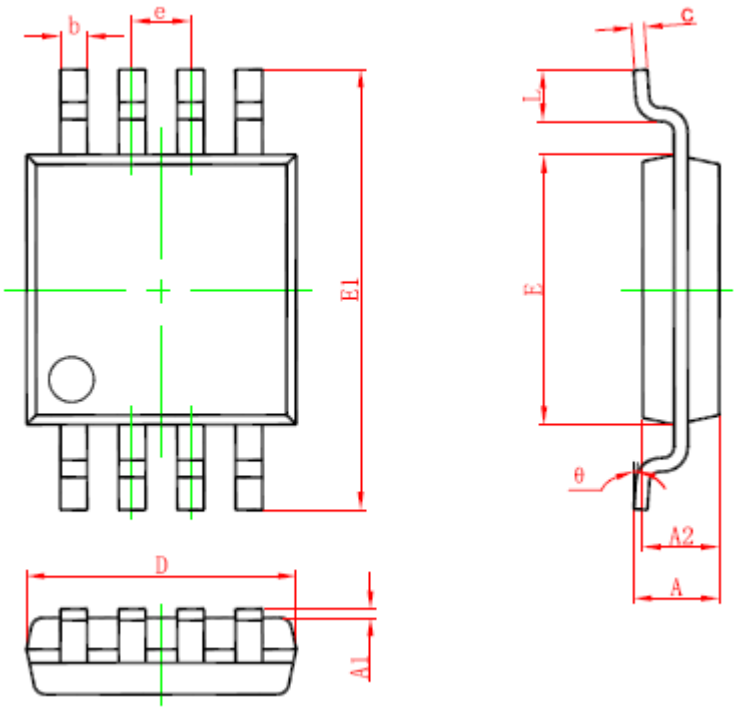
Absolute Maximum Ratings

Parameter	Symbol	Value	Unite
VDD Supply voltage	VDD	6	V
Power Dissipation	P_D	400	mW
Lead temperature	T_L	260	℃
Operating Junction Temperature	T_J	-40 to +85	℃
Storage Temperature Range	T_{STJ}	-40 to +125	℃
ESD voltage protection, human body model		2	KV
ESD voltage protection, machine model		500	V

Attention: Stresses beyond those listed under "absolute maximum ratings" may cause permanent damage to the device. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

Package Outline

MSOP8



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.820	1.100	0.032	0.043
A1	0.020	0.150	0.001	0.006
A2	0.750	0.950	0.030	0.037
b	0.250	0.380	0.010	0.015
c	0.090	0.230	0.004	0.009
D	2.900	3.100	0.114	0.122
e	0.650(BSC)		0.026(BSC)	
E	2.900	3.100	0.114	0.122
E1	4.750	5.050	0.187	0.199
L	0.400	0.800	0.016	0.031
θ	0°	6°	0°	6°

RESTRICTIONS ON PRODUCT USE

- The information contained herein is subject to change without notice.

- BYD Microelectronics Co., Ltd. (short for BME) exerts the greatest possible effort to ensure high quality and reliability. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing BME products, to comply with the standards of safety in making a safe design for the entire system, including redundancy, fire-prevention measures, and malfunction prevention, to prevent any accidents, fires, or community damage that may ensue. In developing your designs, please ensure that BME products are used within specified operating ranges as set forth in the most recent BME products specifications.

- The BME products listed in this document are intended for usage in general electronics applications (computer, personal equipment, office equipment, measuring equipment, industrial robotics, domestic appliances, etc.). These BME products are neither intended nor warranted for usage in equipment that requires extraordinarily high quality and/or reliability or a malfunction or failure of which may cause loss of human life or bodily injury (“Unintended Usage”). Unintended Usage include atomic energy control instruments, airplane or spaceship instruments, transportation instruments, traffic signal instruments, combustion control instruments, medical instruments, all types of safety devices, etc.. Unintended Usage of BME products listed in this document shall be made at the customer’s own risk.

注意事项

1. 购买时请认清公司商标，如有疑问请与公司本部联系。
2. 在电路设计时请不要超过器件的绝对最大额定值，否则会影响整机的可靠性。
3. 本说明书如有版本变更不另外告知。

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