

GENERAL DESCRIPTION

The EST.5198 is designed for most of mainstream USB device to draw a charge current as much as possible from adapter.

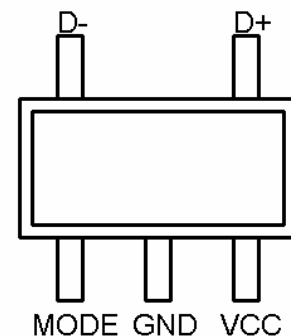
The EST.5198 can recognize and change the USB charging mode for the different USB device. The IC set the USB interface signals (D+/D-) to the required condition and the handheld charging device will start to charge.

The IC support most of the worldwide charging specification like the USB BC specification, mainstream handheld charging specification.

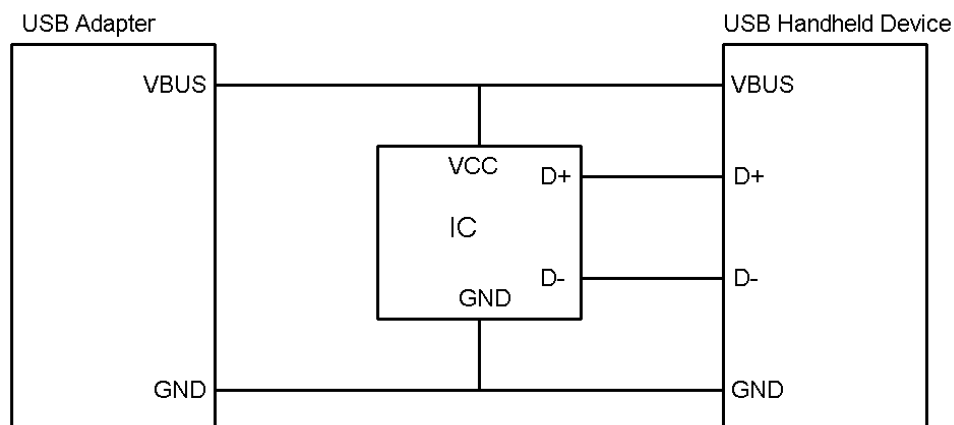
FEATURE

- Support most of mainstream USB device fast charging
- Support the 1A/2A charging mode
- SOT23-5 package

PIN CONFIGURATION (Top View)



REFERENCE APPLICATION CIRCUIT



PIN DESCRIPTION

Pin	Symbol	Type	Function
1	MODE	I	Internal default pull high : Pull high: Apple 2A mode Pull low : Apple 1A mode
2	GND		Ground
3	VCC		Power
4	D+	B	USB positive data
5	D-	B	USB negative data

ABSOLUTE MAXIMUN RATINGS

PARAMETER		MIN	MAX	UNITS
Supply Voltage	VCC	-0.3	7	V
Input / Output Voltage	MODE, D+, D-	-0.3	7	V
Operating Temperature Range	T _O	-20	+85	°C
Storage Temperature Range	T _S	-65	150	°C

ELECTRICAL CHARACTERISTICS (For VCC=5V and Tj=25 °C)

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
VCC					
Operating Range, Vcc		4.5		5.5	V
Operating current, Icc	Vcc=5V		300		uA
MODE, D+, D-					
D+ Output Impedance	Vcc=5V	17.4		25.8	KΩ
D- Output Impedance	Vcc=5V	22.6		37.6	KΩ
D+, D-		0		Vcc,	V
MODE pull high Impedance	Vcc=5.5V		10		KΩ
Mode		0		Vcc	

FUNCTION DESCRIPTION

1. The IC can set the proper USB interface signal to support USB port charging for most of the mainstream handheld device.
2. The IC will draw the charging current as much as the USB adapter could for the USB handheld device. That can reduce the charging time when use the IC as the charging kit.

3. SEL truth table

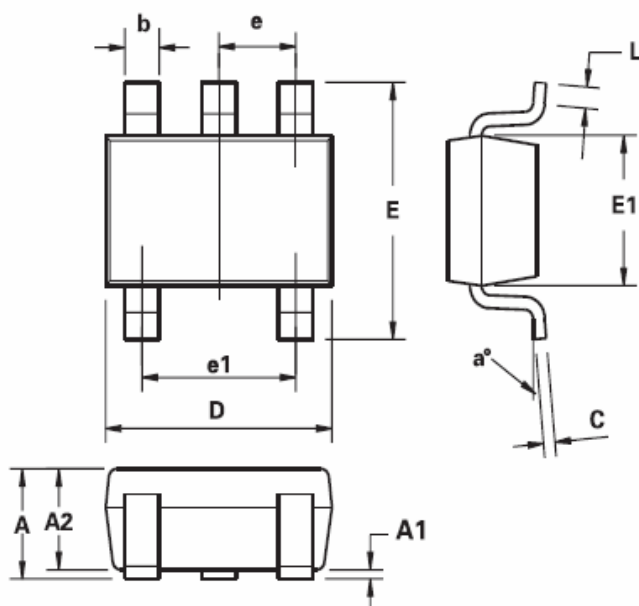
SEL	Function
0	Apple 1A mode
1	Apple 2A mode

If select the 2A mode, please make sure the adapter power source can provide 5V/2A for the USB charging port.

4. The EST.5198 control the D+ / D- signals of the USB port to support the charging procedure and does not control the USB power (VBUS) operation.

PACKAGE DIMENSIONS

SOT23-5



DIM	Millimeters	
	Min.	Max.
A	0.90	1.45
A1	0.00	0.15
A2	0.90	1.30
b	0.20	0.50
C	0.09	0.26
D	2.70	3.10
E	2.20	3.20
E1	1.30	1.80
e	0.95 REF	
e1	1.90 REF	
L	0.10	0.60
a°	0°	30°