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EV2602-Q-00B

Single-Cell 1A Linear Li-Ion Battery Charger Evaluation Board

DESCRIPTION

The EV2602-Q-00B is an evaluation board for the MP2602, a linear, high-performance single cell Li-Ion battery charger.

By integrating high voltage input protection into the charger IC, the MP2602 can tolerate an input surge up to 28V.

The MP2602 features constant current (CC) and constant voltage (CV) charging modes with programmable charge currents (200mA to 1A), programmable battery full threshold, thermal protection, battery temperature monitoring, reverse current blocking and trickle charge. The device also provides AC adapter power good and charge status indications to the system.

ELECTRICAL SPECIFICATION

Parameter	Symbol	Value	Units
Input Voltage	V_{IN}	5	V
Charge Current	I_{CHG}	0.8	A

FEATURES

- Input Surge up to 28V
- Adapter or USB Input
- Programmable Charge Current: 200mA to 1A
- Proprietary Over-Voltage Protection
- 0.75% V_{BATT} Accuracy
- Battery Temperature Monitoring
- AC Adapter Power Good Indicator
- Charge Status Indicator
- Fully Assembled and Tested

APPLICATIONS

- Cell Phones
- MP3 Players
- Smart Phones
- PDAs
- Digital Cameras

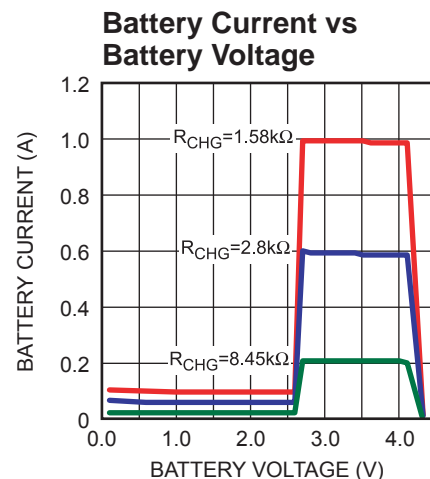
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EV2602-Q-00B EVALUATION BOARD

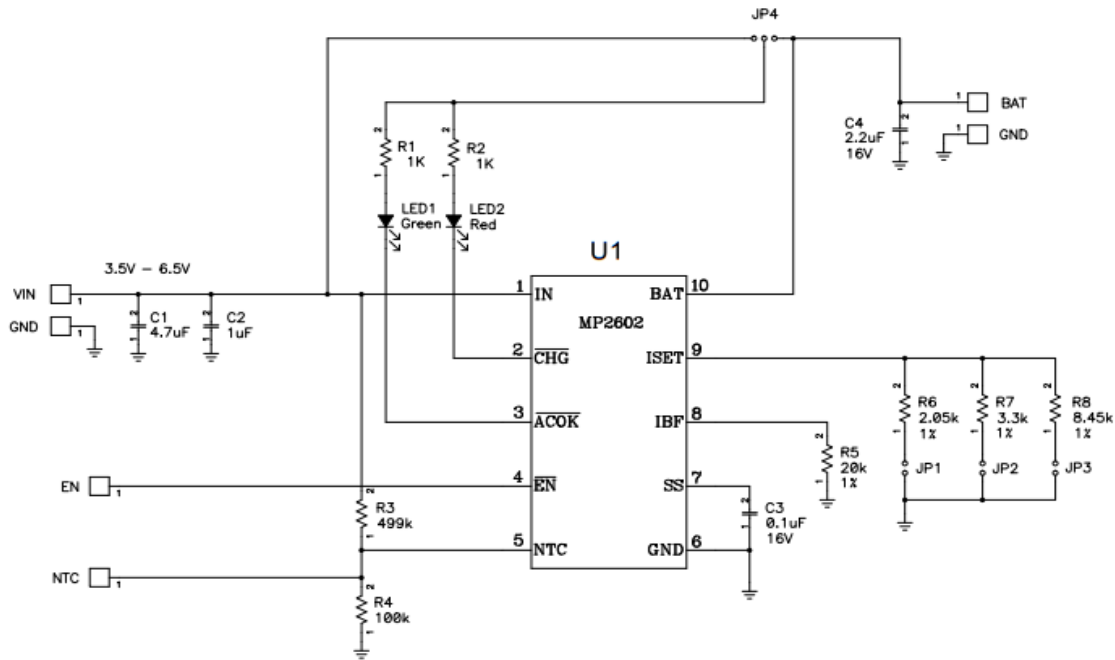


(L x W x H) 2.0" x 1.9" x 0.5"
(5.0cm x 4.8cm x 1.2cm)

Board Number	MPS IC Number
EV2602-Q-00B	MP2602DQ



EVALUATION BOARD SCHEMATIC



EV2602-Q-00B BILL OF MATERIALS

Qty	Ref	Value	Description	Package	Manufacturer P/N
1	C1	4.7µF	Ceramic Cap, 50V, X7R	1210	Murata: GRM32ER71H475KA88L Holystone: C1210B475M035T
1	C2	1µF	Ceramic Cap, 50V, X7R	1206	TDK: C3216X7R1H105K
1	C3	0.1µF	Ceramic Cap, 16V, X7R	0603	TDK: C1608X7R1C104K
1	C4	2.2µF	Ceramic Cap, 16V, X7R	1210	Murata: GRM32MR71C225MC01L
3	JP1, JP2, JP3		2-Pin Connector Header, 0.100"		Sullins: PTC02SAAN
1	JP4		3-Pin Connector Header, 0.100"		Sullins: PTC03SAAN
1	LED1		Led Green, Surface Mount	0805	Panasonic: LNJ306G5URA
1	LED2		Led Red, Surface Mount	0805	Panasonic: LNJ206R5RRX
2	R1, R2	1kΩ	Resistor, 5%	0603	Panasonic: ERJ-3GEYJ102V
1	R3	499kΩ	Resistor, 1%	0603	Panasonic: ERJ-3EKF4993V

EV2602-Q-00B BILL OF MATERIALS *(continued)*

Qty	Ref	Value	Description	Package	Manufacturer P/N
1	R4	100k Ω	Resistor, 1%	0603	Panasonic: ERJ-3EKF1003V
1	R5	20k Ω	Resistor, 1%	0603	Panasonic: ERJ-3EKF2002V
1	R6	2.21k Ω	Resistor, 1%	0603	Panasonic: ERJ-3EKF2211V
1	R7	3.3k Ω	Resistor, 1%	0603	Panasonic: ERJ-3EKF3301V
1	R8	8.45k Ω	Resistor, 1%	0603	Panasonic: ERJ-3EKF8451V
1	U1		Linear Charger	QFN10	MPS: MP2602DQ

PRINTED CIRCUIT BOARD LAYOUT

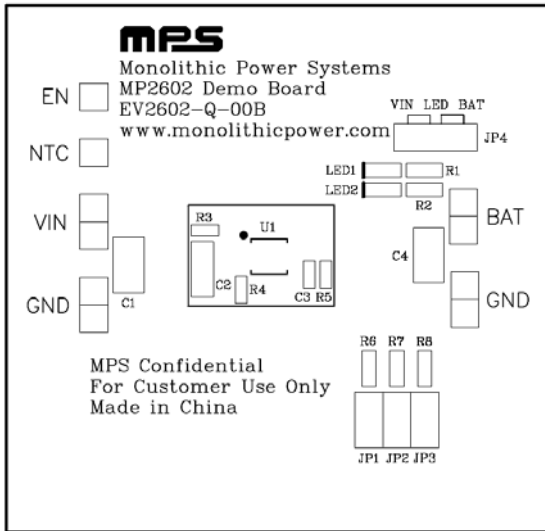


Figure 1—Top Silk Layer

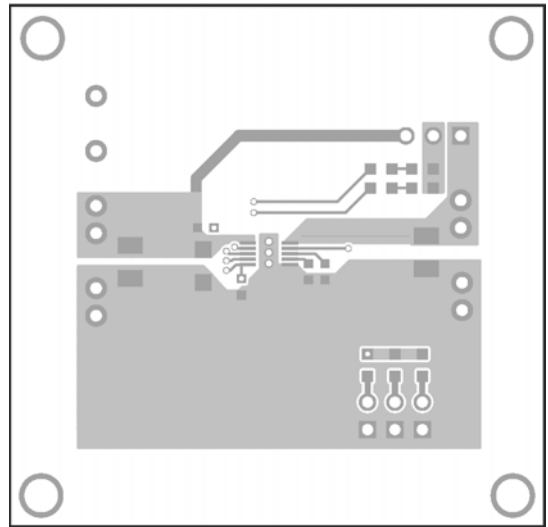


Figure 2—Top Layer

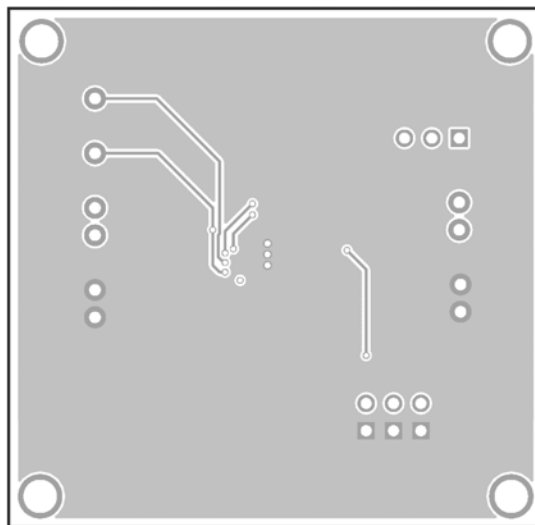


Figure 3—Bottom Layer