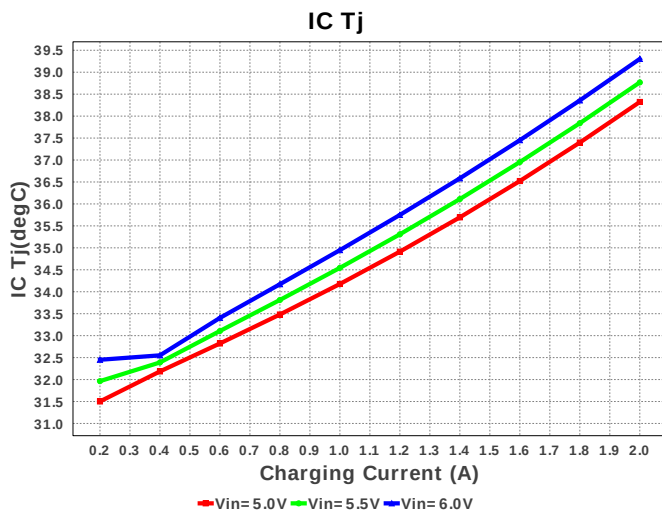
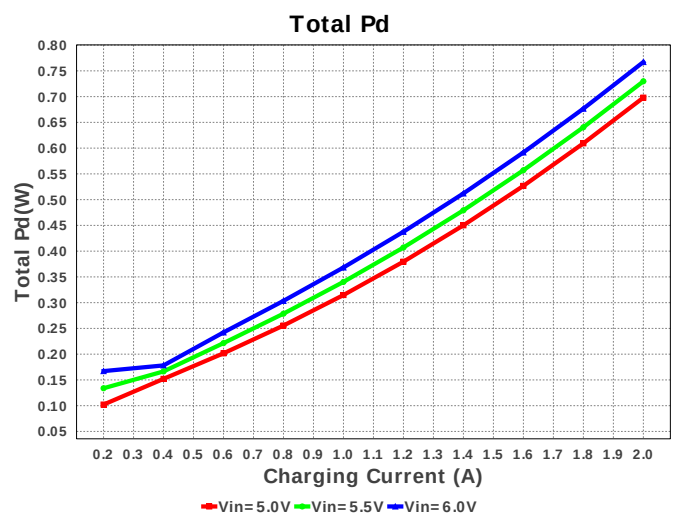
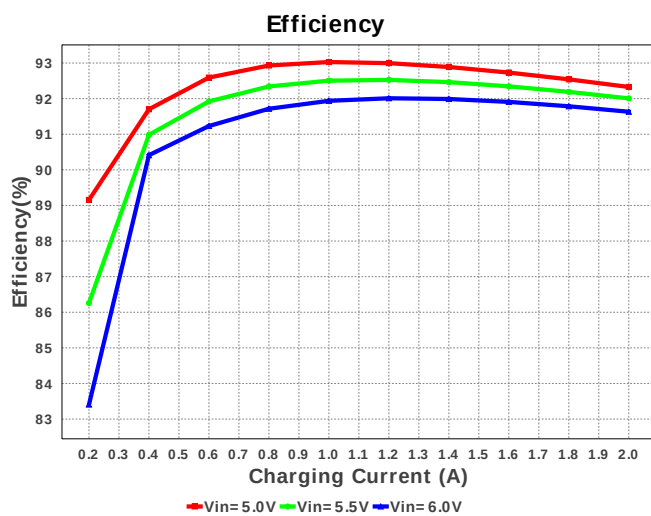




Device = BQ25890RTWR
Topology = BMS_BUCK
Created = 7/20/16 9:04:23 AM
BOM Cost = \$3.21
BOM Count = 13
Total Pd = 0.76W

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
11.	Rstat	Vishay-Dale	CRCW04022K21FKED Series= CRCW..e3	Res= 2.21 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
12.	Rthm1	MuRata	NCP15XH103E03RC Series= NCP15	Thermistor	1	\$0.03	 0402 3 mm²
13.	U1	Texas Instruments	BQ25890RTWR	Switcher	1	\$2.50	 RTW0024H 25 mm²



Operating Values

#	Name	Value	Category	Description
1.	BOM Count	13	General	Total Design BOM count
2.	Cell Capacity	2.0 000mAh	General	Cell Capacity
3.	Cells in Parallel	1.0	General	Cells in Parallel
4.	Cells in Series	1.0	General	Cells in Series
5.	FootPrint	91.0 mm²	General	Total Foot Print Area of BOM components
6.	Frequency	1.5 MHz	General	Switching frequency
7.	Total BOM	\$3.21	General	Total BOM Cost
8.	Total Battery Capacity	2.0 000mAh	General	Total Battery Capacity

#	Name	Value	Category	Description
9.	IBAT_SHORT	100.0 mA	Op_Point	Source current for BAT pin short-circuit detection
10.	ICThetaJA Effective	15.0 degC/W	Op_Point	Effective IC Junction-to-Ambient Thermal Resistance
11.	Ichg_OP	1.984 A	Op_Point	Battery charging current
12.	Ichg_Sch	1.984 A	Op_Point	Charge current selected
13.	IinMax_Sch	2.0 A	Op_Point	Maximum input current selected
14.	Iprecharge	128.0 mA	Op_Point	Pre-charge Current
15.	Itermination	256.0 mA	Op_Point	Termination comparator threshold for termination detection
16.	VBAT_LOWV	3.0 V	Op_Point	Pre-charge to fast-charge transition threshold
17.	VBAT_SHORT	2.0 V	Op_Point	BAT pin short-circuit detection threshold
18.	VSYS_MIN	3.5 V	Op_Point	Minimum DC System Voltage Output
19.	Vchg_OP	4.192 V	Op_Point	Battery output voltage
20.	Vchg_Sch	4.192 V	Op_Point	Charge voltage selected
21.	Efficiency	91.631 %	Op_point	Steady state efficiency
22.	IC Tj	39.224 degC	Op_point	IC junction temperature
23.	VIN_OP	6.0 V	Op_point	Vin operating point
24.	Total Pd	759.612 mW	Power	Total Power Dissipation

Design Inputs

#	Name	Value	Description
1.	IchgMax	2.0	Ichg
2.	IinMax	2.0	IinMax
3.	Vchg	4.2	Vchg
4.	VinMax	6.0	Maximum input voltage
5.	VinMin	5.0	Minimum input voltage
6.	base_pn	BQ25890	Base Product Number
7.	source	DC	Input Source Type
8.	Ta	30.0	Ambient temperature

Design Assistance

1. **BQ25890** Product Folder : <http://www.ti.com/product/bq25890> : contains the data sheet and other resources.

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