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| Chemistry( **MCP73837/8)** | Li-ion |
| Manufacturer | Microchip |
| Mouser Part# | 579-MCP73837-FCI/MF |
| DigiKey Part# | MCP73837-FCI/MF-ND |
| Cost | 1.35$ |
| No.of Cells. | 1 |
| Max Charge Current | 1100mA |
| Charge Time for 2200mAh | Approx 2.5hrs |
| Charge Time for 800mAh | Approx. 1hrs |
| Charge Time for 5500mAh | Approx. 5.5hrs |
| Temperature sensor | negative-temperature coefficient  thermistors (NTC). |
| Cutoff mechanism | 1.The MCP73837/8 suspends charge if the die temperature exceeds 150°C.  2. Under voltage lockout (UVLO) UVLO circuit places the device in shutdown mode if the input supply falls to within +100 mV of the battery  voltage. The UVLO circuit is always active.  3. The charge cycle is terminated when, during constant voltage mode, the average charge current diminishes  below a percentage of the programmed charge current(factory setted). |
| Max Vin applicabale | 6v |
| Packaging | 10-Lead DFN/MSOP |
| Dev Board | Available for 40$ |
| Programming | 1.Current Regulation Setting With AC-adapter; Device Charge Control  Enable; Precondition Set Point for AC control(connect a resistor on PROG1 pin)  2.Current Regulation Setting With USB-port; Precondition Set Point  for USB control.(connect a resistor on PROG2 pin) |
| Manufacturer Part No. | MCP73837-FCI/MF |

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| Chemistry( **MCP73871)** | Li-ion |
| Manufacturer | Microchip |
| Mouser Part# | 579-MCP73871-2CCI/ML |
| DigiKey Part# | MCP73871-2AAI/ML-ND |
| Cost | approx 2$ |
| No.of Cells. | 1 |
| Max Charge Current | 1100mA |
| Charge Time for 2200mAh | approx 2.5hrs |
| Charge Time for 800mAh | approx 1hr |
| Charge Time for 5500mAh | approx. 5.5hrs |
| Temperature sensor | The MCP73871 device continuously monitors battery temperature during a charge cycle by measuring the voltage between the THERM and VSS pins. |
| Cutoff mechanism | 1. Under voltage lockout (UVLO) UVLO circuit places the device in shutdown mode if the input supply falls to within +100 mV of the battery  voltage. The UVLO circuit is always active.  2. The Constant Voltage mode charge cycle terminates either when the average charge current diminishes below a threshold established by the value of the  resistor connected from PROG3 to VSS  3. The MCP73837/8 suspends charge if the die temperature exceeds 150°C. |
| Max Vin applicabale | 6v |
| Packaging | 20-Lead QFN\* |
| Dev Board | Available for 20$ |
| Programming | 1.PROG2 USB port input current limit selection when SEL = Low (Low = 100 mA, High = 500 mA)  2. PROG3 I/O Termination set point for both AC-DC adapter and USB port  3. PROG1 Fast charge current regulation setting with SEL = High. Preconditioning set point  for both USB port and AC-DC adapter |
| Manufacturer Part No. | MCP73871-2AAI/ML |

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| Chemistry(**LTC1733)** | Li-ion |
| Manufacturer | Linear Technology |
| Mouser Part# | NA |
| DigiKey Part# | LTC1733EMSE#PBF-ND |
| Cost | 3.6$ |
| No.of Cells. | 1 cell |
| Max Charge Current | 1.5A |
| Charge Time for 2200mAh | Approx. 1.5hrs |
| Charge Time for 800mAh | Approx. 45mins |
| Charge Time for 5500mAh | Approx. 5hrs |
| Temperature sensor | 1.An internal thermal limit reduces the programmed charge current if the die temperature attempts to rise above a  preset value of approximately 105°C. This feature protects the LTC1733 from excessive temperature  2.Thermal Regulation Maximizes Charging Rate without Risk of Overheating |
| Cutoff mechanism | 1.An internal undervoltage lockout circuit monitors the input voltage and keeps the charger in shutdown mode until VCC rises above the undervoltage lockout threshold. The UVLO circuit has a built-in hysteresis of 150Mv  2. At the beginning of a charge cycle, if the battery voltage is low (below 2.48V) the charger goes into trickle charge reducing the charge current to 10% of the full-scale  current. If the low battery voltage persists for one quarter of the total charge time, the battery is assumed to be defective, the charge cycle is terminated, the CHRG pin  output assumes a high impedance state, and the FAULT pin latches low.  3. An internal thermal limit reduces the programmed charge  current if the die temperature attempts to rise above a  preset value of approximately 105°C. This feature protects  the LTC1733 from excessive temperature |
| Max Vin applicabale | 6.5v |
| Packaging | MSE EXPOSED PAD PACKAGE  10-LEAD PLASTIC MSOP |
| Dev Board | no |
| Programming | Charge Current Program, Shutdown Input and Charge Current Monitor Pin. The charge current is programmed by connecting a resistor, RPROG to ground.When in constant-current mode, the LTC1733 servos the PROG pin voltage to 1.5V. In all modes the voltage on the PROG pin can be used to measure the charge current as follows:  ICHG = (VPROG/RPROG) • 1000. |
| Manufacturer Part No. | LTC1733EMSE#PBF |

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| Chemistry(**bq24270)** | Li-ion |
| Manufacturer | Texas Instruments |
| Mouser Part# | 595-BQ24270RGET |
| DigiKey Part# | NA |
| Cost | 3.56$ |
| No.of Cells. | 1 |
| Max Charge Current | 1.5A |
| Charge Time for 2200mAh | Approx. 1.5hrs |
| Charge Time for 800mAh | Approx. 45mins |
| Charge Time for 5500mAh | Approx. 4hrs |
| Temperature sensor | 1.Thermal Regulation Protection for Output Separate Power Path Control Current Control |
| Cutoff mechanism | 1. During the charging process, to prevent the IC from overheating, bq24270 and bq24271 monitor the junction temperature, TJ, of the die and begins to taper down the charge current once TJ reaches the thermal regulation  threshold, TREG. The charge current is reduced to zero when the junction temperature increases about 10°C  above TREG |
| Max Vin applicabale | 6V |
| Packaging | Available in Small 2.8 mm x 2.8 mm 49-ball |
| Dev Board | Available for 122$ |
| Programming | Charge Parameters Programmed Using I2C Interface |
| Manufacturer Part No. | BQ24270RGET |