Application Differences Between CN3163 And CN3063

CN3163 and CN3063 are pin-to-pin compatible. Customers can use CN3163 on the PCBs for CN3063.

Their differences are listed as follows.

1. Maximum Charge Current
   The maximum charge current for CN3163 is 1A and that for CN3063 is 600mA.
2. DC Voltage Source
   CN3163 can be used as a DC voltage source but not CN3063.
3. LED Information
   When CN3163's output has no battery, LED for $\overline{\text{CHRG}}$ is off and LED for $\overline{\text{DONE}}$ is on.
   However, both LEDs for CN3063 will be flashing under the same condition.
4. Pin 1 for Temperature Sensing
   CN3163 can monitor the battery temperature above the upper limit and below the lower limit.
   CN3063 can only monitor the battery temperature either above the upper limit or below the lower limit.
5. Pin 2 for Setting Constant Charge Current (I_{CH})
   For CN3163, R_{ISET} = 1188V / I_{CH}.
   For CN3063, R_{ISET} = 1800V / I_{CH}.
6. Pin 8 for Setting Regulation Voltage (V_{REG}) in Constant Voltage Mode
   For CN3163, V_{REG} = 4.2V + 3.707μA × Rx.
   For CN3063, V_{REG} = 4.2V + 3.04μA × Rx.

In conclusion,

1. The resistor (R_{ISET}) connected to Pin 2 should be changed for adjusting the constant charge current (I_{CH}). In addition, CN3163 and CN3063 are using different resistors for the same constant charge current.
2. For no battery condition, the LEDs for $\overline{\text{CHRG}}$ (Pin 7) and $\overline{\text{DONE}}$ (Pin 6) of CN3163 are off and on, respectively. However, both LEDs for CN3063 will be flashing under the same condition.

In general, two ICs have no major difference for the battery charging application.