

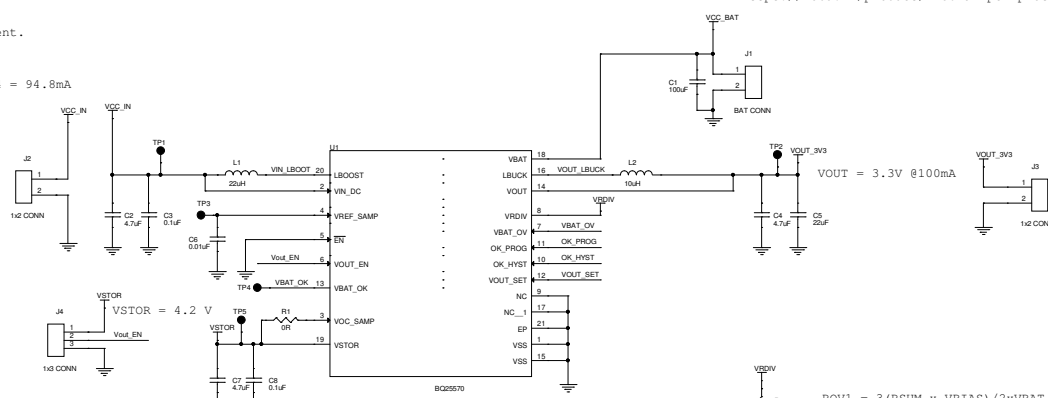
# SOLAR CELL + BATTERY CHARGER

Solar cell : KXOB061K08F  
 4 in Parallel to increase the current.  
 Voltage (typ) =4.46V  
 Current (typ) = 23.7mA  
 For 4 in parallel, current : 23.7x4 = 94.8mA

MPPT ratio = VMPP / Voc  
 VMPP =4.46V  
 Voc=5.53V  
 MPPT ratio=80.65%

L1- From table 3 as 22uH  
 L2- From table 4 as 10uH

Battery Product:  
<https://robu.in/product/1250mah-pcm-protected-micro-li-po-battery/>



$$ROV1 = 3(RSUM \times VBIAS) / 2 \times VBAT\_OV$$

$VBAT\_OV = 4.2V$   
 $VBIAS = 1.21V$   
 $ROV1 = 5.62M$   
 $ROV2 = RSUM \times OV - ROV1 = 13M - 5.62M = 7.38M \text{ ohm}$   
 $ROV2 = 7.32M \text{ ohm}$

$$ROK1 = (VBIAS \times RSUM) / VBAT\_OK\_HYST$$

$VBIAS = 1.21V$   
 $RSUM = 13Mohm$   
 $VBAT\_OK\_HYST = 3V$   
 $ROK1 = 5.24Mohm \rightarrow 5.23Mohm$   
 $VBAT\_OK = 2.9V$   
 $ROK2 = ((VBAT\_OK / VBIAS) - 1) \times ROK1$   
 $ROK2 = 7.30Mohm \rightarrow 7.32Mohm$   
 $ROK3 = 13 - 5.23 - 7.32 = 0.45Mohm \rightarrow 0.448Mohm$

$$VOUI = VBIAS \times (RVS1 + RVS2) / RVS1$$

$RSUM = 13Mohm$   
 $VBIAS = 1.21V$   
 $RVS1 = 8.25M$   
 $RVS2 = 4.75M \text{ ohm}$

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