

User Input	VBIAS	1,21	V
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	Comparator threshold for VSTOR of charger. Typically the max storage element voltage, e.g. 4.2V for Lilon battery.			
	$VBAT_UV \leq VBAT_OV \leq 5.5V$			
Desired				
Desired	RSUM ¹	10	MΩ	
Desired	VBAT_OV	5	V	
		closest 1% resistor ¹		
Computed		Exact	<	>
Computed	ROV1	3,630	3,570	3,650 MΩ
Computed	ROV2	6,370	6,340	6,490 MΩ
Computed	VBAT_OV	>	5,038	5,042 V
Computed				
Selected	ROV1	3,6	MΩ	
Selected	ROV2	6,3	MΩ	
Selected		↓		
Typ voltage ³	VBAT_OV(typ)	4,991	V	-0,18 % diff
Typ voltage ³				

Comparator threshold voltages indicating when VSTOR has risen above VBAT_OK_HYST or fallen below VBAT_OK.				
VBAT_OV ≥ VBAT_OK_HYST ≥ VBAT_UV				
RSUM ¹	12	MΩ		
VBAT_OK	3,3	V	> VBAT_UV	
VBAT_OK_HYST	3,5	V	> VBAT_OK	
		closest 1% resistor ¹		
	Exact	<	>	
ROK1	4,149	4,120	4,220	MΩ
ROK2	7,166	7,150	7,320	MΩ
ROK3	0,686	0,681	0,698	MΩ
VBAT_OK	→	3,310	3,309	V
VBAT_OK_HYST	→	3,510	3,509	V
ROK1	4,22	MΩ		
ROK2	7,32	MΩ		
ROK3	0,681	MΩ		
	↓			
VBAT_OK (typ)	3,309	V	0,27	% diff
VBAT_OK_HYST (typ)	3,504	V	0,12	% diff

For the bq25570 only, comparator threshold for VOUT of buck converter.				
$1.3V \leq V_{OUT} \leq V_{BAT_OV}$				
R _{SUM} ¹	13	MΩ		
V _{OUT}	3,3	V		
		closest 1% resistor ¹		
	Exact	<	>	
R _{OUT1}	4,767	4,750	4,870	MΩ
+10MEG ²	0,000	0,000	0,000	MΩ
R _{OUT2}	8,233	8,060	8,250	MΩ
V _{OUT}	→	3,263	3,260	V
R _{OUT1}	4,75	MΩ		
+10MEG ²	0,00	MΩ		
R _{OUT2}	8,25	MΩ		
	↓			
V _{OUT} (typ)	3,312	0,35	% diff	

Maximum power point threshold, e.g. ~0.7-0.8 of solar panel's open circuit voltage.				
MPPT				
RSUM ¹	20	MΩ		
VIN_DC(OC)	6	V	Open Circuit Volts	
VREF_SAMP	4	V	MPP voltage	
		closest 1% resistor ¹		
		<	>	
	Exact			
ROC1	3,333	3,320	3,400	MΩ
+10MEG ²	10,000	10,000	10,000	MΩ
ROC2	6,667	6,650	6,810	MΩ
+10MEG ²	0,000	0,000	0,000	MΩ
VREF_SAMP		→	4,002	3,978 V
ROC1	3,3	MΩ		
+10MEG ²	10,000	MΩ		
ROC2	6,6	MΩ		
+10MEG ²	0,000	MΩ		
	↓			
VREF_SAMP	4,010	V	0,25	% diff

¹ If the available 1% resistors for the recommend resistor total (RSUM) produce too high of % difference, try using the closest 1% > and < resistor cross combo OR increasing or decreasing RSUM in order to find a closer 1% resistor match OR adding 1 or more additional resistors and use two resistors in series that sum to the recommended value.

²Granularity of resistors values > 10 Mohm is greatly reduced so you may need to use a 10 Mohm resistor in series with a smaller resistor in order to achieve the desired resistance value.

³Total dc regulation accuracy is a function of VBIAS tolerance, resistor tolerance, line regulation, load regulation and output voltage ripple (i.e., output capacitance).