

Differential Feedback Termination and Filtering

③ Place termination resistors within 1 inch of the uP

Current Feedback Selection and Filtering

Q1 Hi side losses at 10A out 300kHz:
switching: 400mW est
conducting: 200mW max

modify from Atom / Cyclon EVM

EEFSD0D331R with 7mOhms max used in actual model for C15, C16

Eight 10uF output caps on EVM see next page for last 3 caps

L1 at 10A: 1007mW

Q3 lo side losses at 10A: 650mW typical when hot

Tested Aug 2-3: See Test report

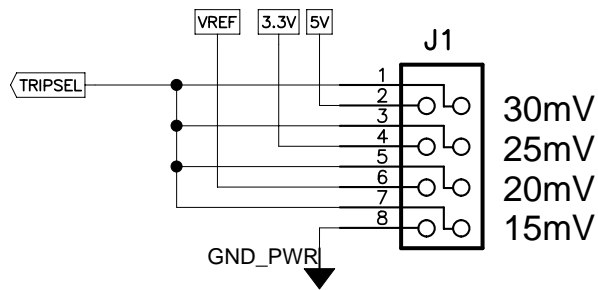
Full load 14A
Thermal max 10A
Application settings:
1.05Vout (VID5,2) to
1.15Vout(VID4,3,2)
300kHz for best efficiency

Update:
L1, R8, R6, R10, C15
add C16 and R34 and C6

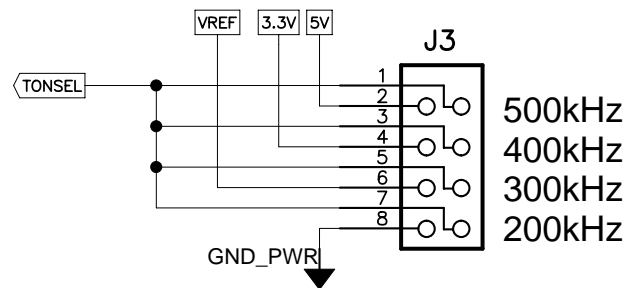
- Notes:
- ① A "*" before a component value indicates this component is not populated in the standard configuration.
 - ② These connections require Kelvin connections to the component.
 - ③ These connections are to be run as differential pairs.

Title				TPS51610 EVM: 12Vin 14A out	
Size	Number	PMP5835		Rev	A
Date	Tue Aug 03, 2010	Drawn by	Josh Mandelcorn		
Filename	PMP5835_revA.sch	Sheet	1	of	3

TRIPSEL 1 of 4 Selection Header

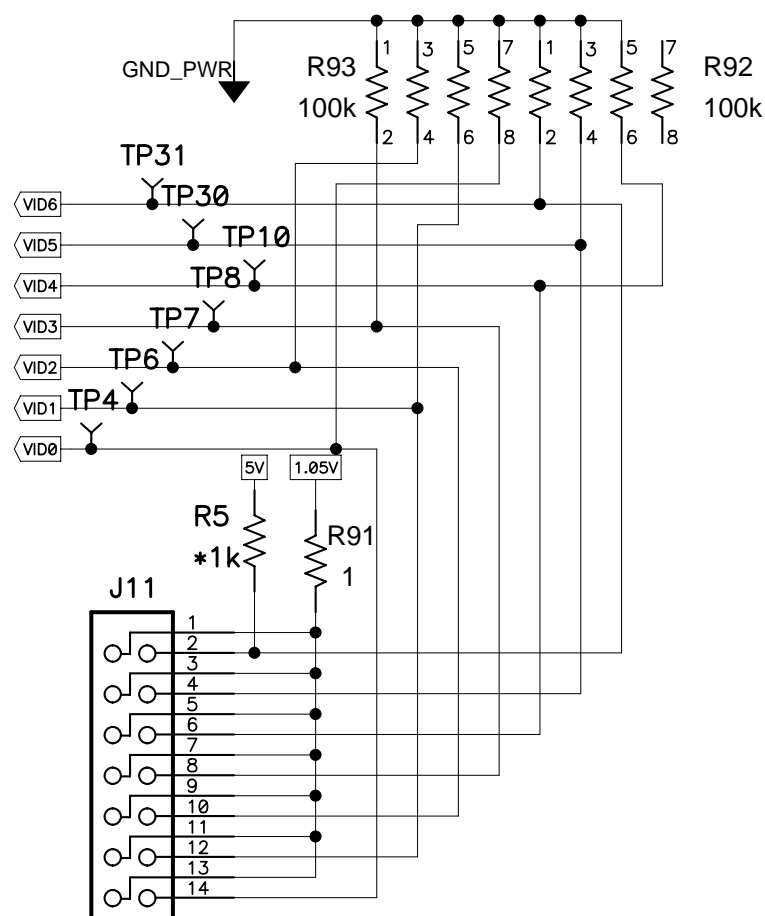


TONSEL 1 of 4 Selection Header



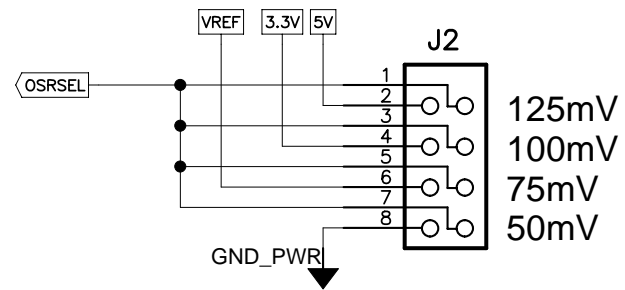
select TRIPSEL at MAX or 30mV
select TONSEL at 300kHz

CPU mode, DNP R5

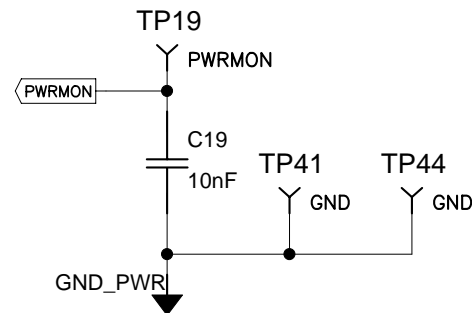


Manual VID Setting
Open = LO

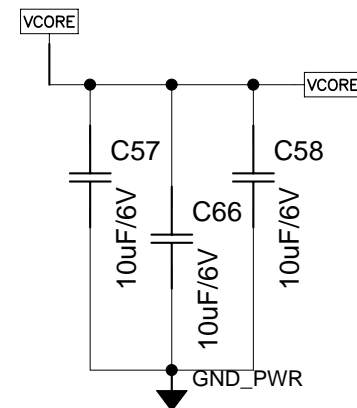
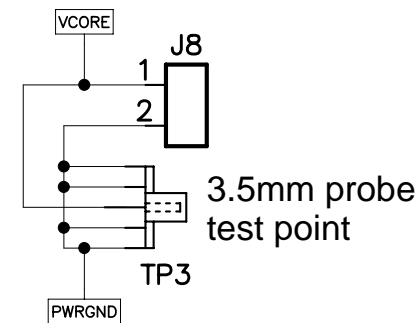
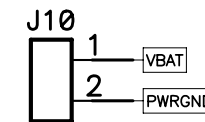
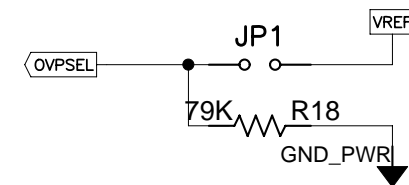
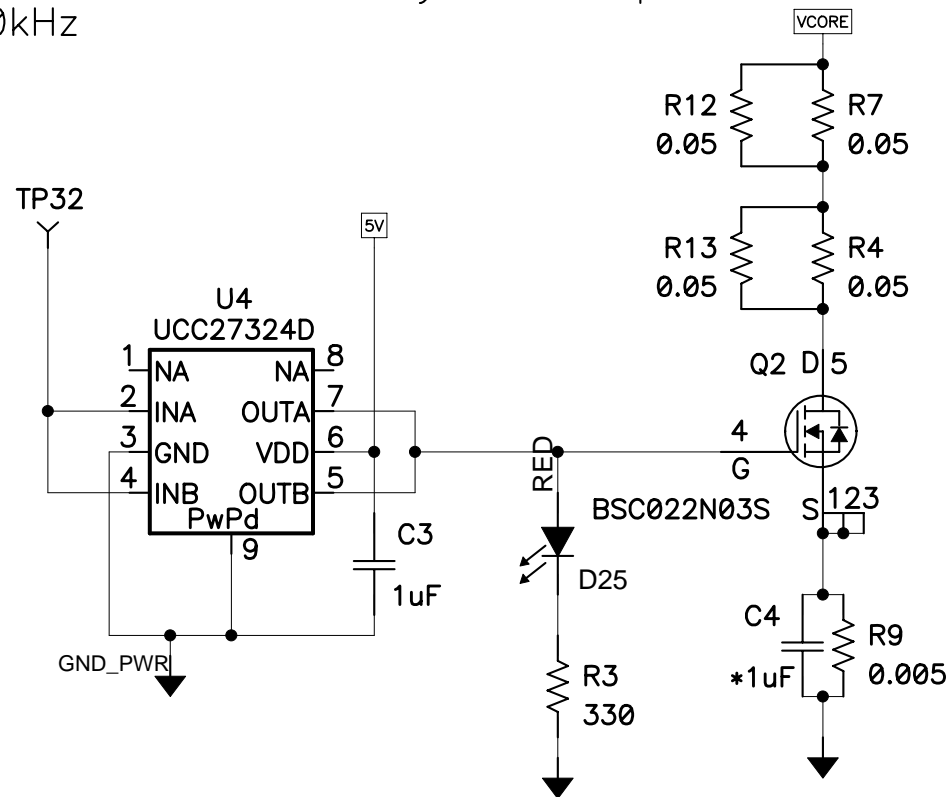
OSRSEL 1 of 4 Selection Header



POWERMON Termination



R12 and R13 piggybacked upon R7, R4 to get close to 10A dynamic step load



remaining 10uF output caps not shown on page 1

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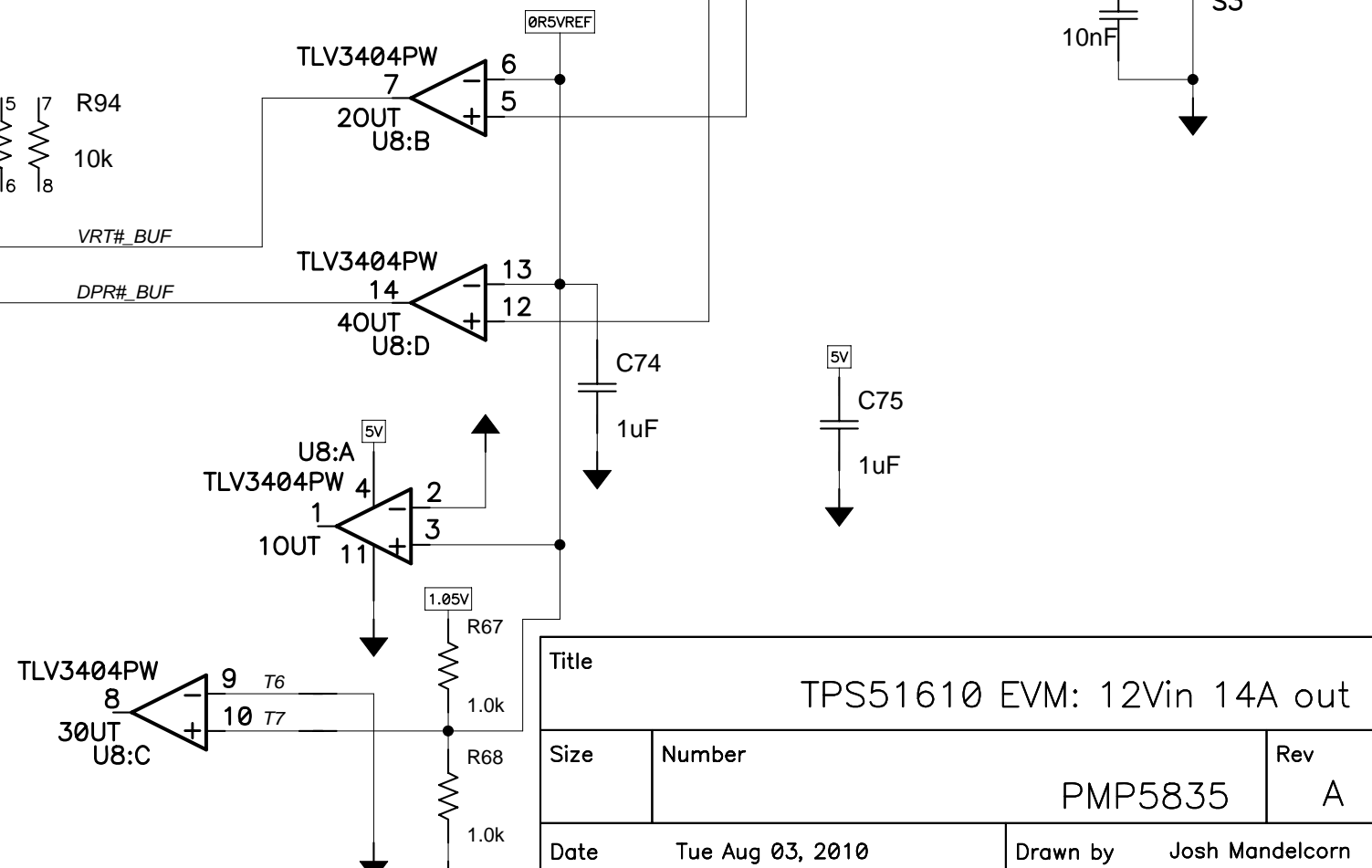
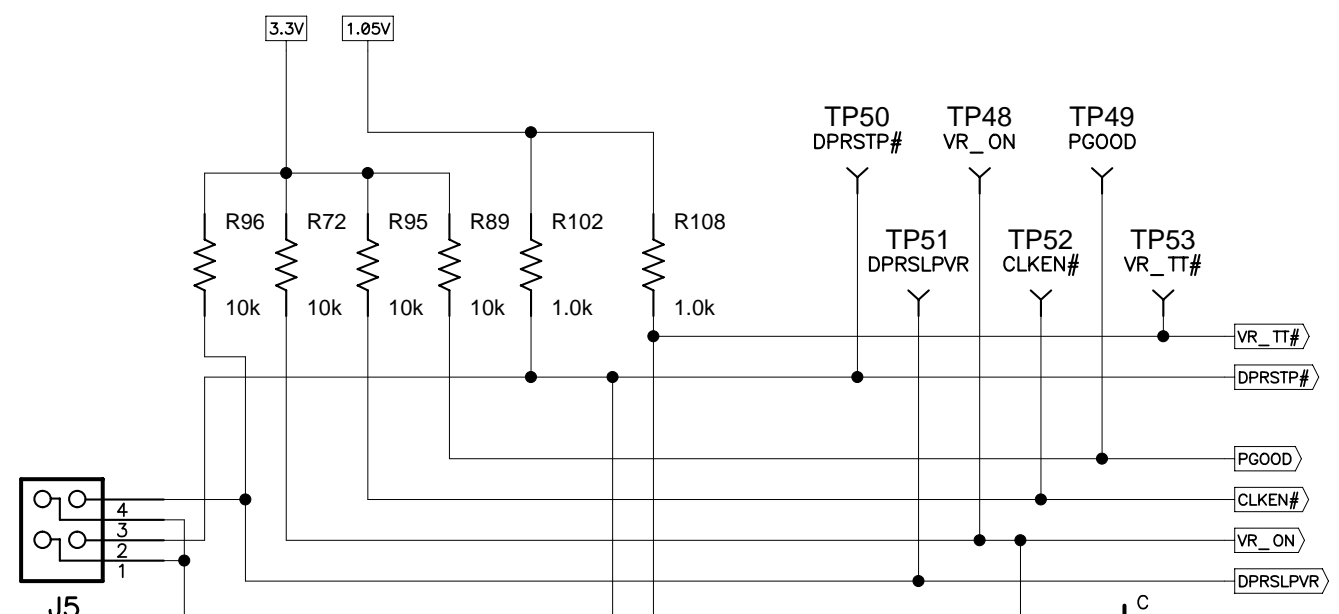
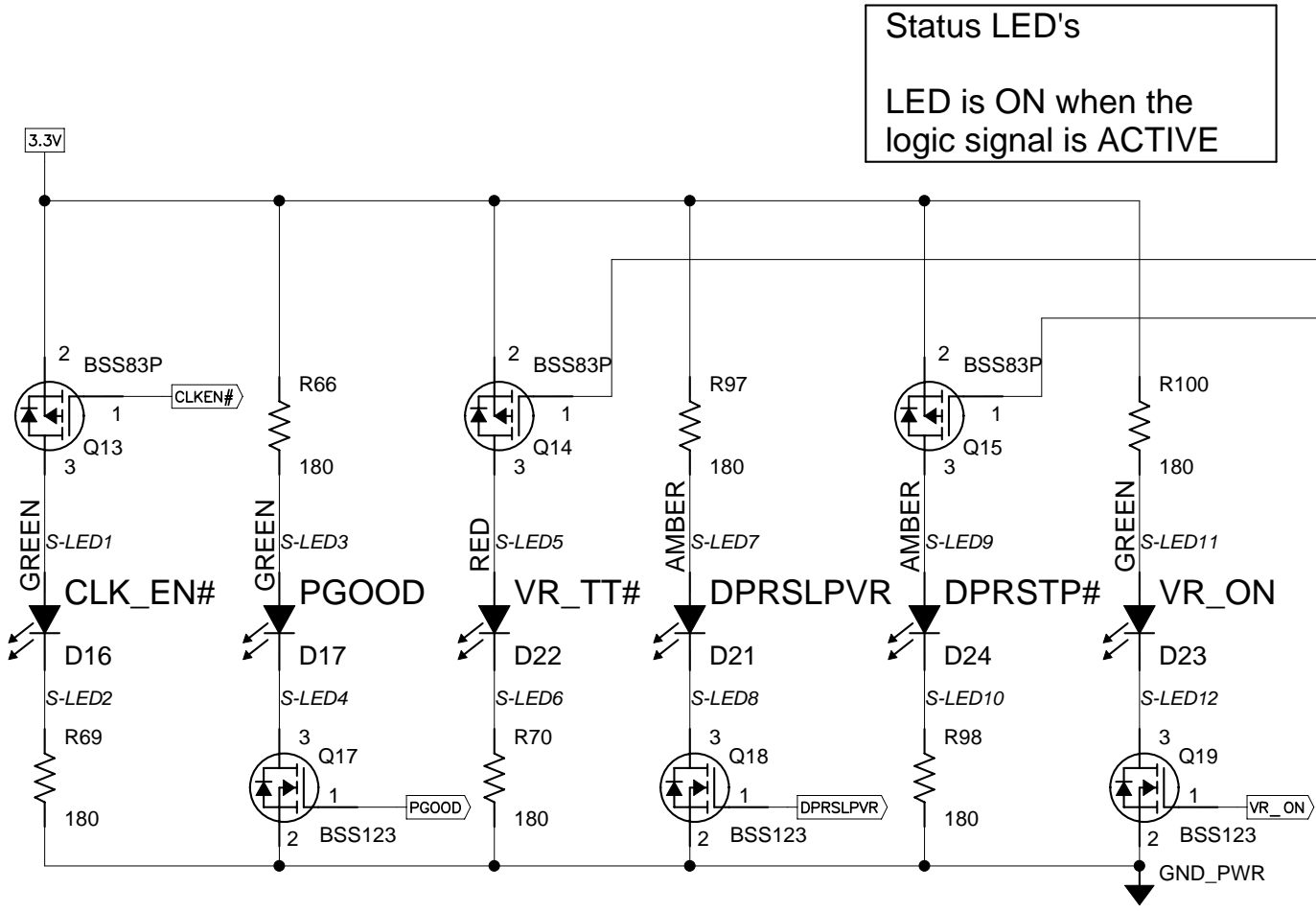
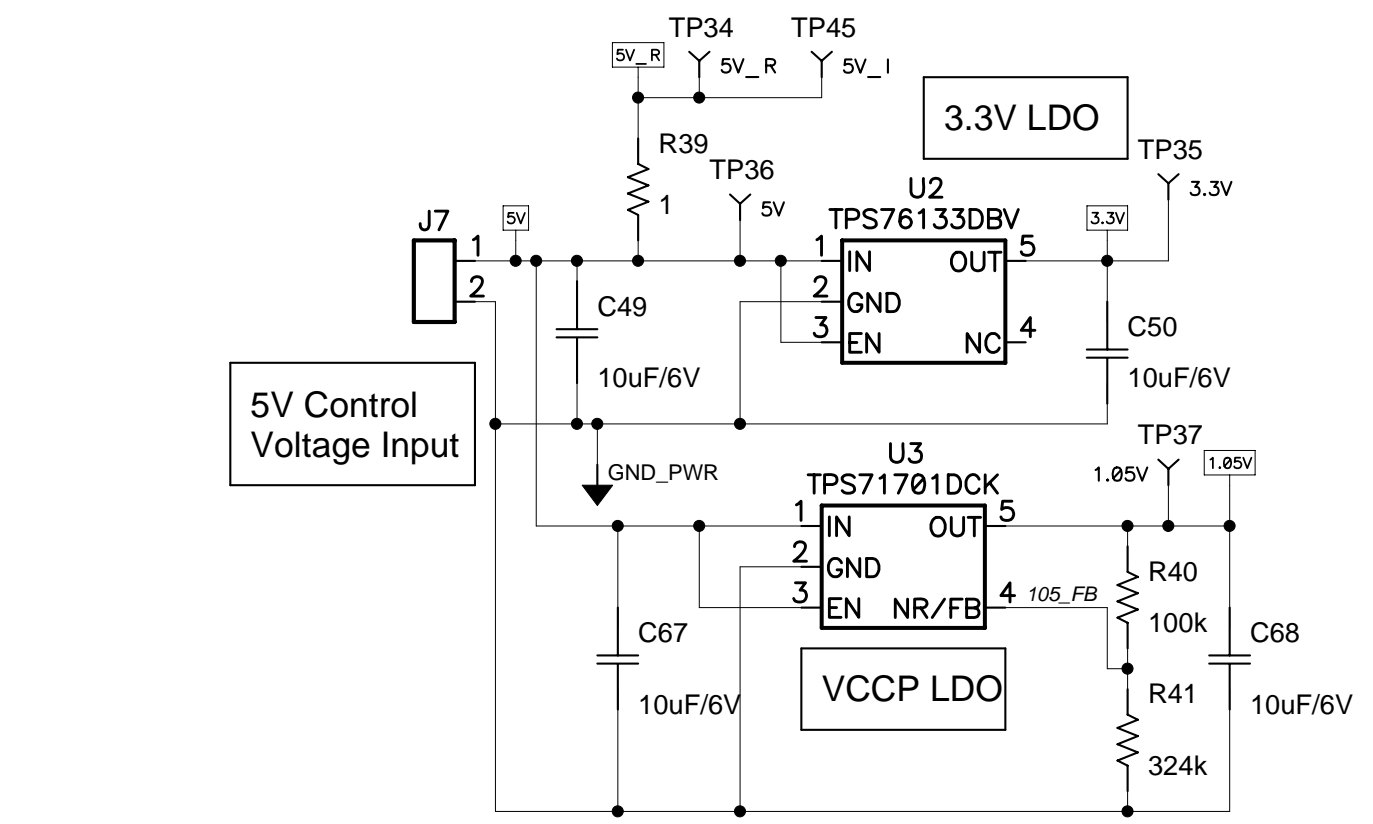
Logic Signal Termination and Manual Control

5V Control Voltage Input

3.3V LDO

VCCP LDO

Status LED's
LED is ON when the logic signal is ACTIVE



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