Voltage Monitor Circuit Configuration

Design Note 014

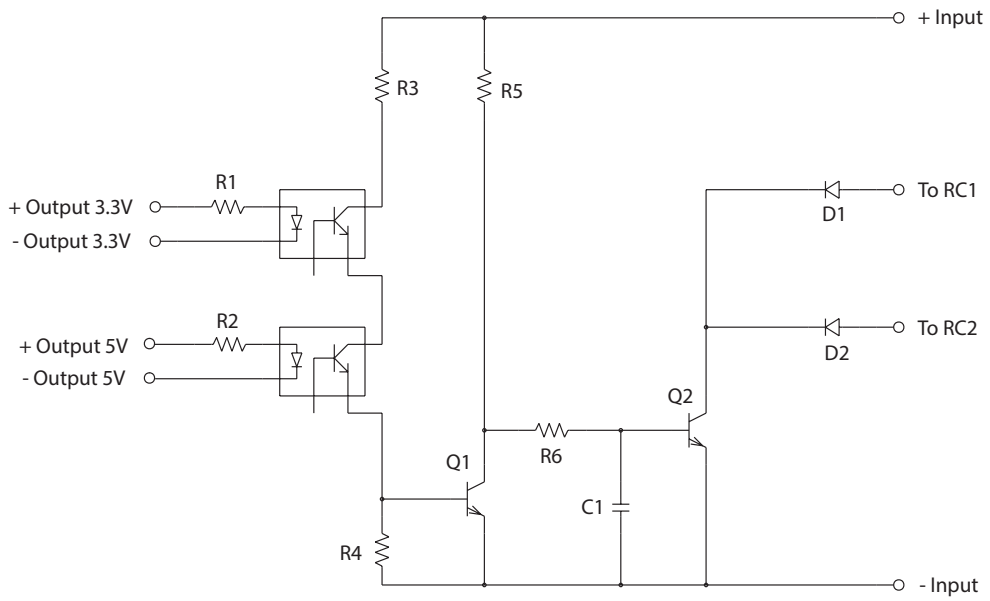
Flex Power Modules

Voltage Monitor Circuit Configuration

In some applications it is necessary to monitor the output voltages and shut down all converters if any of these fails. The enclosed example shows how to monitor two outputs.
Increasing the number of monitored outputs is simply done by adding an optocoupler for each additional output in series with the base of Q1.
R5 and C1 in the circuit diagram are used to set a time constant delaying the voltage monitoring during start-up. The values used in the example provide approximately 60 ms delay. Consult the converter's datasheet to determine the required delay for your application. The circuit is latching and requires that the input voltage be toggled off-on to restart the converters.

Component Values

R1	1.8 kΩ
R2	3.6 kΩ
R3	1 MΩ
R4	510 kΩ
R5	1 MΩ
R6	12 ohm
C1	4.7 µF
D1, D2	BAS 70
Q1, Q2	MMBTA 42L



Formed in the late seventies, Flex Power Modules is a division of Flex that primarily designs and manufactures isolated DC/DC converters and non-isolated voltage regulators such as point-of-load units ranging in output power from 1 W to 700 W. The products are aimed at (but not limited to) the new generation of ICT (information and communication technology) equipment where systems' architects are designing boards for optimized control and reduced power consumption.

Flex Power Modules
Torshamnsgatan 28 A
164 94 Kista, Sweden
Email: pm.info@flex.com

Flex Power Modules - Americas
600 Shiloh Road
Plano, Texas 75074, USA
Telephone: +1-469-229-1000

Flex Power Modules - Asia/Pacific
Flex Electronics Shanghai Co., Ltd
33 Fuhua Road, Jiading District
Shanghai 201818, China
Telephone: +86 21 5990 3258-26093

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