On/Off Control Using Remote Control (RC) Pin

Design Note 013

Flex Power Modules

On/Off Control Using Remote Control (RC) Pin

In some applications it is necessary to have a precise turn on and turn off level.
The circuit below is useful for setting turn on and turn off in the range of 18-75 V.

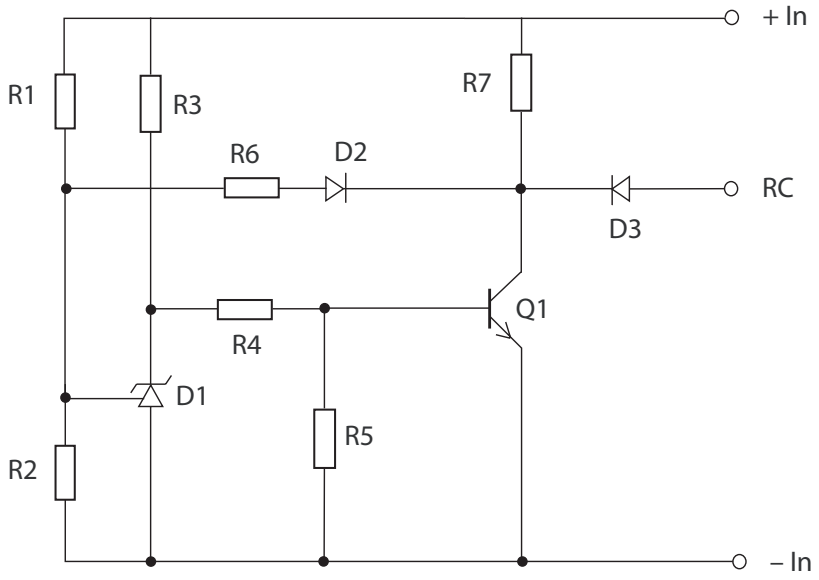
The voltage level for turn off is set by resistors R1 and R2.
The turn On level is given by R2 in parallel with R6. A lower value on R6 will increase the hysteresis and a higher value will decrease it.

$$Voff = 2.495 \times \frac{(R1 + R2)}{R2}$$

The following values were used to set turn On at 20.15 V and turn Off at 19.53 V:

R1, R3	15 kΩ, 0.5 W
R2	2.2 kΩ
R4	220 kΩ
R5	15 kΩ
R6	47 kΩ
R7	330 kΩ
D1	TL 431 progammable reference diode
D2, D3	1N4148 or similar
Q1	2N5551 or similar

Resistors 0.25 W unless otherwise stated.



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.

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