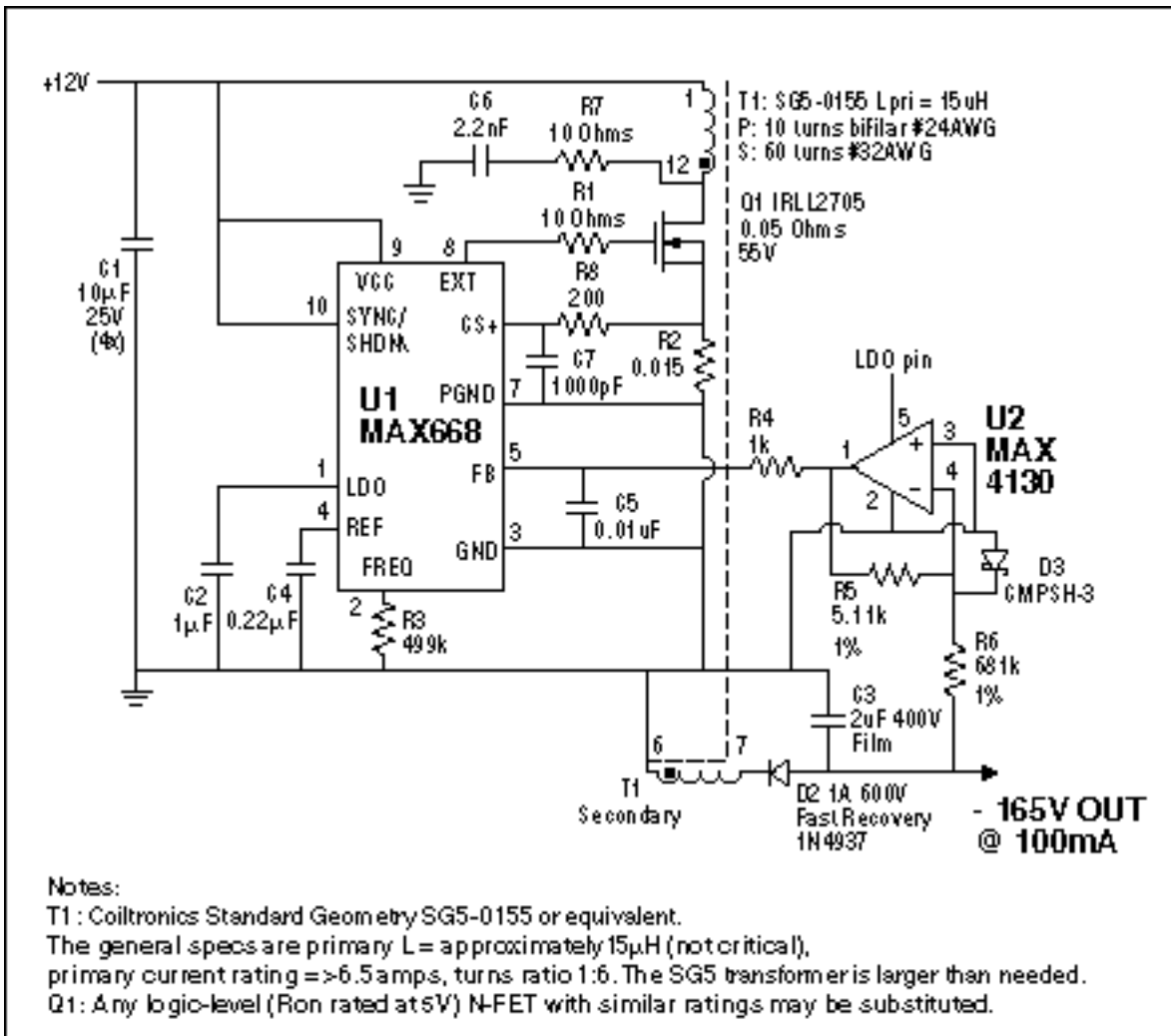


APPLICATION NOTE 435

+12V Input Converter Generates -165V at 100mA

Additional Information:

- [Quick View Data Sheet for the MAX668](#)
- [Quick View Data Sheet for the MAX4130](#)
- [Technical Support: Power](#)



This circuit uses the MAX668 and a transformer (which will need about a one-to-six turns ratio) to make a flyback converter. The op amp inverts the feedback from the negative output voltage.

The above circuit generates -165V at 100mA from a +12V input. Based on a MAX668 transformer flyback application, the circuit employs a custom transformer to generate -165V through a combination of turns ratio and duty cycle. The transformer is designed on an SG5-size bobbin to facilitate the winding and to decrease the leakage inductance.

D2 is chosen as a fast-recovery diode to moderate the cost for a high-breakdown voltage part. Because the diode will see 165V + (6 x Vin) + flyback due to leakage inductance, a 600V rating is necessary. C3 is selected

as a film capacitor to get high voltage rating and high ripple-current capacity.

Application Note 435: www.maxim-ic.com/an435

More Information

For technical support: www.maxim-ic.com/support

For samples: www.maxim-ic.com/samples

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Related Parts

MAX4130: [QuickView](#) -- [Full \(PDF\) Data Sheet](#) -- [Free Samples](#)

MAX668: [QuickView](#) -- [Full \(PDF\) Data Sheet](#) -- [Free Samples](#)

AN435, AN 435, APP435, Appnote435, Appnote 435

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