



Figure 17 This converter has an output of 5 to 200V. Transistor Q_1 is in cascode with the LT1172 and switches the high voltage. This approach allows a low-voltage regulator to control the output. Diode clamps protect the regulator from transients. Flyback events at L_1 bootstrap Q_1 's gate drive through the 100-k Ω resistor. The diode that connects to the output and the 300 Ω resistor provide short-circuit protection. The ferrite bead and the 100 and 300 Ω resistors minimize high-frequency output noise.