

DCM, Curent Mode, Two Transistor Forward Converter, 100W

Magnetising current
in transformer primary =
 $i(L1)+1.47 \cdot i(L2)$

Note that at about 15ms, the primary magnetising current "staircases" up to 540mA. -The Steady state magnetising current PEAK is just 270mA. This shows a risk factor with Two Transistor Forward Converters, because the 540mA peak magnetising current could take your transformer into saturation. And "flyaway" saturation is a possibility because Forward converters tend not to have a gap in ther ferrites. Note that this high magnetising current still occurred even though the FET duty cycle was definetely kept at less than 0.5 at all times.

