

DIGITALLY CONTROLLED ZERO VOLTAGE SWITCHING

ABSTRACT

Generally, this disclosure describes an apparatus. The apparatus includes switch controller circuitry. The switch controller circuitry includes dead time logic circuitry to determine an
5 estimated dead time interval between a turn off of a first switch and a turn on of a second switch. The first switch and the second switch are coupled at a switched node. The estimated dead time interval is determined based, at least in part, on a difference between an input voltage, V_{in} , and a
switched voltage, V_{sw} , detected at the switched node just prior to turning off the first switch, a
parasitic capacitance, C_{par} , associated with the switched node and a maximum inductor current,
10 $I_{L,max}$. The difference between V_{in} and V_{sw} represents the maximum inductor current.

Fig. 2