Figure 2 The output diode in the diode-rectified flyback prevents the transformer secondary current from flowing backward. At light loads, this situation results in discontinuous-current-mode operation in which the transformer’s secondary current discharges completely into the output at the end of each cycle (a). The synchronous MOSFET allows current to continue to flow in the negative direction and forces the synchronous flyback to always operate in continuous-current mode, regardless of load current (b).