

The schematic diagram illustrates the internal architecture of the UCC3817A DC-DC converter. Key components and connections include:

- Power and Reference:** A 16V source is connected to the 16V pin. A 7.5V REFERENCE is connected to the 9 pin (VREF). The 1VCC pin is connected to the 1VCC supply.
- Control and Protection:** The circuit includes a 16V/10V (UCC3817A) and 10.5V/10V (UCC3818A) UVLO (Under Voltage Lockout) block, a 1.9V and 0.33V divider network, a 6.0V OVP (Over Voltage Protection) block, and a 16V VREF (Voltage Reference).
- Signal Processing:** The circuit features a VOLTAGE ERROR AMP, a CURRENT AMP, a PFM (Pulse Frequency Modulation) block, a PFM LATCH, and a PFM OSC (Pulse Frequency Modulation Oscillator).
- Output and Load:** The output of the PFM OSC is connected to the DRVOUT pin, which drives the electronic load device. The output voltage is labeled DRVOUT.
- Other Pins:** The circuit includes pins for OV/PIEN (10), SS (13), VOUT (7), VSENSE (11), VFF (8), IAC (6), MOUT (5), CAI (4), CAOUT (3), RT (12), and CT (14).

UDG-03122

Is there a protection circuit not listed on the data sheet?

- After that, operation of UCC2818A is restored by turning on the power again.(Latch stop)

DRVOUT

2.00 V 500mA 2.00 V 500mA 2.50GS/s 1M points 12.2 V

40.0μs

400ns

100X

64.8μs

65.48μs 64.54μs Δ944.0ns

20.00mA -840.0mA Δ860.0mA

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ON width change of DRVOUT

VREF