1.1 Transient Load

1A~11A step load, 1A/us slew rate, **without oversampling**
320mV overshoot, 346mV undershoot. Recover time: overshoot: 220us; undershoot: 410us

1A~11A step load, 1A/us slew rate, **x2 oversampling**
320mV overshoot, 346mV undershoot. Recover time: overshoot: 170us; undershoot: 330us
1.2 Output Ripple

Vin=48V, Io=0A /Ripple=33.6mV

Vin=48V, Io=10A /Ripple=28mV

Vin=48V, Io=15A /Ripple=38mV
1.3 Soft start

Soft start at 48V input, 0A load, with syncFETs on from the beginning

Soft start at 48V input, 10A load, with syncFETs on from the beginning
1.4 Pre-bias Start-up

Pre-bias soft start at 48V input voltage. 4V pre-bias voltage on the output port.
1.5 Efficiency

UCD3138 18th Brick Efficiency @12Vout, 200kHz, 25°C

![Efficiency Graph]

94.3% @ 11A load

1.6 Line Regulation

UCD3138 18th Brick Line Regulation

![Line Regulation Graph]
1.7 Load Regulation

UCD3138 18th Brick load regulation

1.8 Constant Power Constant Current (CPCC)
1.9 Surge Test
Load 1A, Vin from 40V~60V, Vin slew rate 30.4V/2.36us.
KP_COEFF_1 = 8000, KP_COEFF_2 = 10000
Vout variation 760mV, recover time 80us
Figure 2 Surge Test
1.10 Current sharing Accuracy

Figure 3 Current Sharing Accuracy


**1.11 Copper Trace Current Sensing Accuracy**

The measured copper trace current sending absolute error is -0.4A~0.6A. (Tested with temperature compensation only.)
Figure 5 Copper Trace Current Sensing Accuracy
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