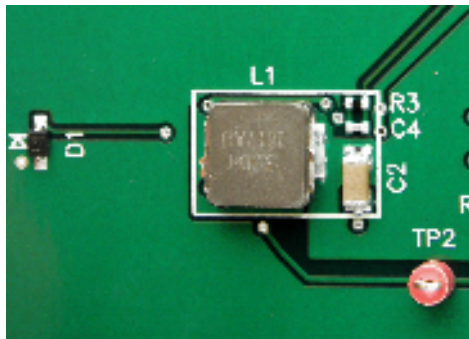
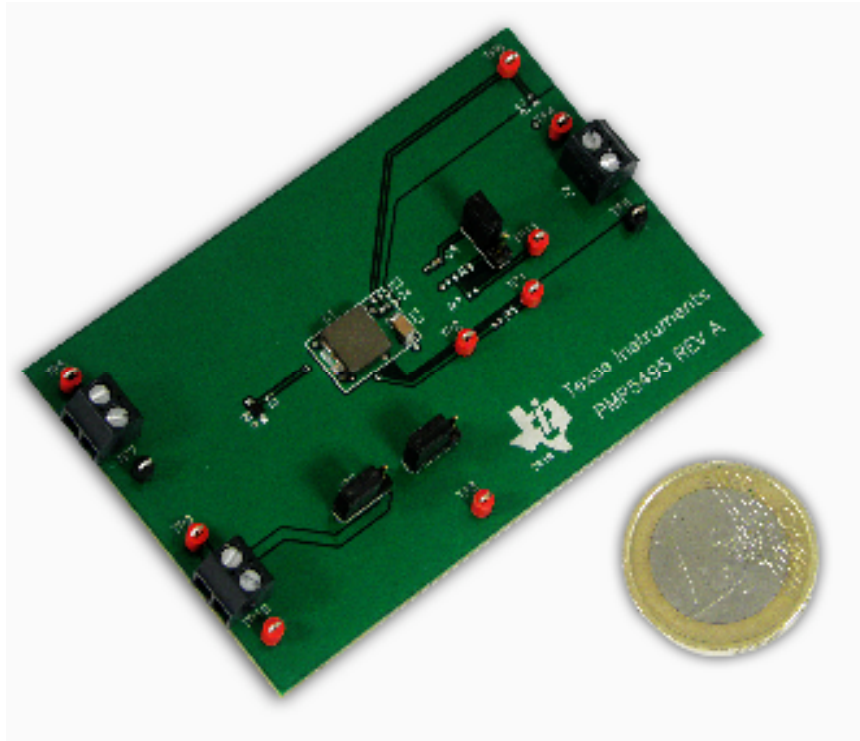

PMP5495 Test Report

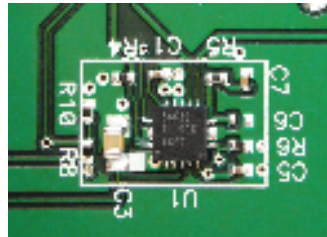
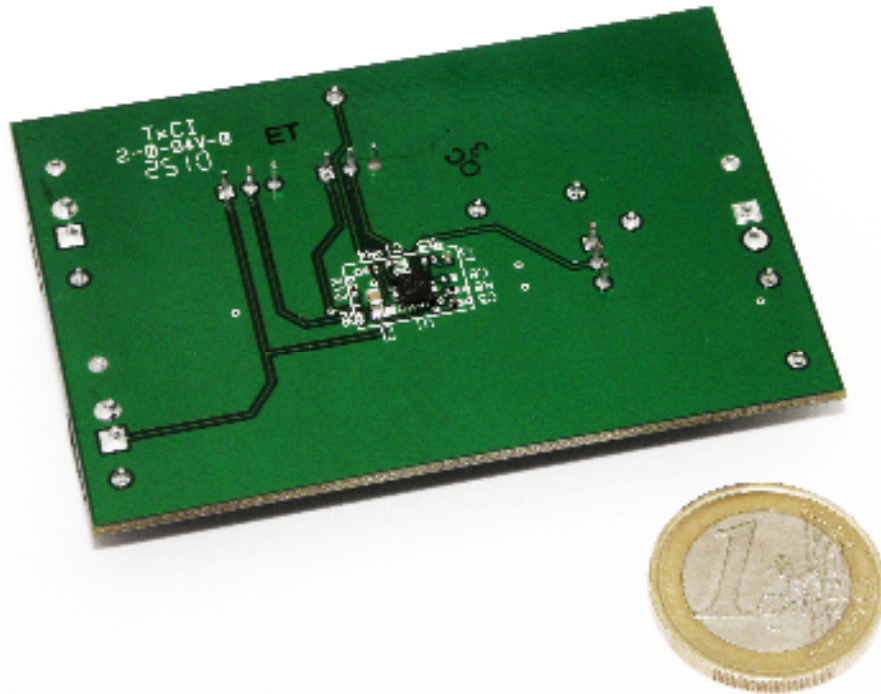
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1 Board Images

1.1 Top



1.2 Bottom

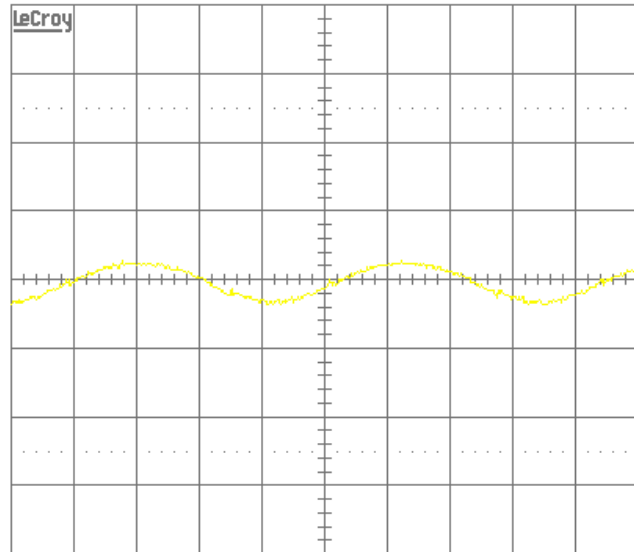


2 Output Voltage Ripple

$V_{in} = 10V$, $V_{out} = 3.3V$, $I_{out} = 5A$

3-Jun-10
12:33:15

1
.5 μs
50 mV



.5 μs BWL

1 5 mV AC $\times$
2 .1 V DC $\times$
3 .2 V DC $\times$
4 .2 V DC $\times$



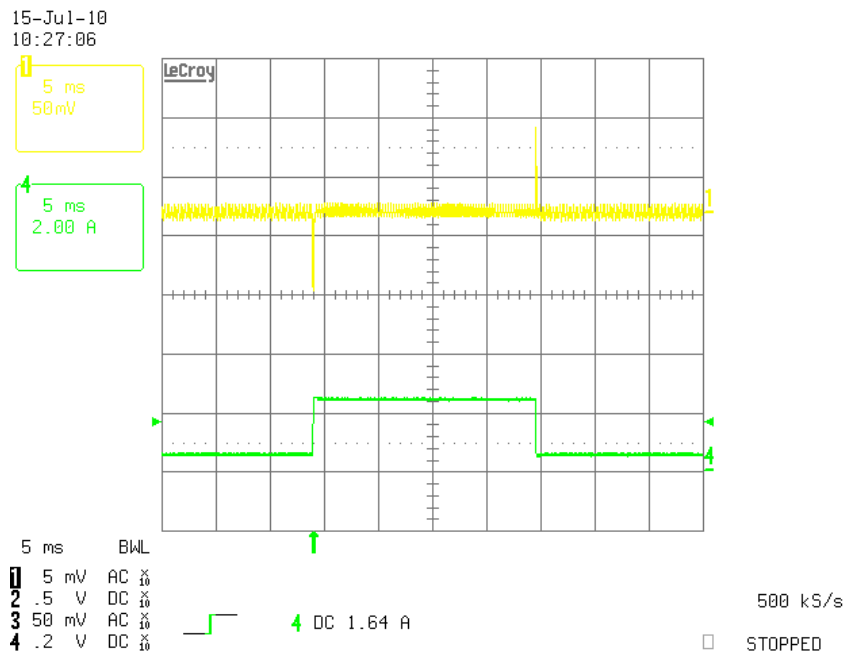
4 DC -2.76 A

200 MS/s

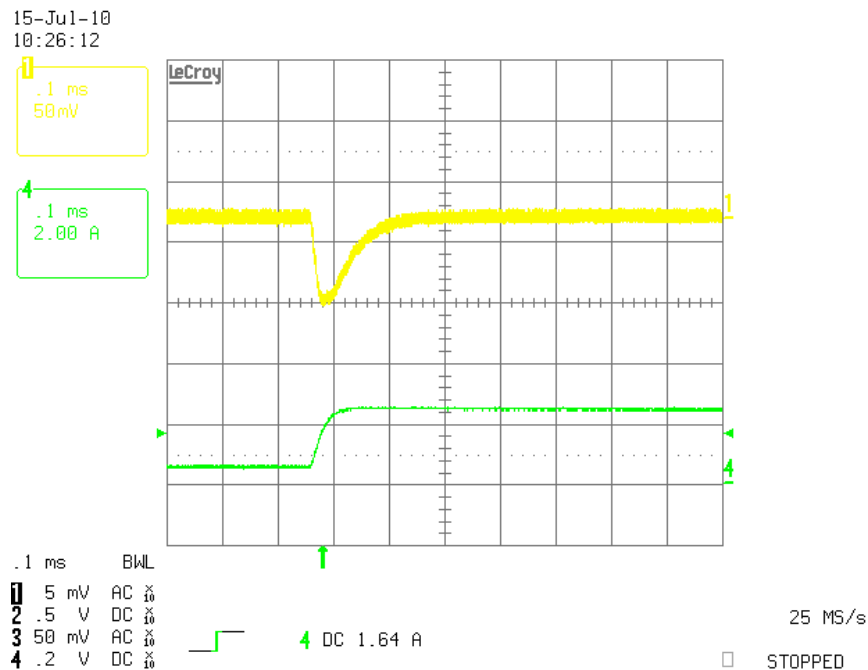
☐ STOPPED

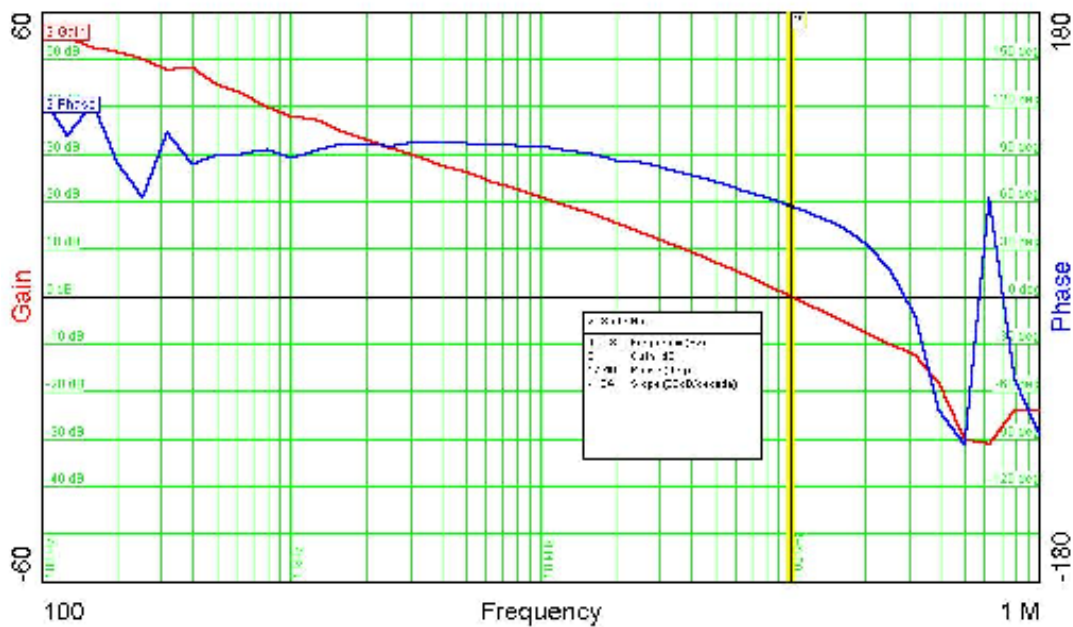
3 Load Transient

$V_{in} = 5V$, $V_{out} = 3.3V$, $I_{out} = 500mA - 2.5A$ (load step)

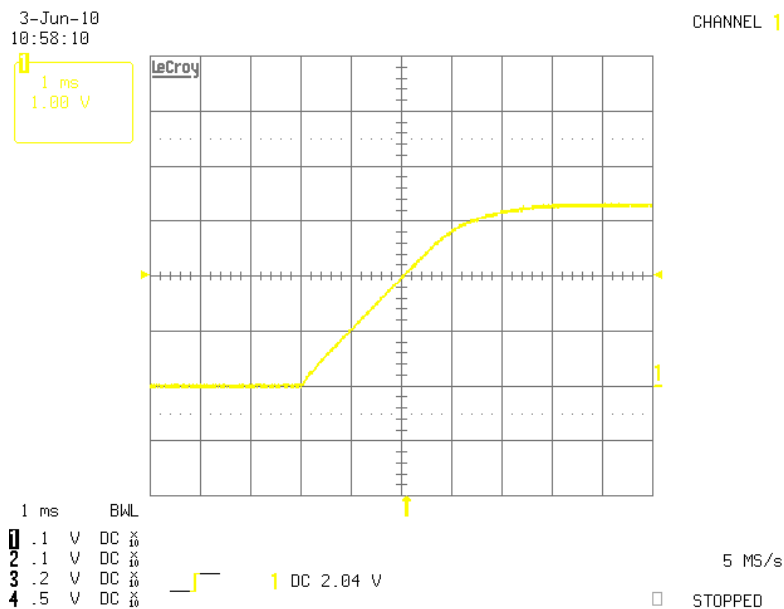


$V_{in} = 5V$, $V_{out} = 3.3V$, $I_{out} = 500mA - 2.5A$ (load step) – Zoom



$$V_{in} = 10V, V_{out} = 3.3V, I_{out} = 5A$$


Phase margin = 57.46 @ 100.3 kHz

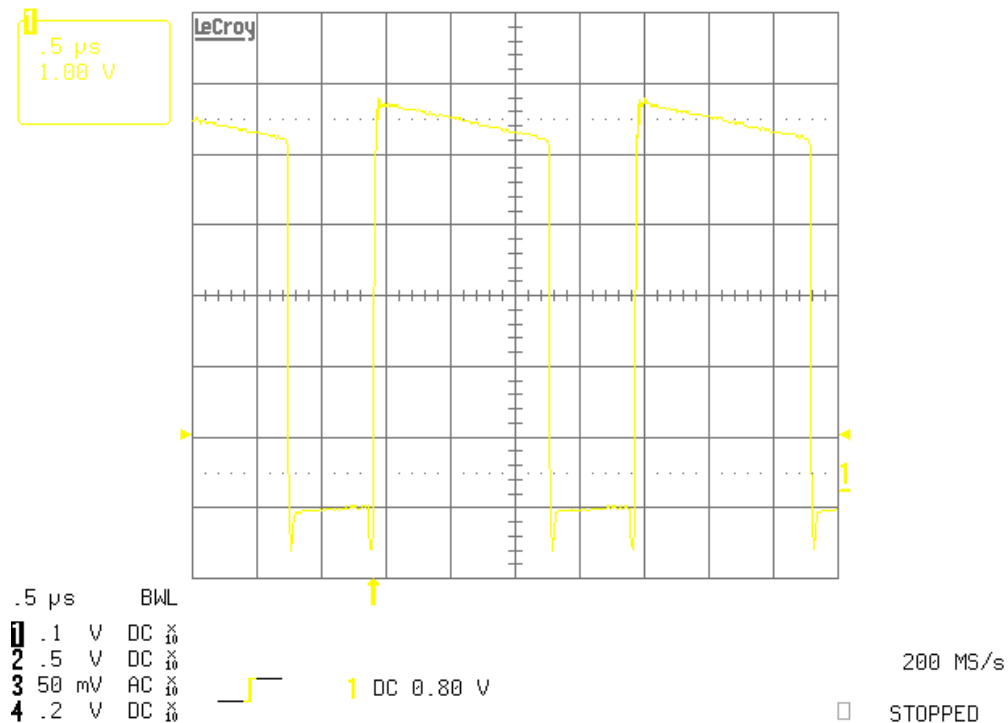
$$V_{in} = 10V, V_{out} = 3.3V, I_{out} = 1A$$


6 Switch Node

6.1 Switch Node without Input Bulk Capacitor

$V_{in} = 5V$, $V_{out} = 3.3V$, $I_{out} = 5A$, with 10uF ceramic input capacitor

15-Jul-10
11:35:13

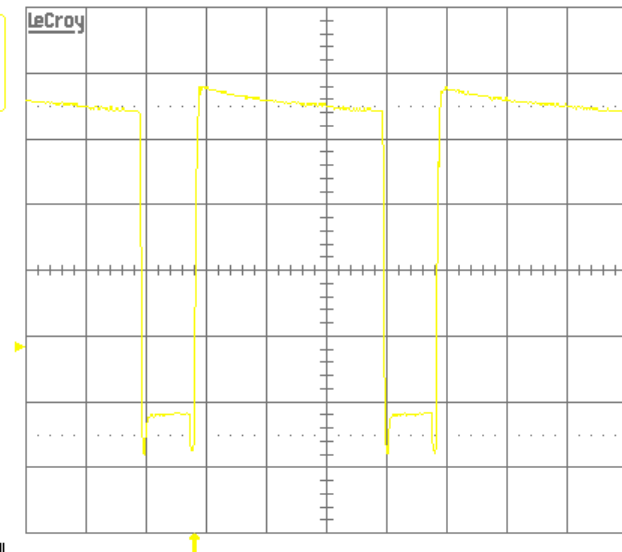


6.2 Switch Node with Input Bulk Capacitor

$V_{in} = 5V$, $V_{out} = 3.3V$, $I_{out} = 5A$, with 10uF ceramic + 100uF Aluminum input capacitors

15-Jul-10
13:19:18

.5 μs
1.00 V



.5 μs BWL
1 .1 V DC $\frac{1}{10}$
2 .5 V DC $\frac{1}{10}$
3 50 mV AC $\frac{1}{10}$
4 .2 V DC $\frac{1}{10}$



1 DC 0.80 V

200 MS/s

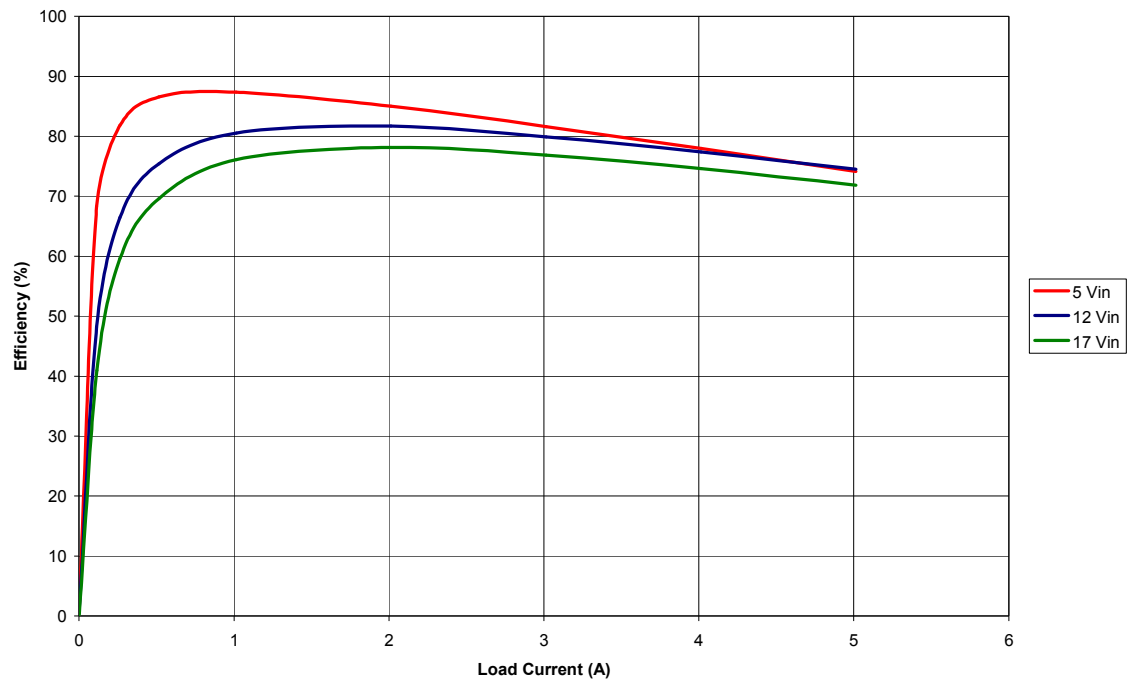
☐ STOPPED

7 Efficiency

7.1 Efficiency at 1.05V Out

$$V_{\text{out}} = 1.05\text{V}$$

1.05 Vout - Efficiency vs. Load Current

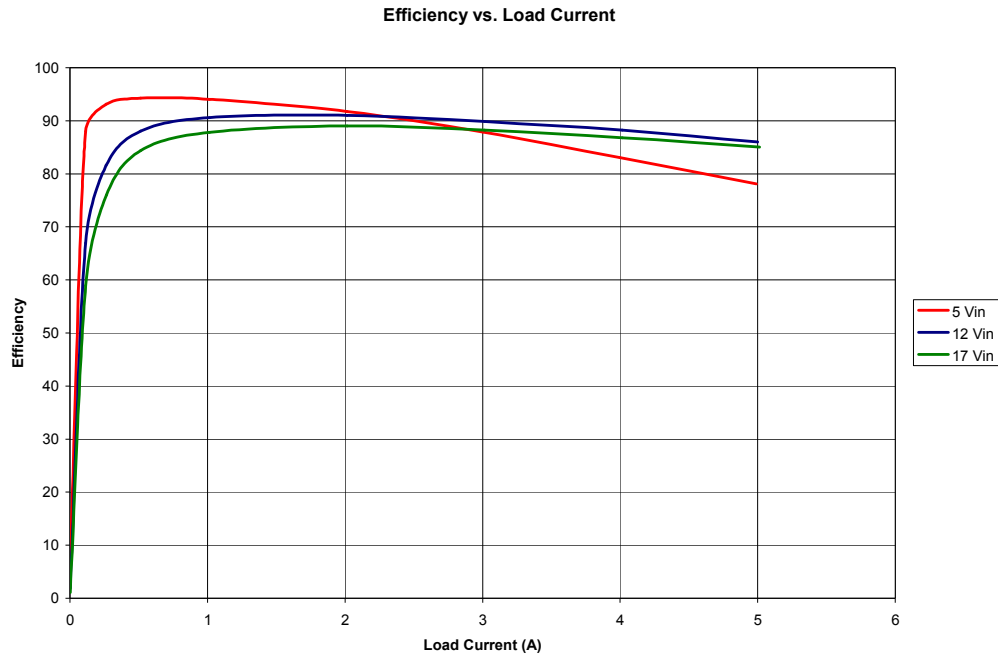


7.2 Efficiency at 3.3V Out

Efficiency Tests for 3.3V Out.

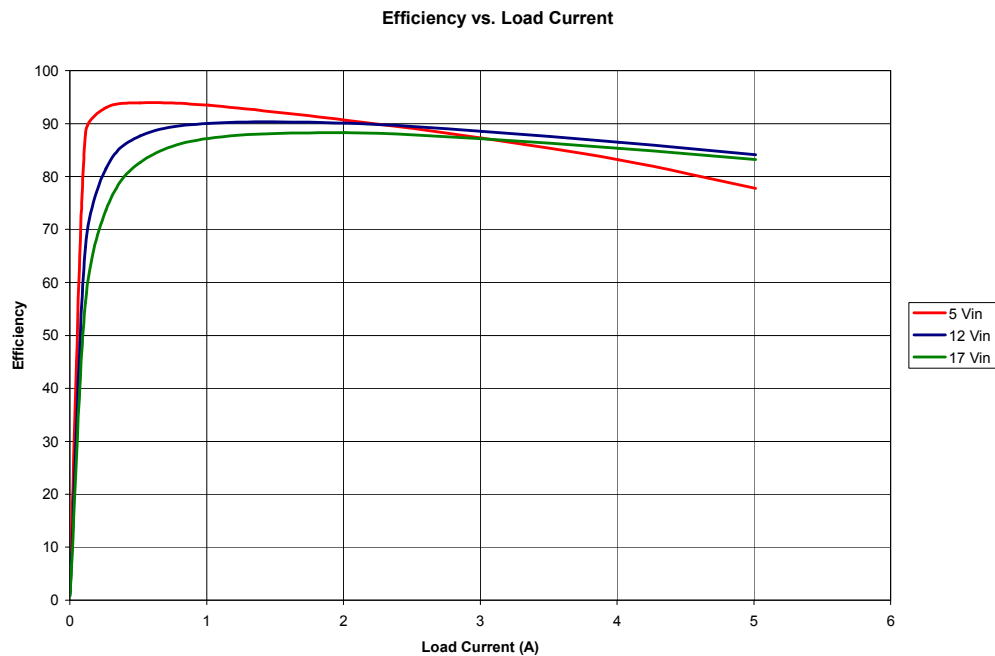
7.2.1 3.3V Out with 10uF Input Capacitor

$V_{out} = 3.3V$, 10uF Ceramic Input Capacitor



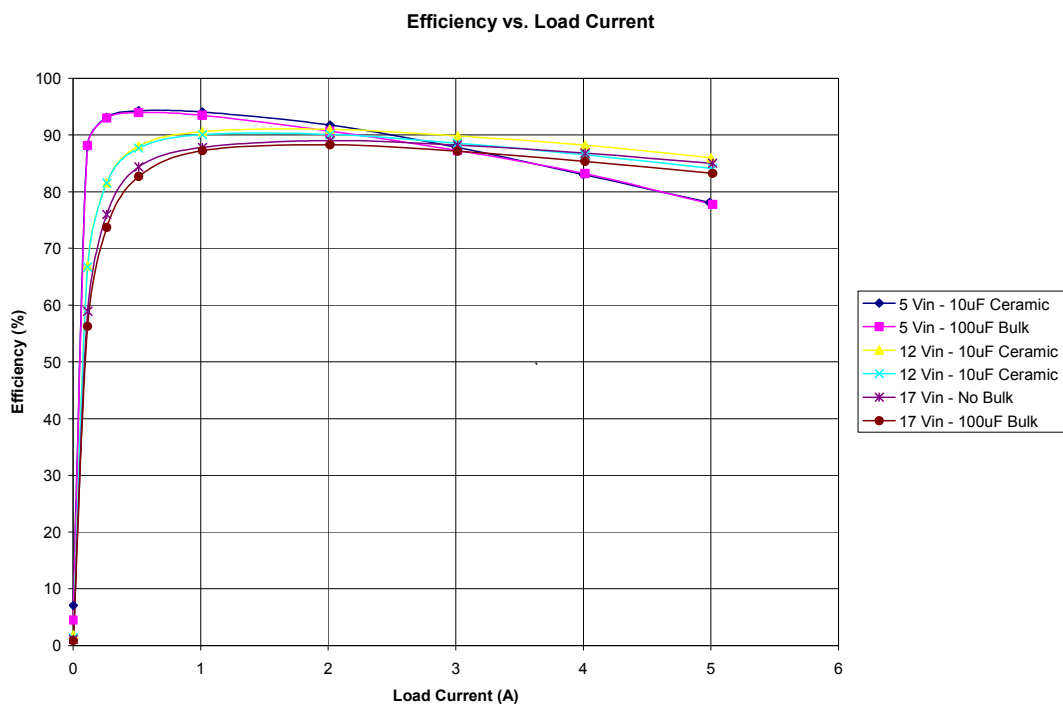
7.2.2 3.3V Out with 10uF and 100uF Bulk Input Capacitors

$V_{out} = 3.3V$, 10uF Ceramic + 100uF Aluminum Input Capacitors



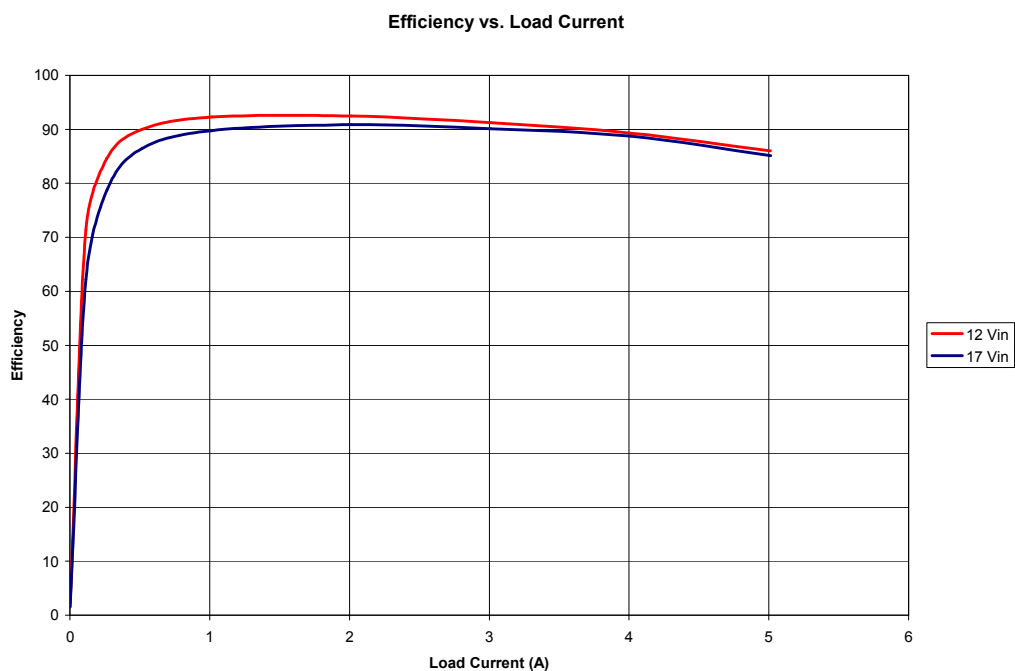
7.2.3 Comparison of Efficiency of 100uF Bulk and No Bulk

$V_{out} = 3.3V$



7.3 Efficiency at 5.0V Out

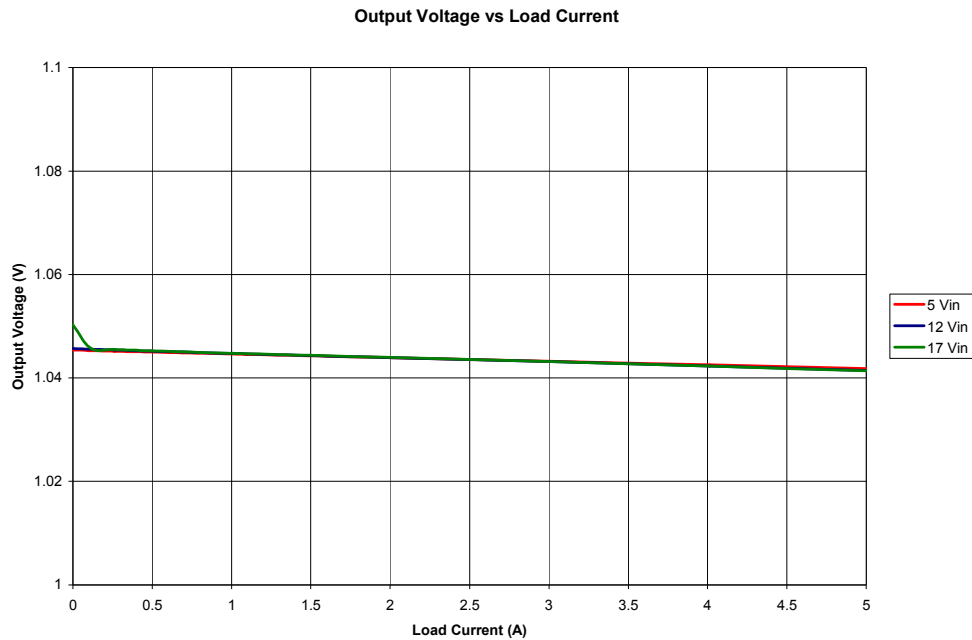
$V_{out} = 5.0V$



8 Load Regulation – Output Voltage vs Load Current

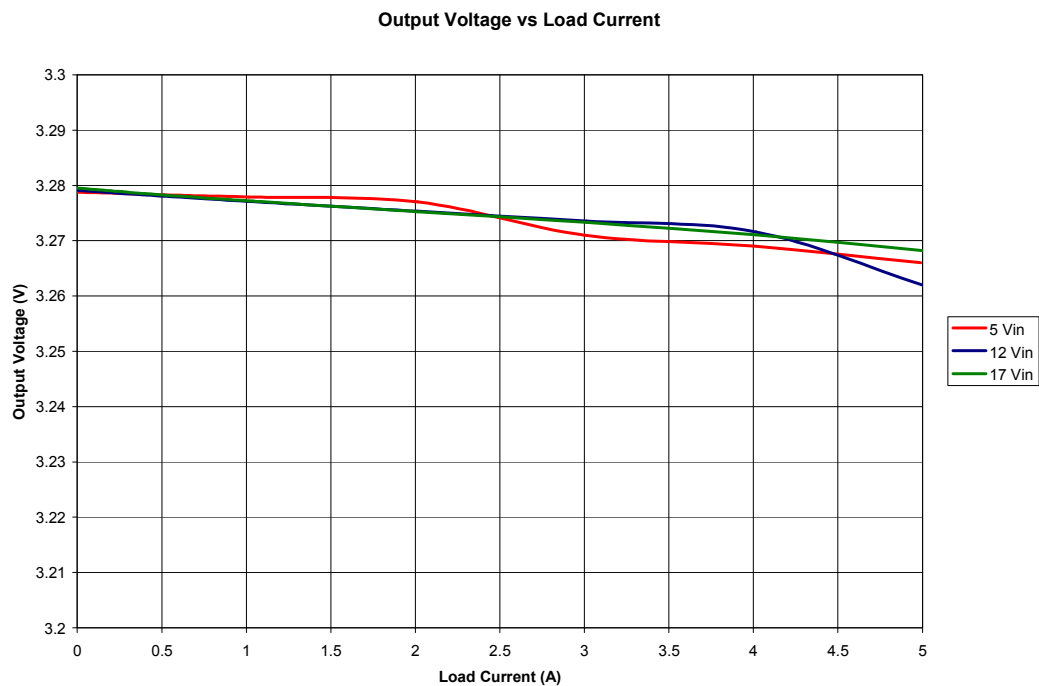
8.1 Load Regulation at 1.05V Out

$$V_{\text{out}} = 1.05\text{V}$$



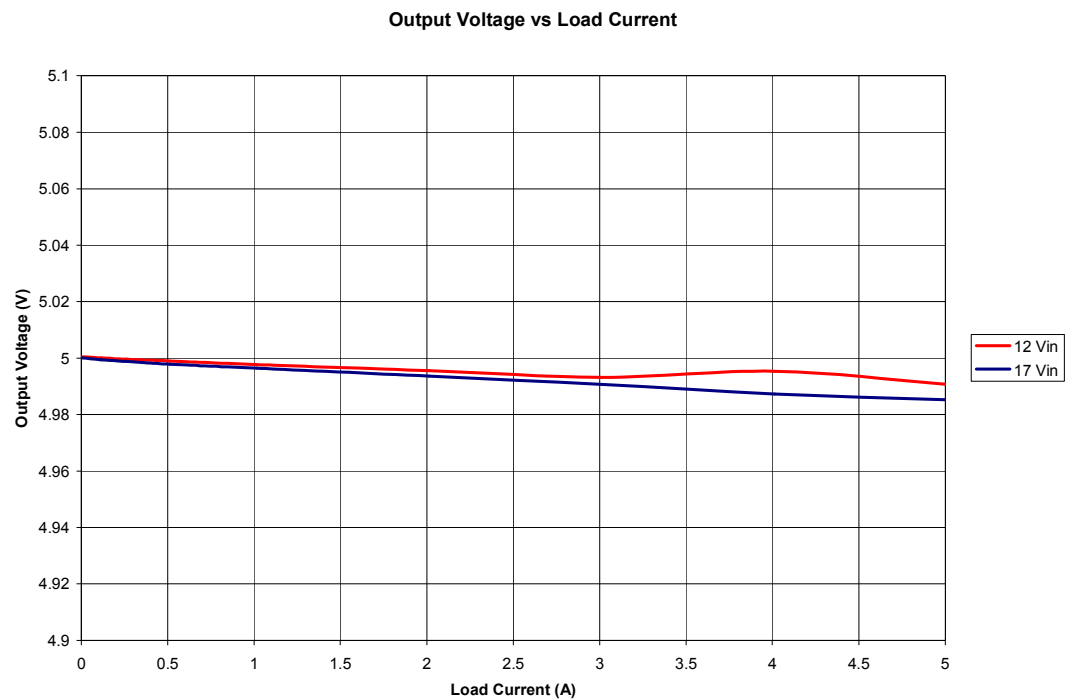
8.2 Load Regulation at 3.3V Out

$$V_{\text{out}} = 3.3\text{V}$$



8.3 Load Regulation at 5.0V Out

$$V_{\text{out}} = 5.0\text{V}$$



9 Thermal Images

$V_{in} = 10V$, $V_{out} = 3.3V$, $I_{out} = 5A$

Comments: If large amounts of INPUT current (3.5A-4A) are needed, the trace should be 2-3 times wider than the trace on this EVM.

9.1 Top



9.2 Bottom



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