

THN 15-1210N

% of FULL LOAD	Efficiency (%) - Vin = 9V	Efficiency (%) - Vin = 12V	Efficiency (%) - Vin = 18V
10	82	80	79
20	86	85	84
30	87	86	85
40	88	85	83
50	88.5	87	88
60	88	86	87
70	88	88	88
80	87.5	88.5	88.5
90	87	88.5	88.5
100	88	87	86

Input Voltage (VDC)	100% of Full Load Efficiency (%)	50% of Full Load Efficiency (%)	25% of Full Load Efficiency (%)
9	89.0	87.0	86.0
10	87.0	86.0	85.0
11	87.5	87.0	86.0
12	88.0	87.5	86.5
13	88.0	87.5	86.5
14	88.0	87.5	86.5
15	88.5	88.5	87.0
16	88.5	88.5	86.5
17	88.5	88.5	86.0
18	88.5	88.5	85.5

Figure 10 is a line graph showing Power Loss (W) on the Y-axis (ranging from 0 to 2.4) versus % of Full Load on the X-axis (ranging from 10 to 100). Three curves are plotted for different input voltages (V_{in}):

- $V_{in} = 9V$ (Red line)
- $V_{in} = 12V$ (Blue line)
- $V_{in} = 18V$ (Green line)

The graph illustrates that power loss increases with the percentage of full load for all input voltages. The 9V input voltage results in the highest power loss, while the 18V input voltage results in the lowest power loss. Arrows indicate the load range for each input voltage: 9V from ~38% to ~65%, 12V from ~35% to ~58%, and 18V from ~35% to ~52%.

Oscilloscope screenshot showing a signal trace (yellow) on a grid. The signal exhibits a sharp positive peak followed by a sharp negative peak. The signal is labeled 'C1'.

Timebase: 500 ns

Trigger: 100 mV

Stop: 500 ns

Probe: 100 mV

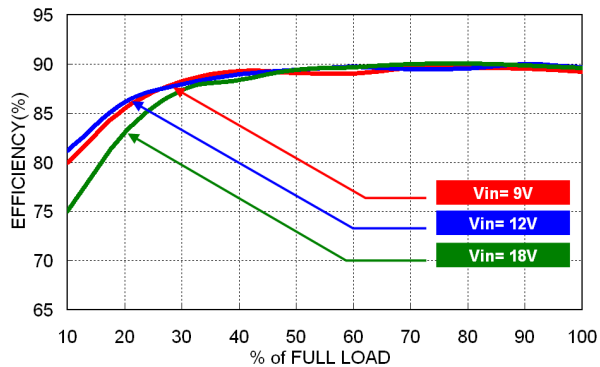
The screenshot shows two waveforms on a grid. The top trace, labeled 'Vin', is a square wave switching between 0V and 5V. The bottom trace, labeled 'Vout', is a smoothed version of the input, showing the RC network's response. The scope settings at the bottom are: 2.00 V/div, 5.00 V/div, 10.0 ms/div, 4.00 MS, and Trigger Edge at 3.80 V.

The oscilloscope displays two waveforms: **Von/off** (magenta) and **Vout** (yellow). The **Von/off** signal is a square wave that transitions from low to high at approximately 10 ns. The **Vout** signal is a ramp-up signal that starts at 0 V and rises to approximately 4.5 V over the 200 ns period. The x-axis represents time from 0 to 200 ns, and the y-axis represents voltage from 0 to 5.00 V.

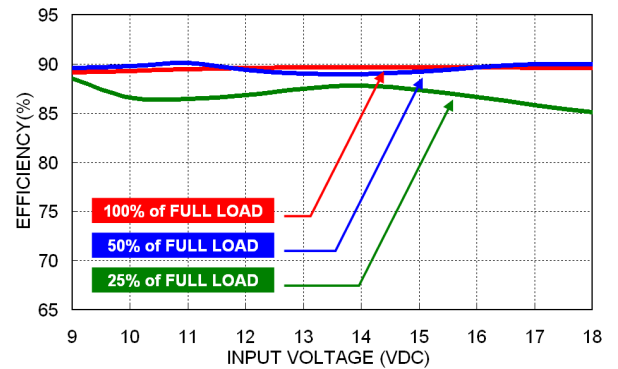
Time (ns)	Von/off (V)	Vout (V)
0	0	0
10	4.5	0
20	4.5	0.5
50	4.5	1.5
100	4.5	3.5
150	4.5	4.2
200	4.5	4.5

THN 15-1211N

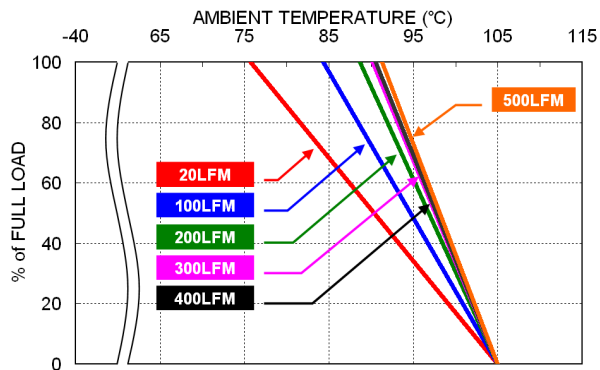
Efficiency versus Output Load



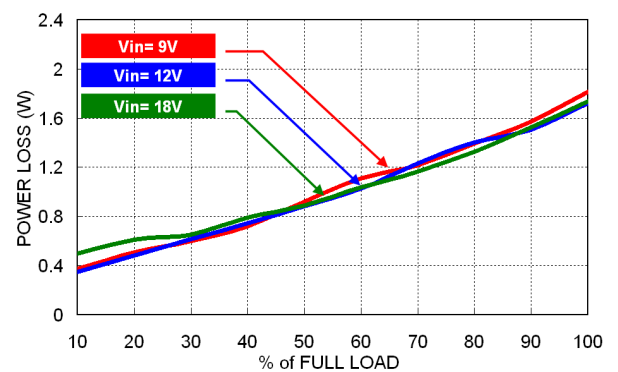
Efficiency versus Input Voltage



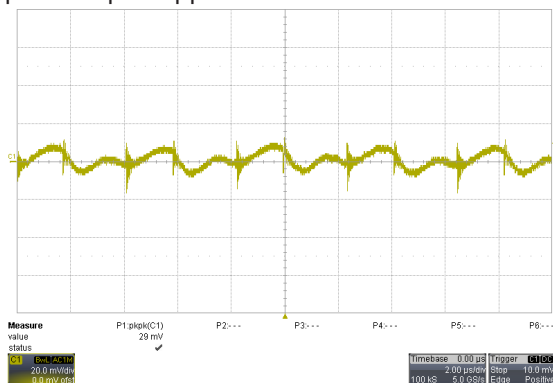
Derating Output Load versus Ambient Temperature



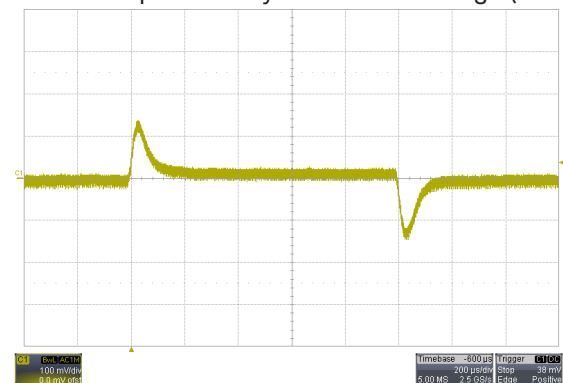
Power Dissipation versus Output Load



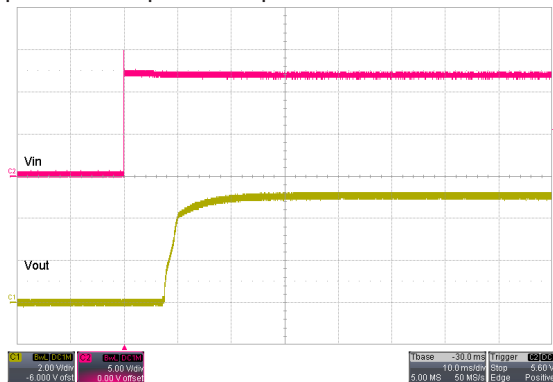
Typical Output Ripple and Noise



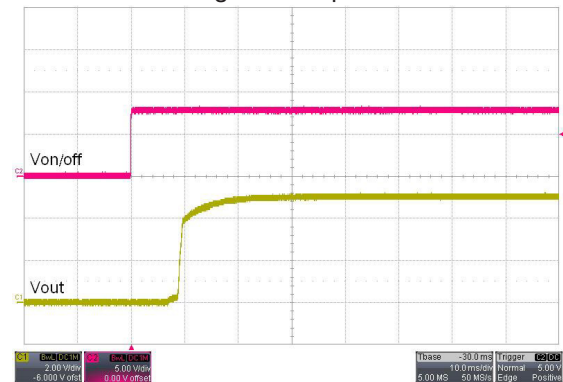
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



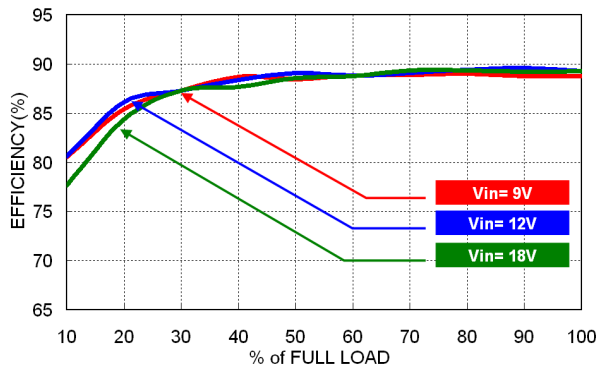
Remote on/off Voltage Start-Up Characteristic



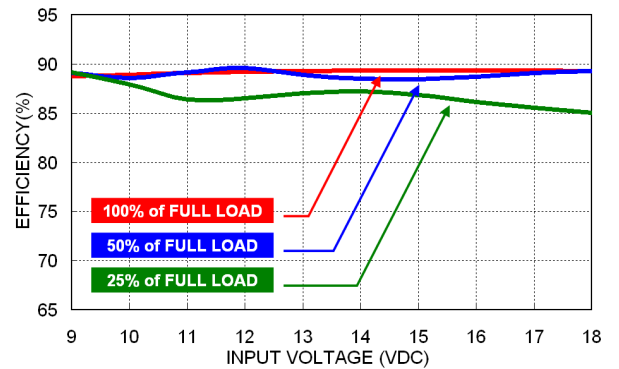
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-1212N

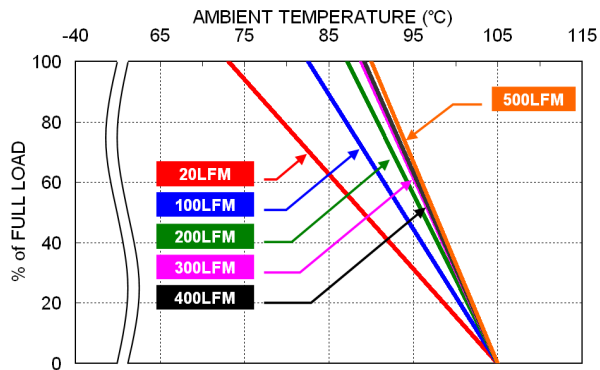
Efficiency versus Output Load



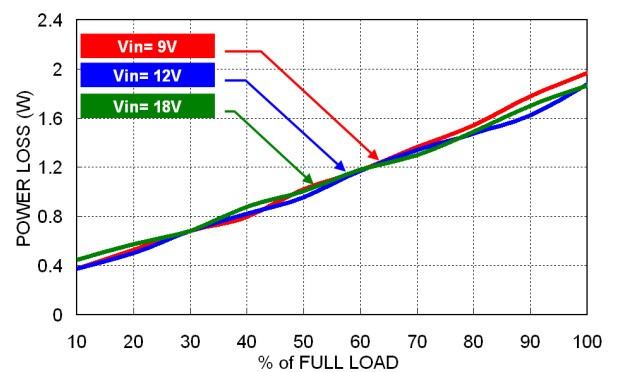
Efficiency versus Input Voltage



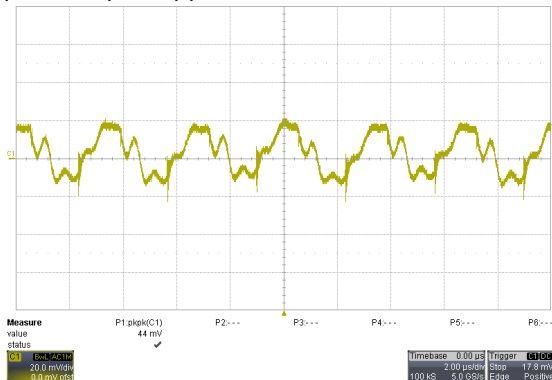
Derating Output Load versus Ambient Temperature



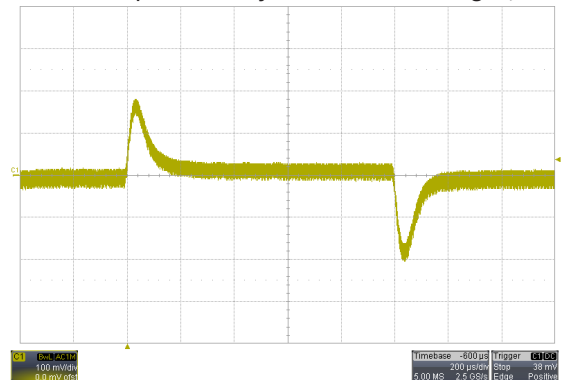
Power Dissipation versus Output Load



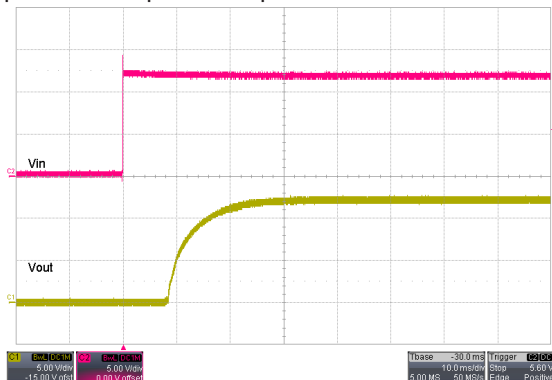
Typical Output Ripple and Noise



Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



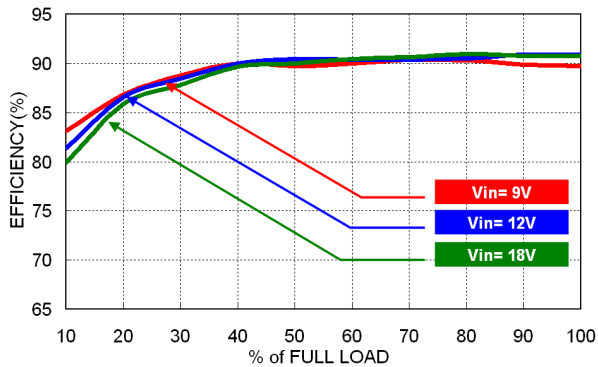
Remote on/off Voltage Start-Up Characteristic



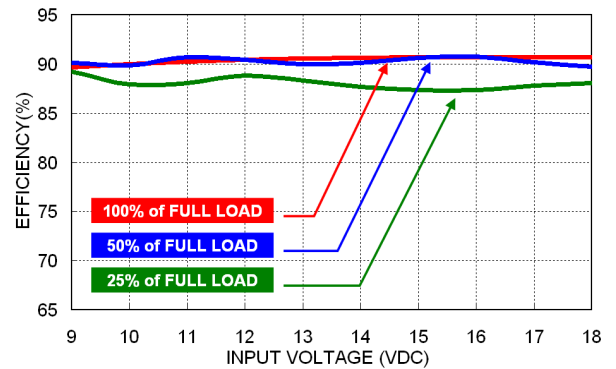
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-1213N

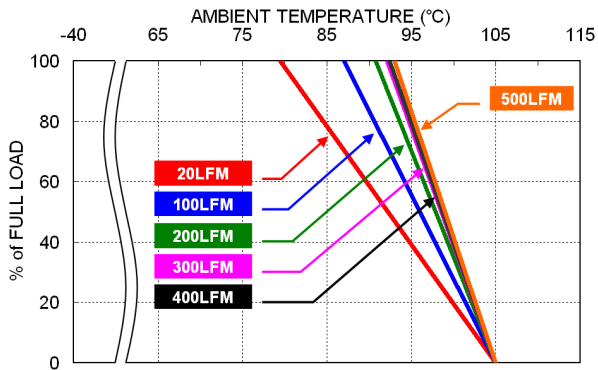
Efficiency versus Output Load



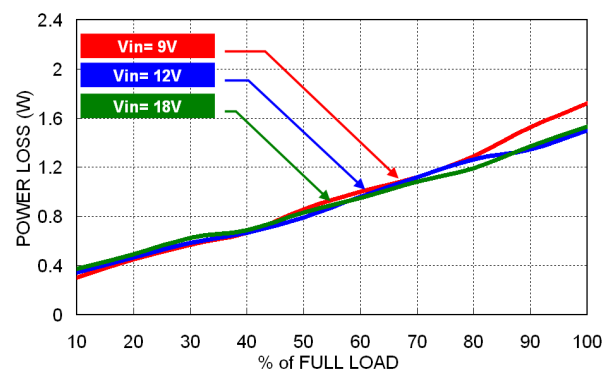
Efficiency versus Input Voltage



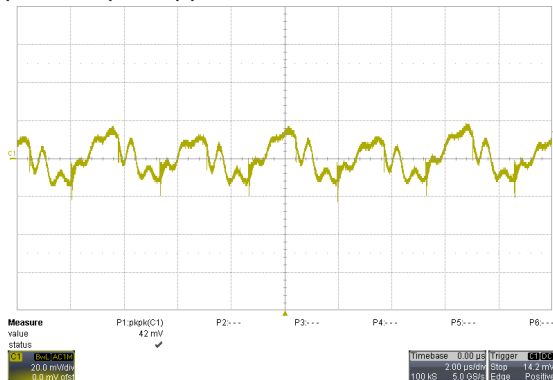
Derating Output Load versus Ambient Temperature



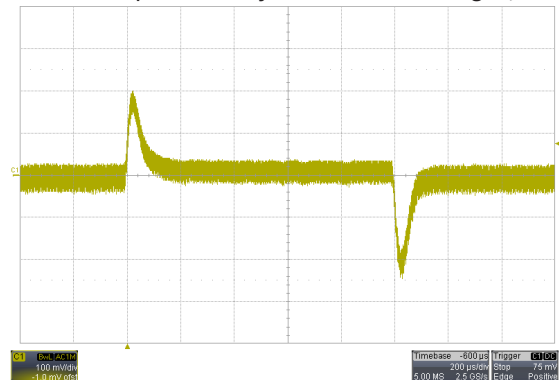
Power Dissipation versus Output Load



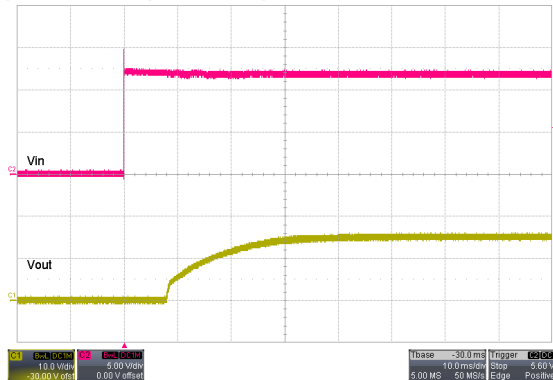
Typical Output Ripple and Noise



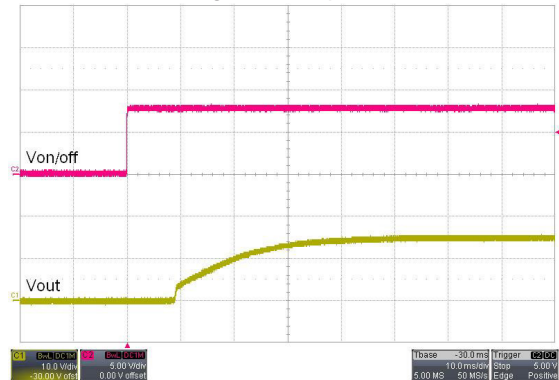
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic

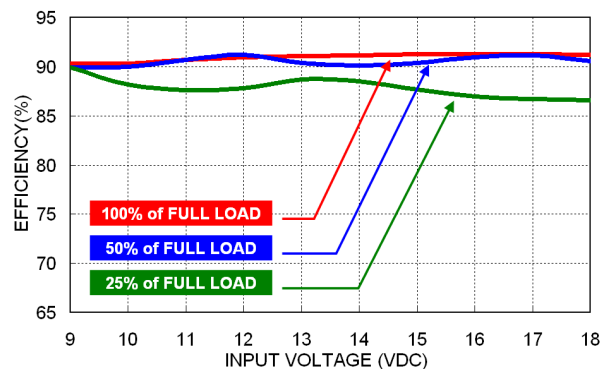
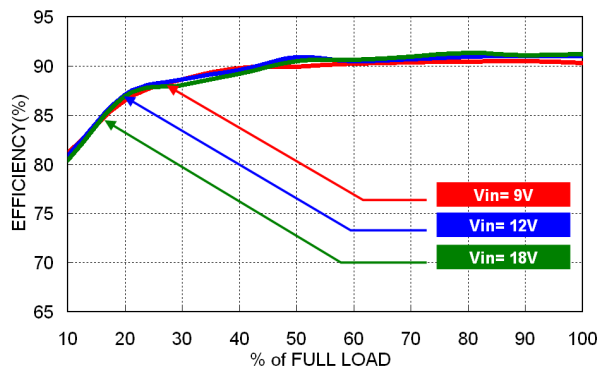


Remote on/off Voltage Start-Up Characteristic

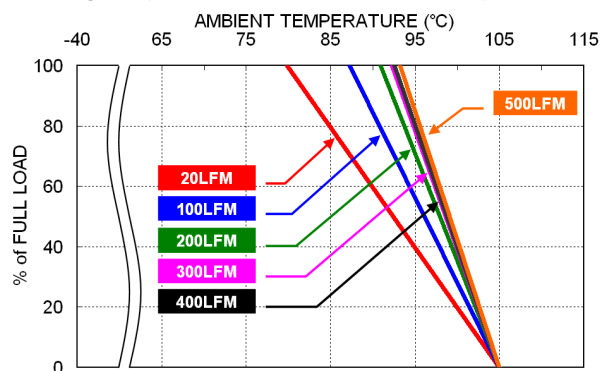


All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

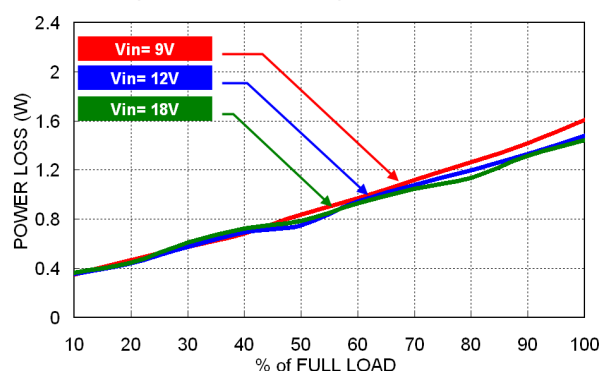
Efficiency versus Output Load



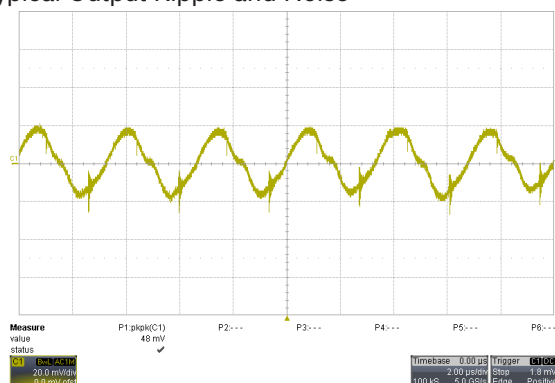
Derating Output Load versus Ambient Temperature



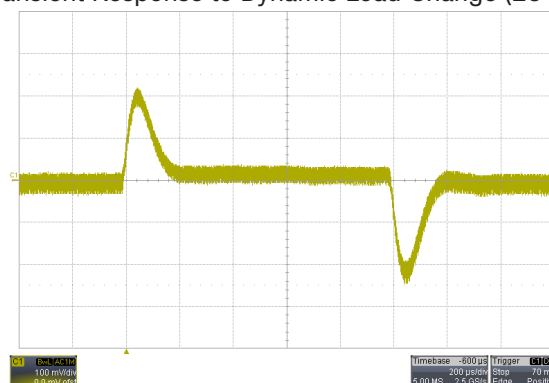
Power Dissipation versus Output Load



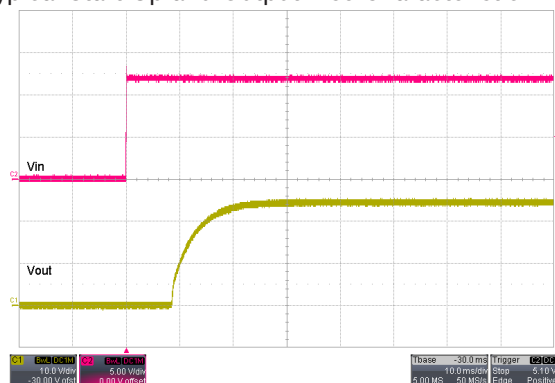
Typical Output Ripple and Noise



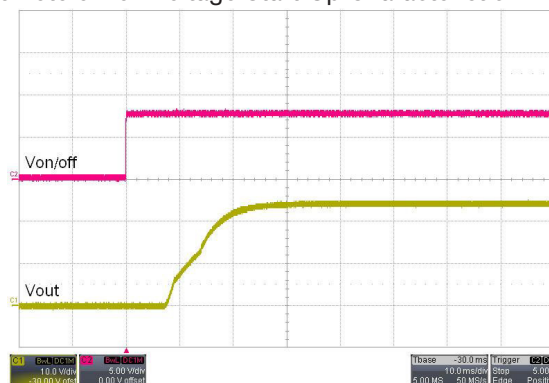
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



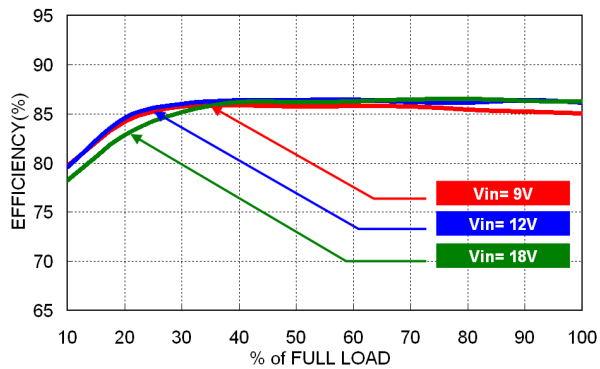
Remote on/off Voltage Start-Up Characteristic



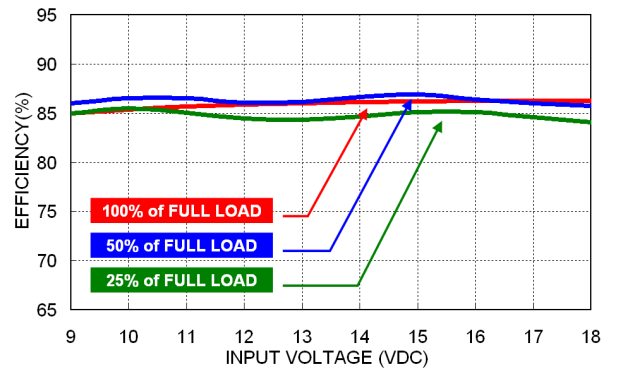
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-1221N

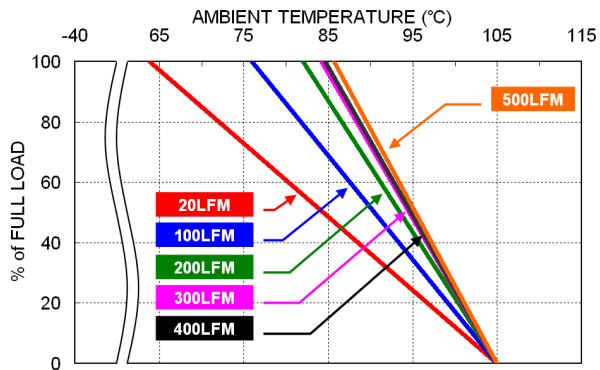
Efficiency versus Output Load



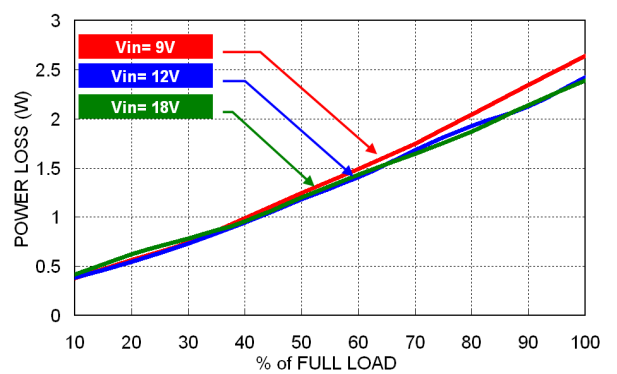
Efficiency versus Input Voltage



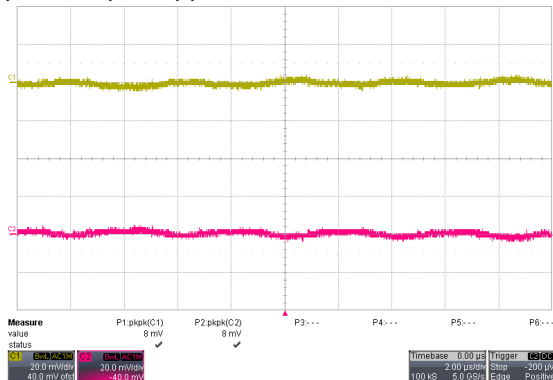
Derating Output Load versus Ambient Temperature



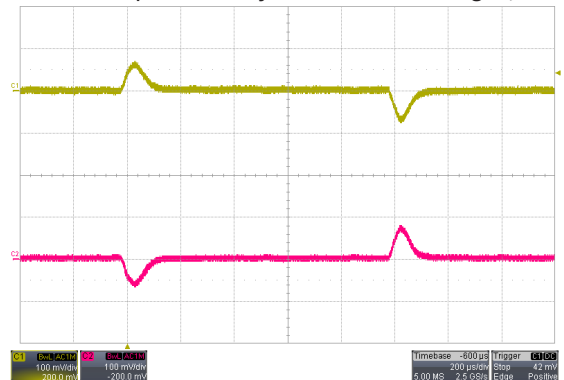
Power Dissipation versus Output Load



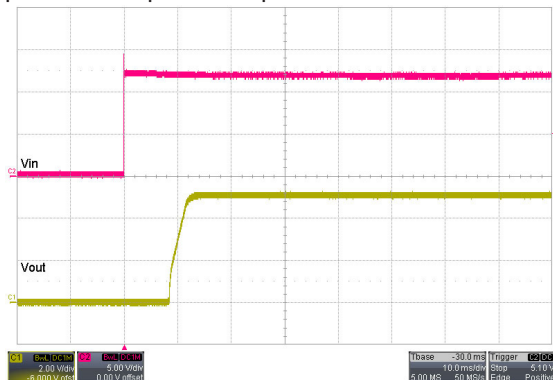
Typical Output Ripple and Noise



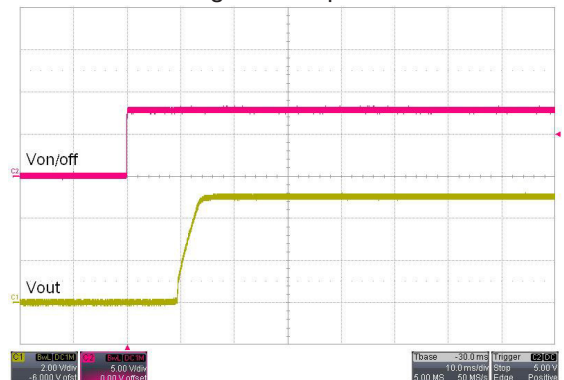
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



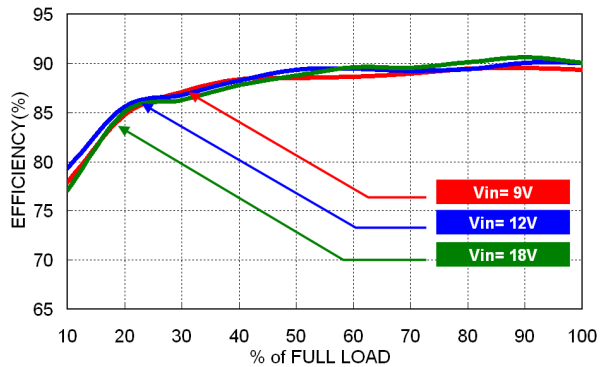
Remote on/off Voltage Start-Up Characteristic



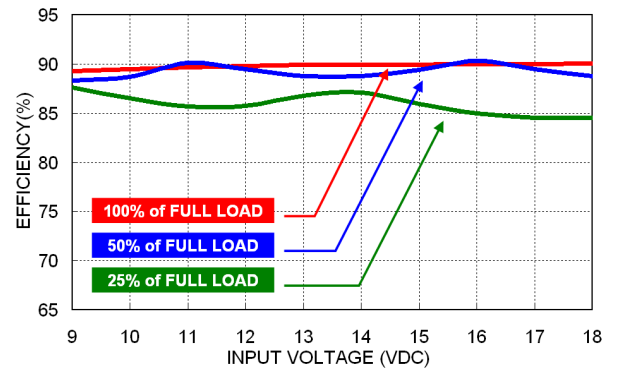
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-1222N

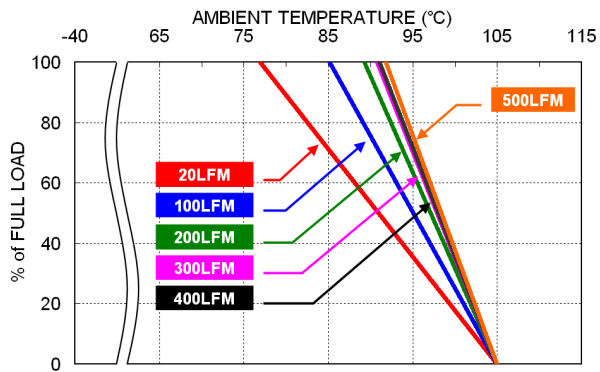
Efficiency versus Output Load



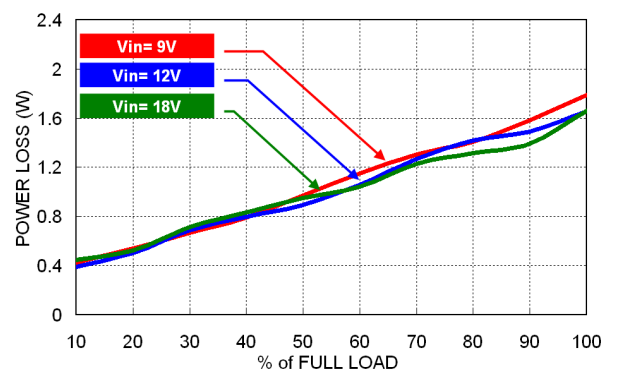
Efficiency versus Input Voltage



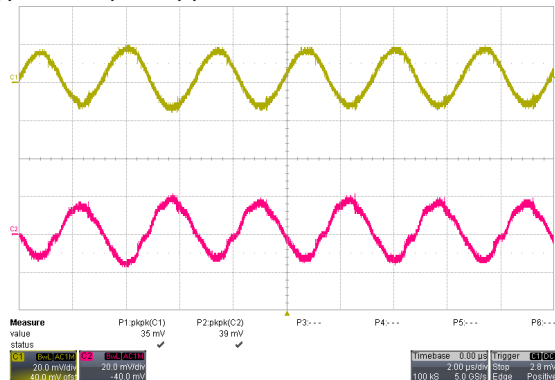
Derating Output Load versus Ambient Temperature



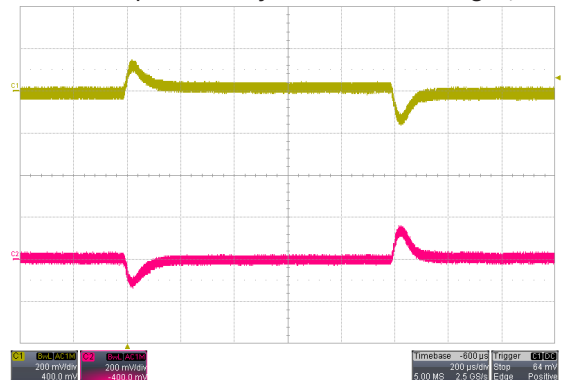
Power Dissipation versus Output Load



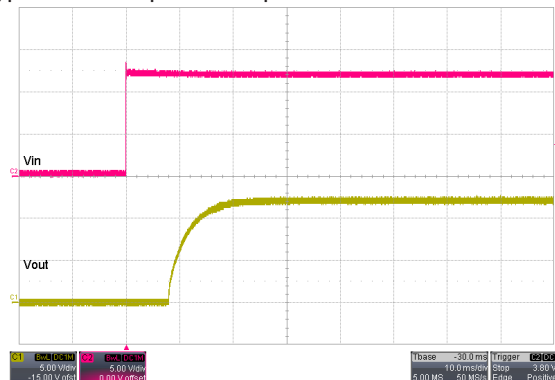
Typical Output Ripple and Noise



Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



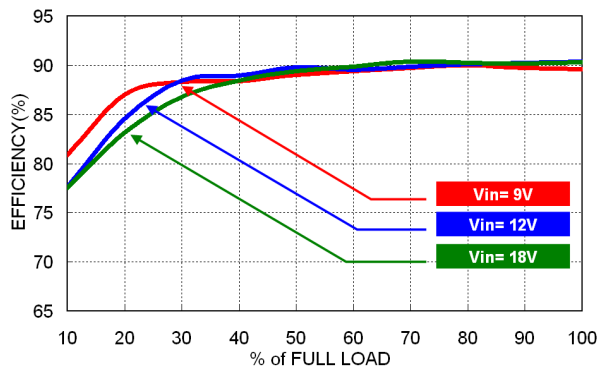
Remote on/off Voltage Start-Up Characteristic



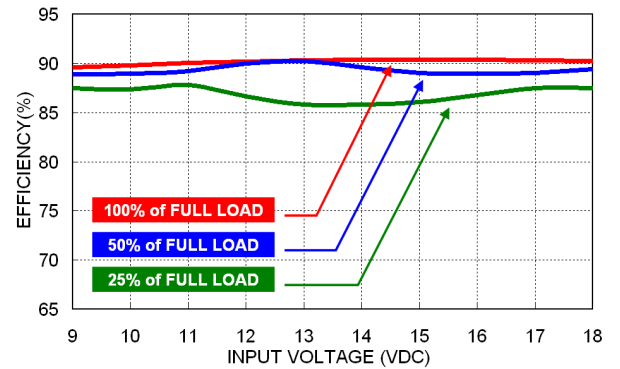
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-1223N

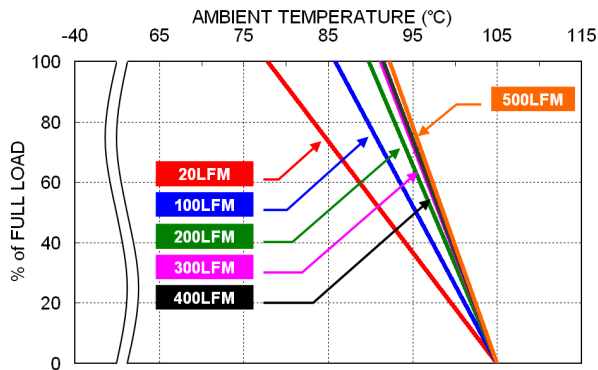
Efficiency versus Output Load



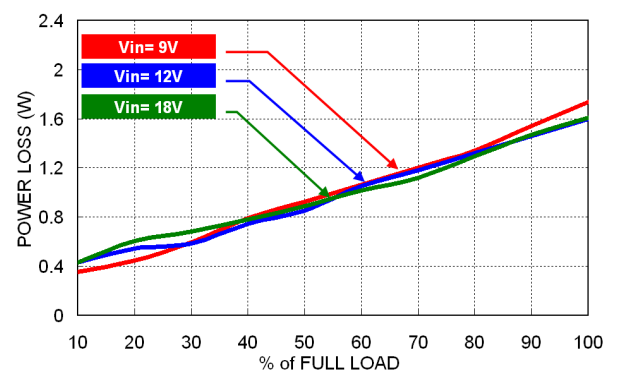
Efficiency versus Input Voltage



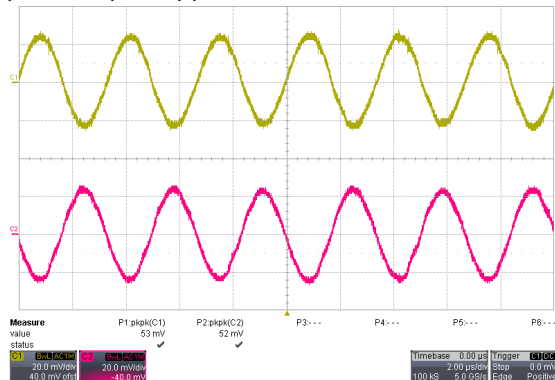
Derating Output Load versus Ambient Temperature



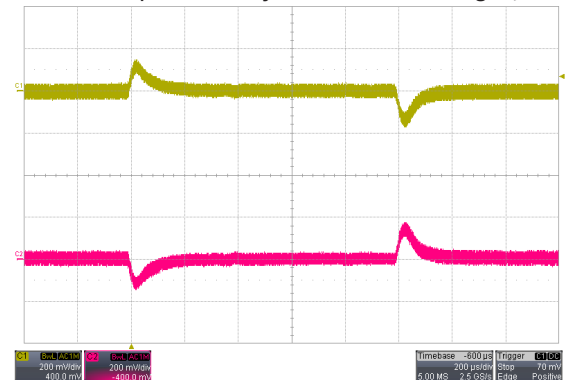
Power Dissipation versus Output Load



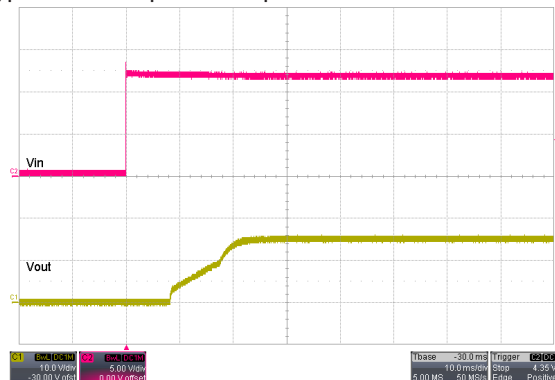
Typical Output Ripple and Noise



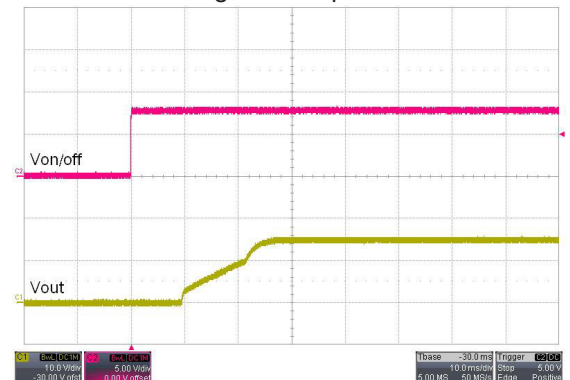
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



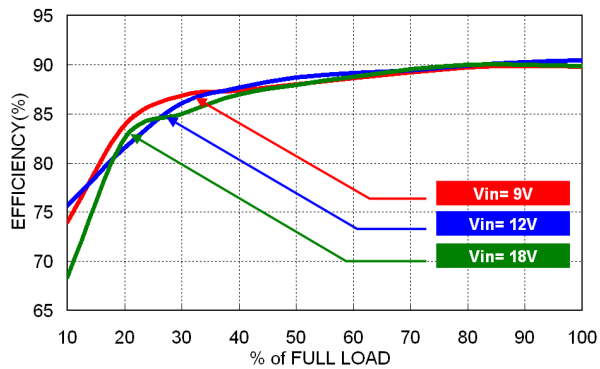
Remote on/off Voltage Start-Up Characteristic



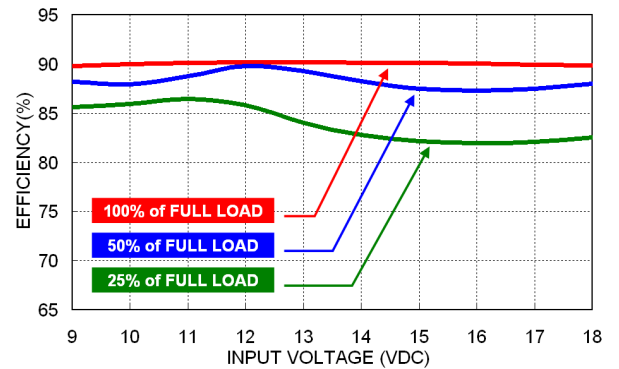
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-1225N

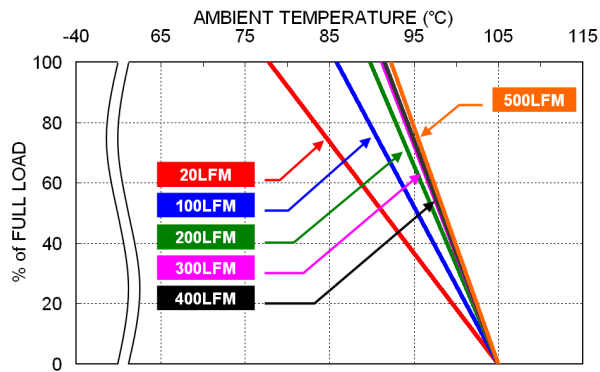
Efficiency versus Output Load



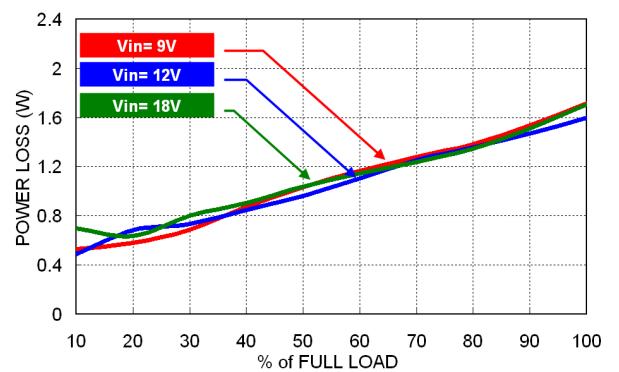
Efficiency versus Input Voltage



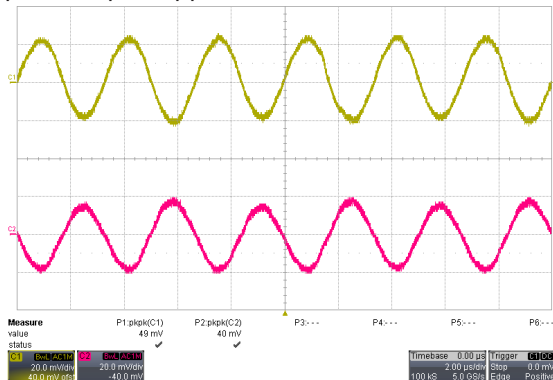
Derating Output Load versus Ambient Temperature



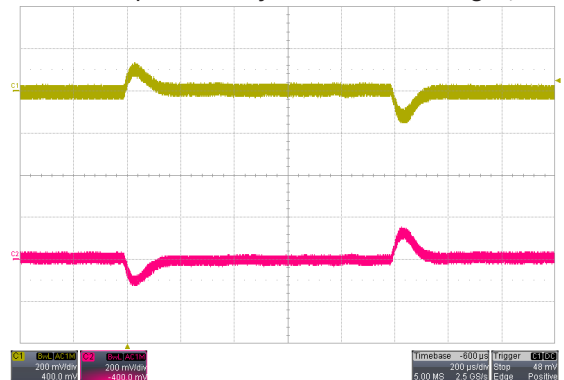
Power Dissipation versus Output Load



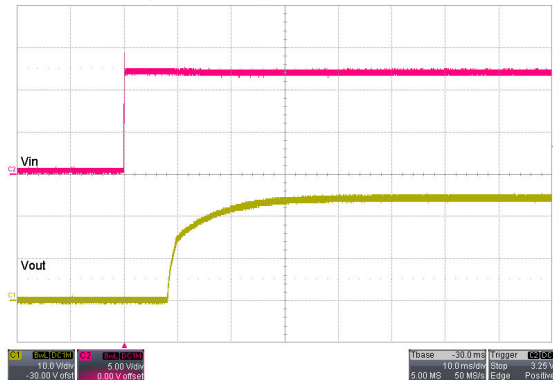
Typical Output Ripple and Noise



Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



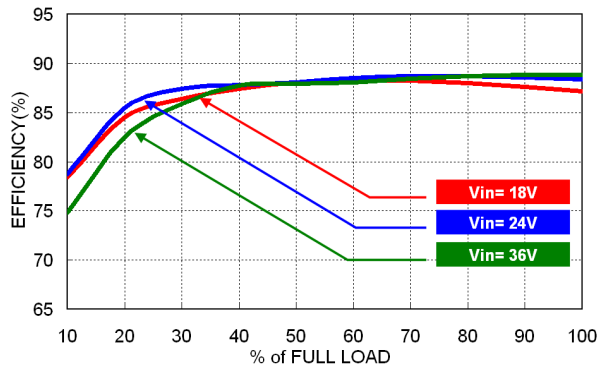
Remote on/off Voltage Start-Up Characteristic



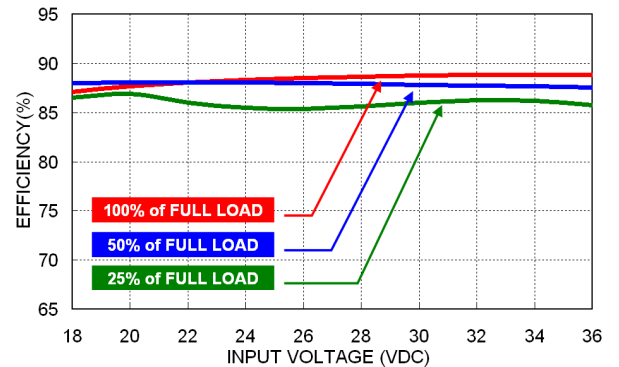
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-2410N

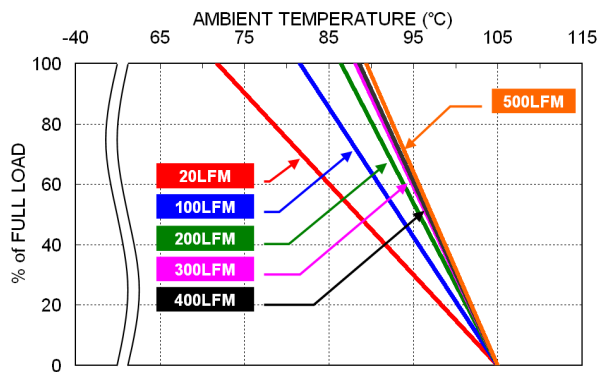
Efficiency versus Output Load



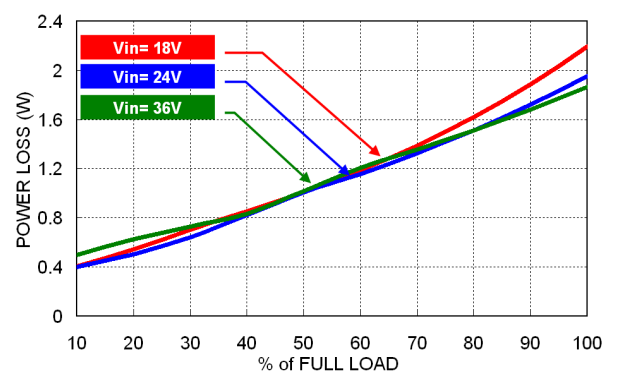
Efficiency versus Input Voltage



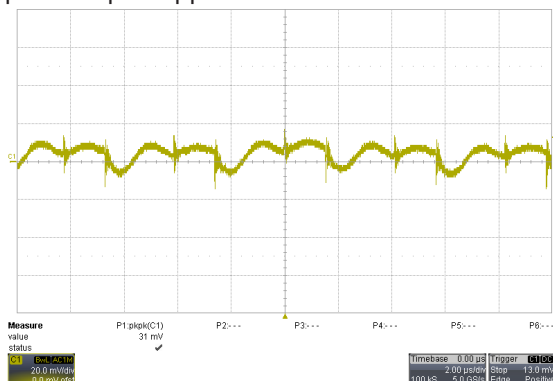
Derating Output Load versus Ambient Temperature



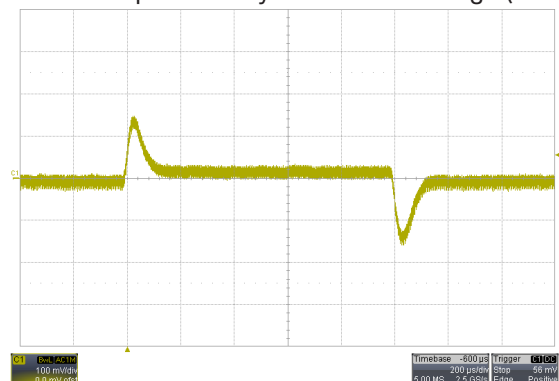
Power Dissipation versus Output Load



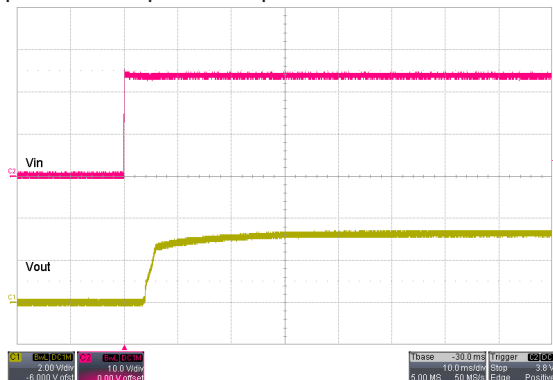
Typical Output Ripple and Noise



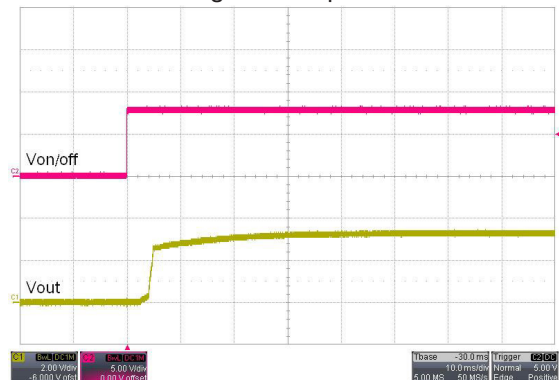
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



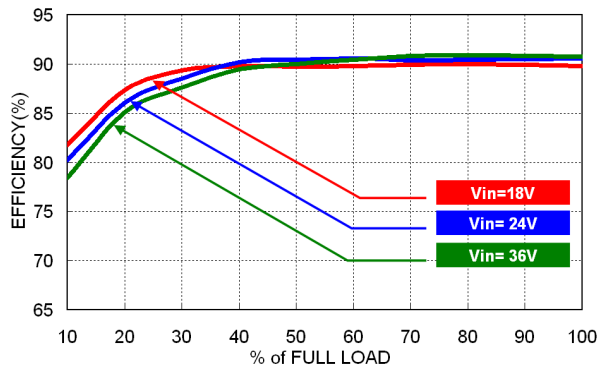
Remote on/off Voltage Start-Up Characteristic



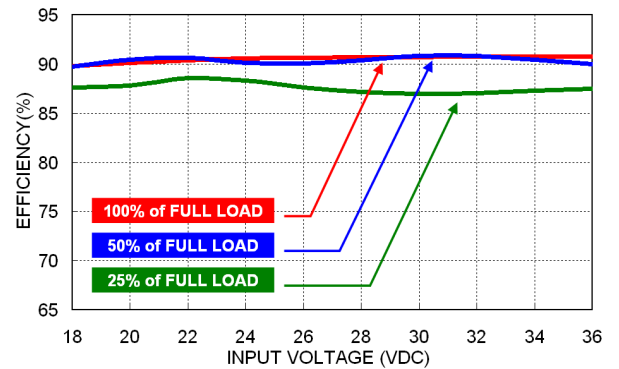
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-2411N

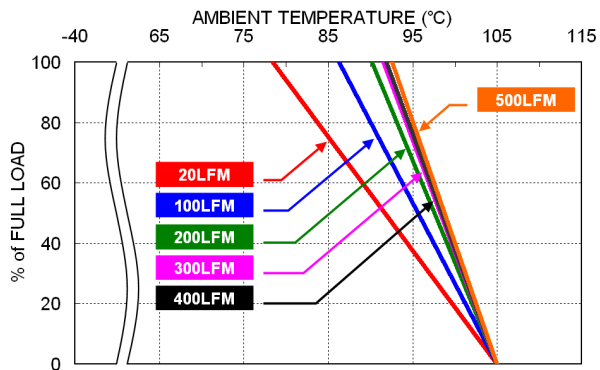
Efficiency versus Output Load



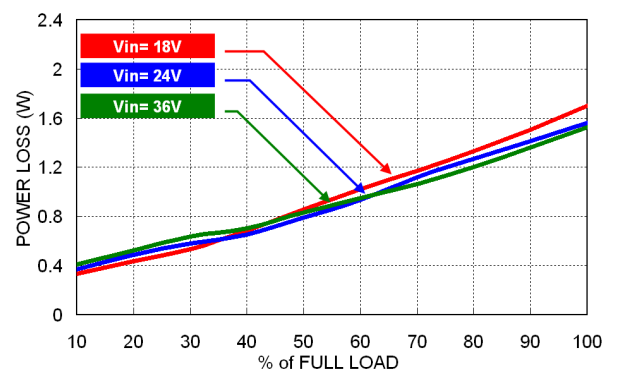
Efficiency versus Input Voltage



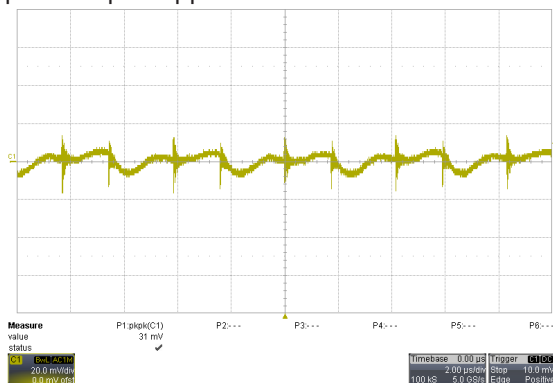
Derating Output Load versus Ambient Temperature



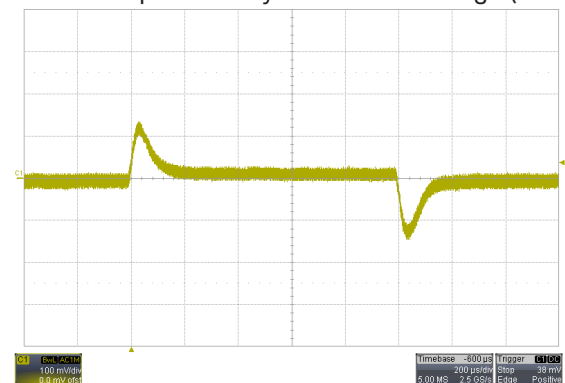
Power Dissipation versus Output Load



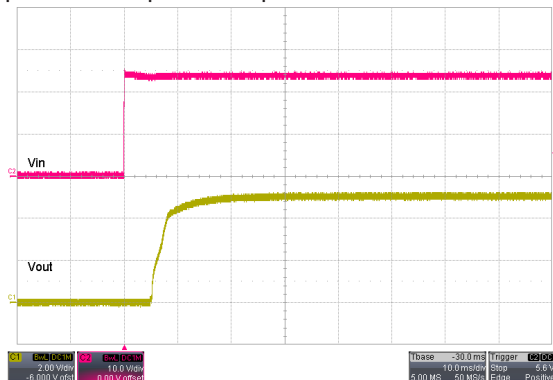
Typical Output Ripple and Noise



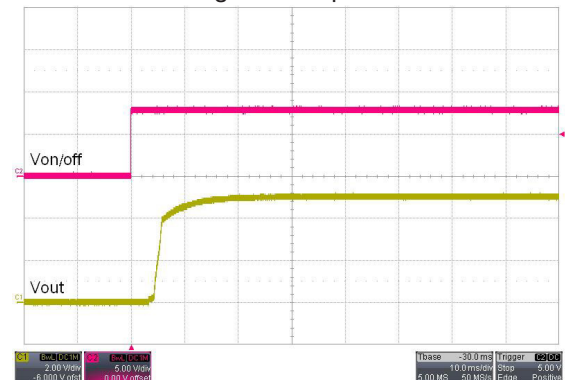
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



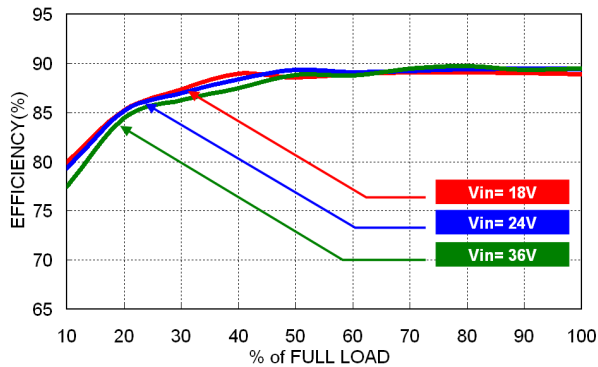
Remote on/off Voltage Start-Up Characteristic



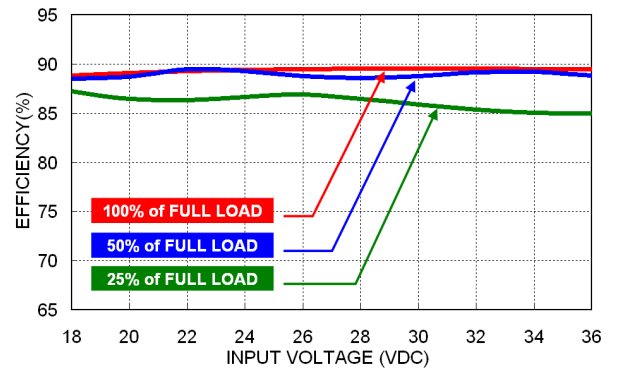
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-2412N

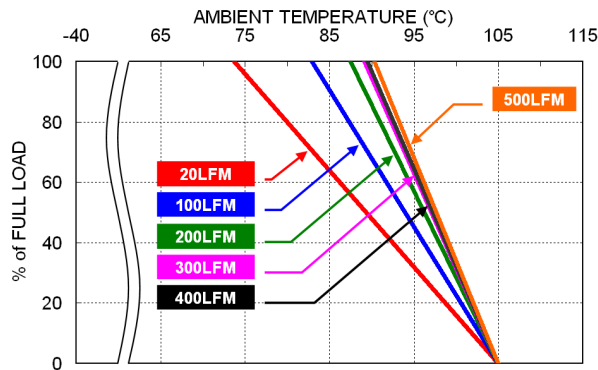
Efficiency versus Output Load



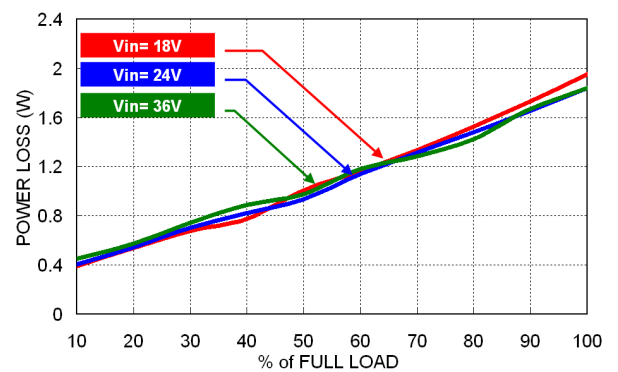
Efficiency versus Input Voltage



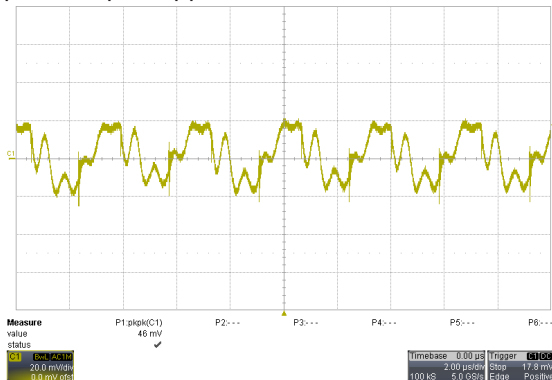
Derating Output Load versus Ambient Temperature



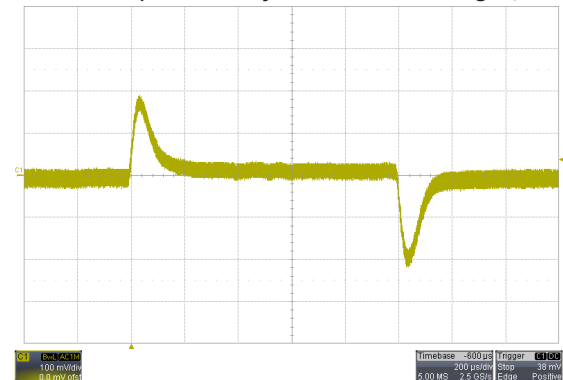
Power Dissipation versus Output Load



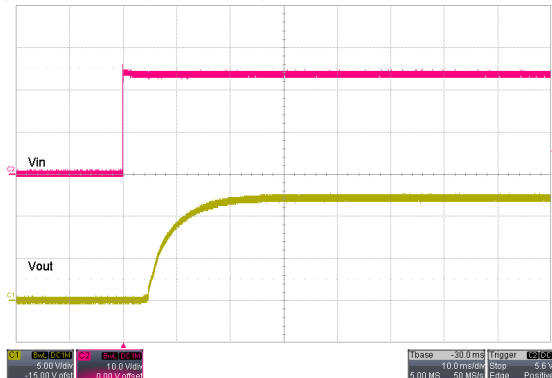
Typical Output Ripple and Noise



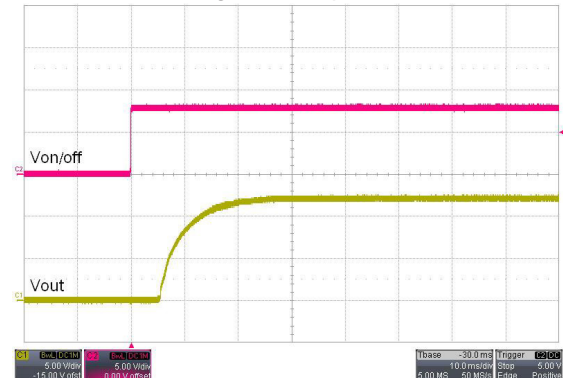
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



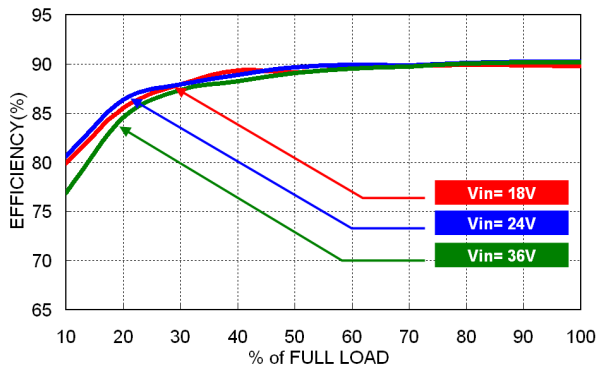
Remote on/off Voltage Start-Up Characteristic



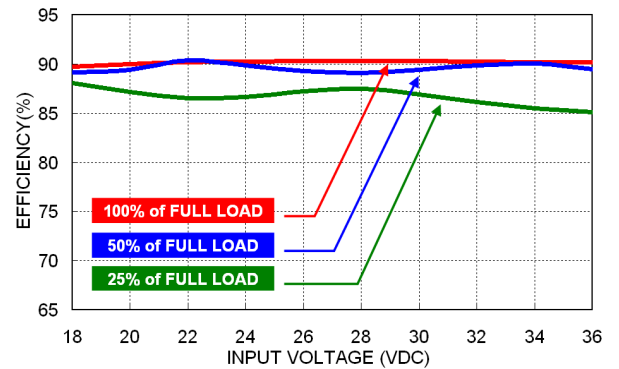
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-2413N

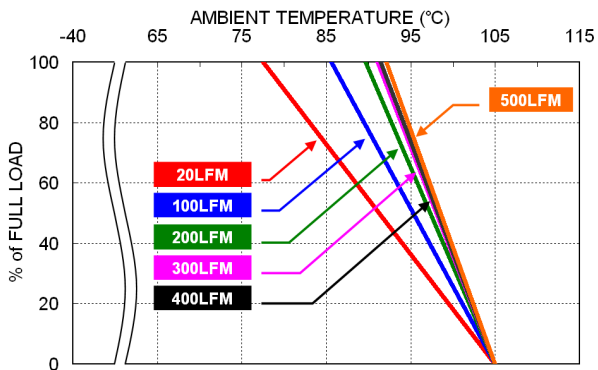
Efficiency versus Output Load



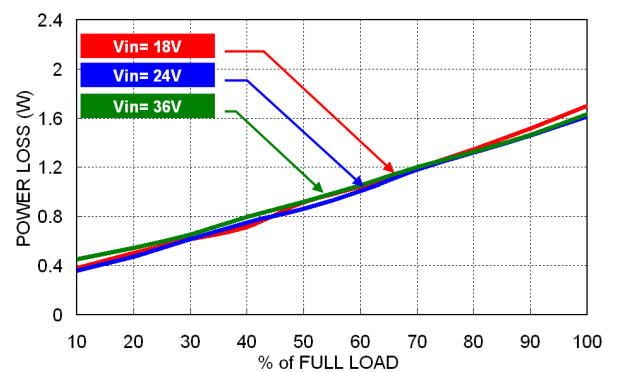
Efficiency versus Input Voltage



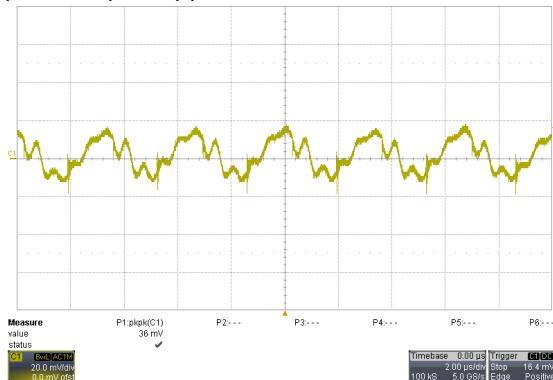
Derating Output Load versus Ambient Temperature



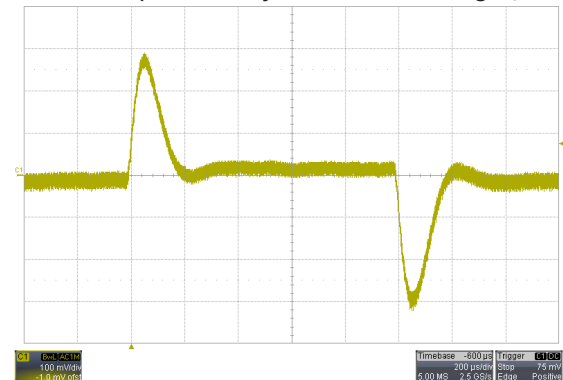
Power Dissipation versus Output Load



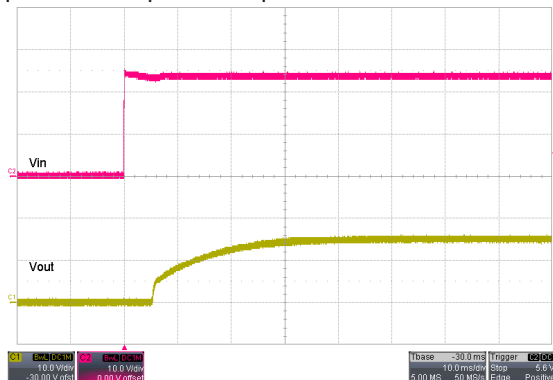
Typical Output Ripple and Noise



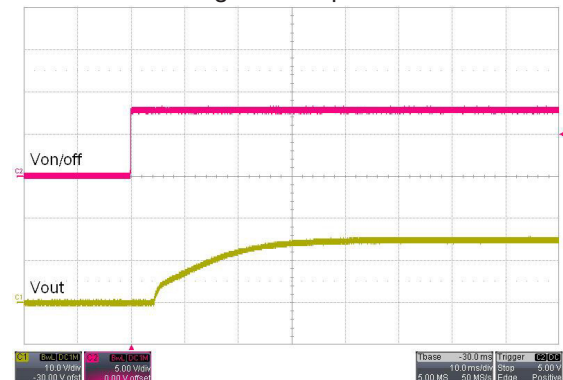
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



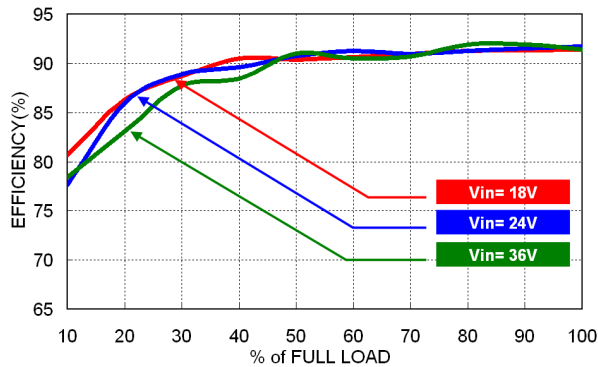
Remote on/off Voltage Start-Up Characteristic



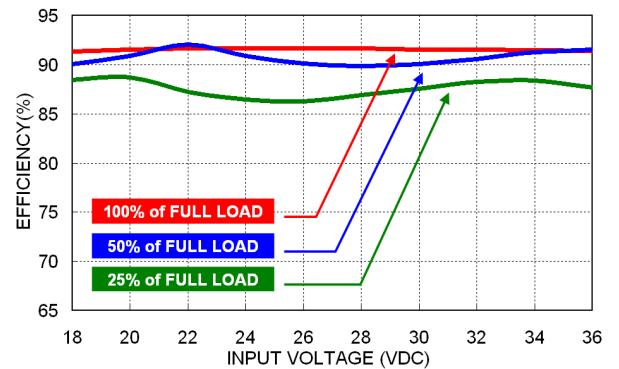
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-2415N

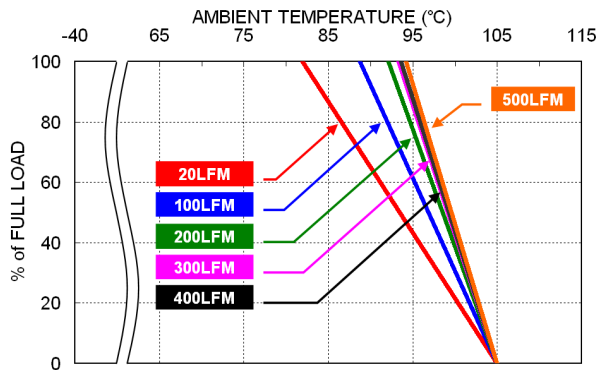
Efficiency versus Output Load



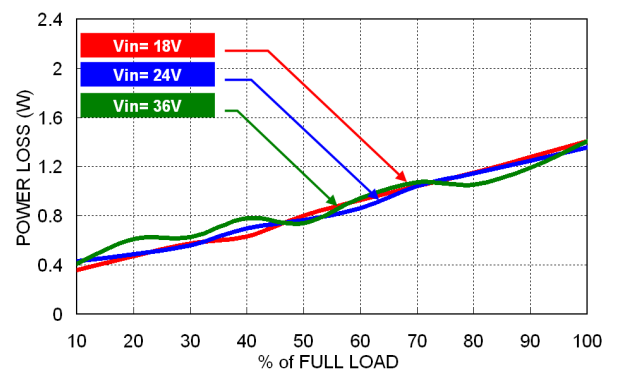
Efficiency versus Input Voltage



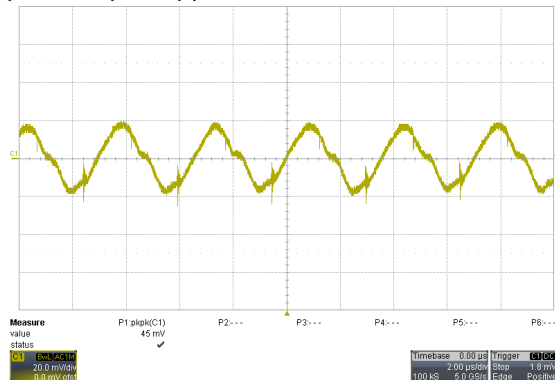
Derating Output Load versus Ambient Temperature



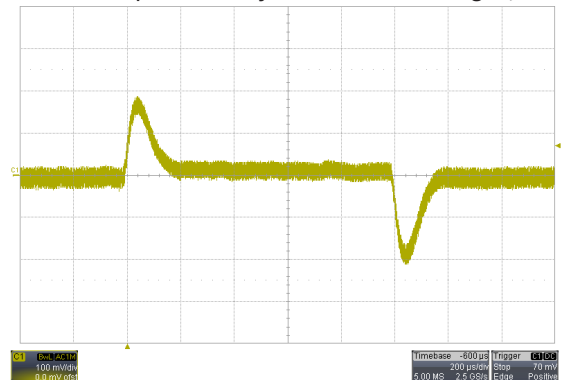
Power Dissipation versus Output Load



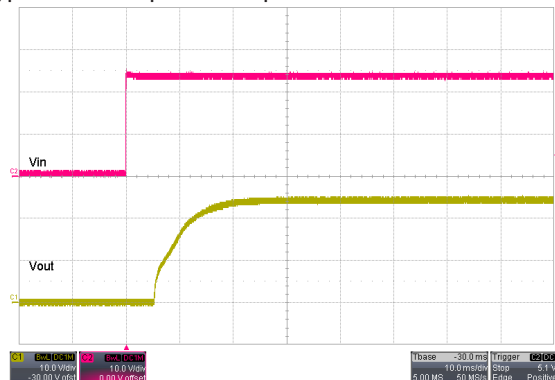
Typical Output Ripple and Noise



Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



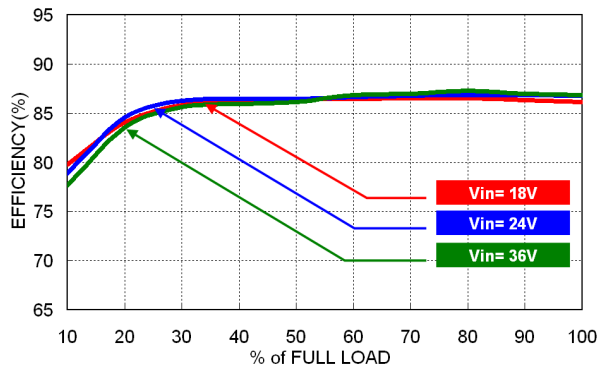
Remote on/off Voltage Start-Up Characteristic



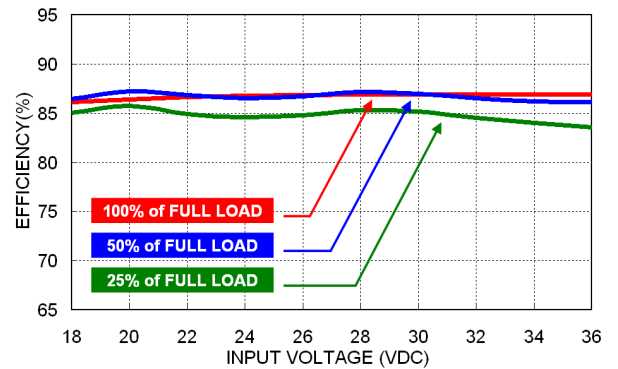
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-2421N

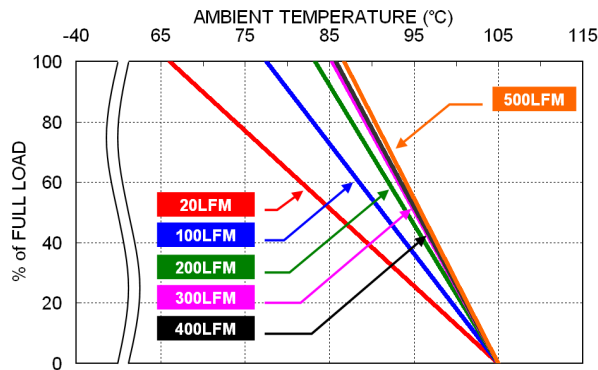
Efficiency versus Output Load



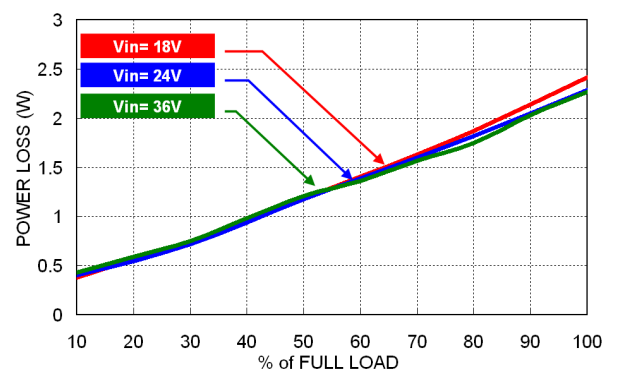
Efficiency versus Input Voltage



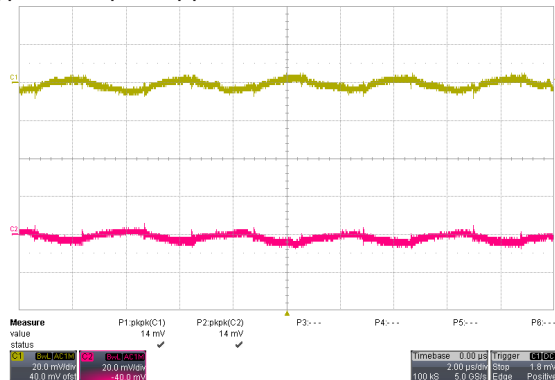
Derating Output Load versus Ambient Temperature



Power Dissipation versus Output Load



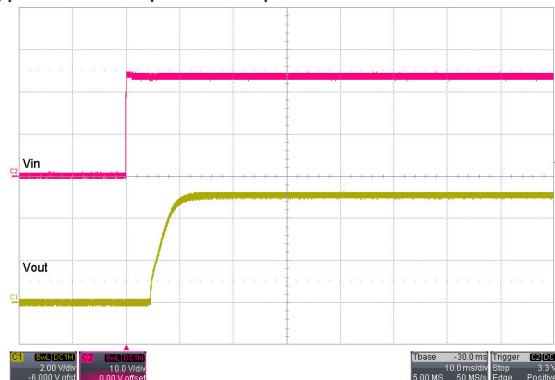
Typical Output Ripple and Noise



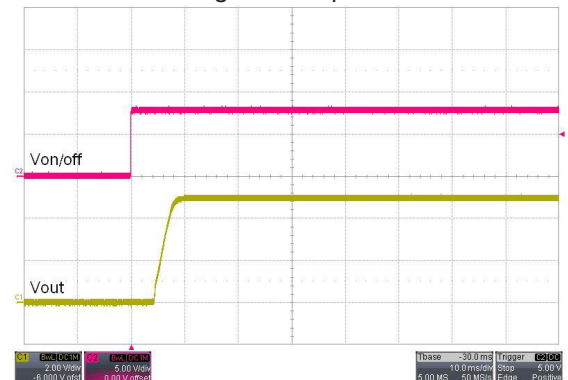
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



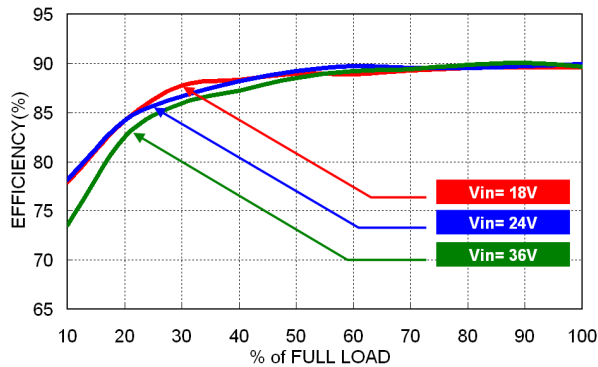
Remote on/off Voltage Start-Up Characteristic



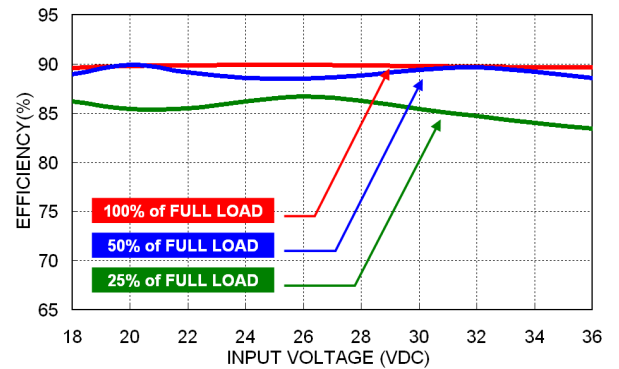
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-2422N

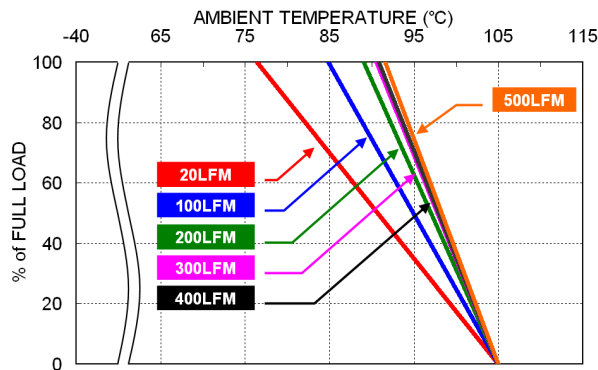
Efficiency versus Output Load



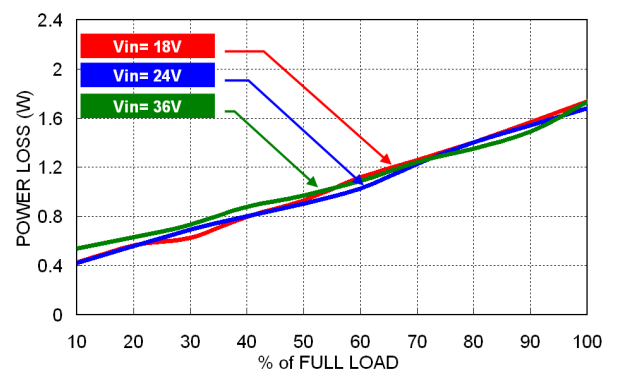
Efficiency versus Input Voltage



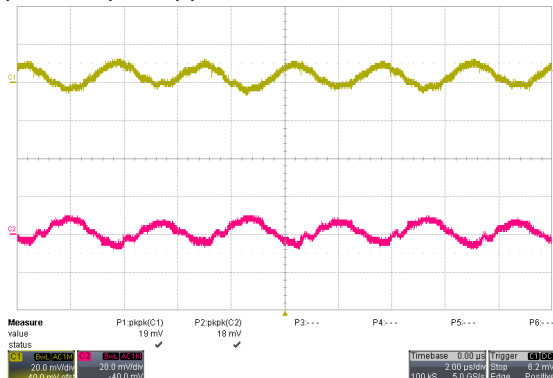
Derating Output Load versus Ambient Temperature



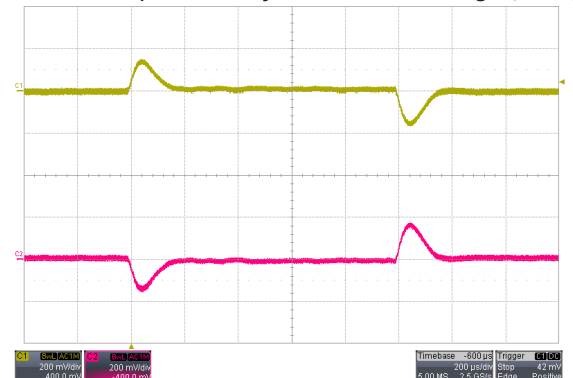
Power Dissipation versus Output Load



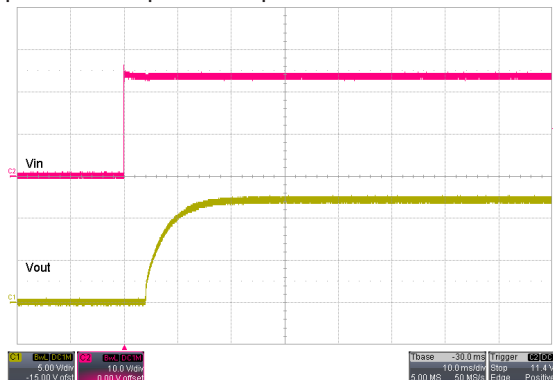
Typical Output Ripple and Noise



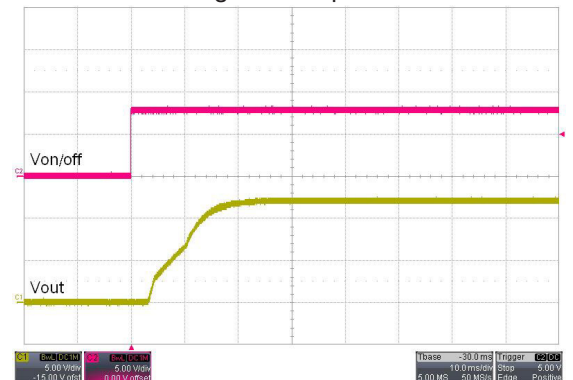
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



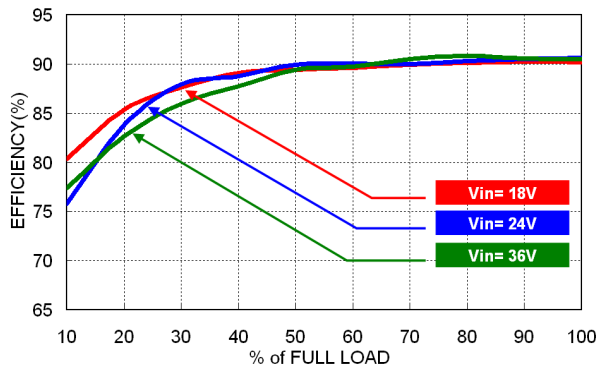
Remote on/off Voltage Start-Up Characteristic



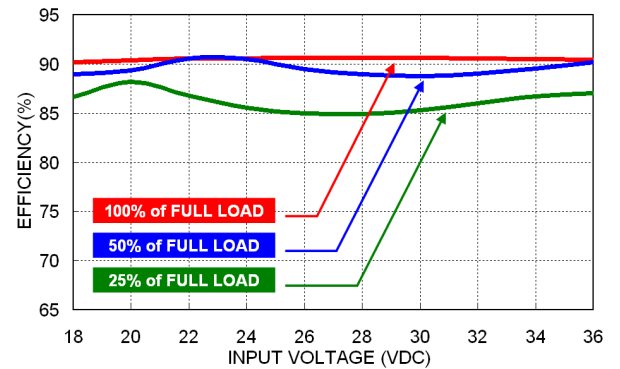
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-2423N

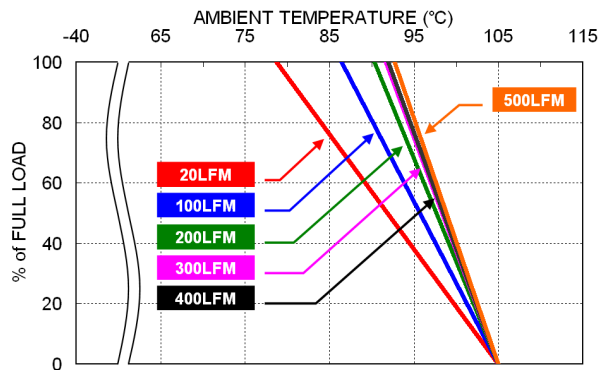
Efficiency versus Output Load



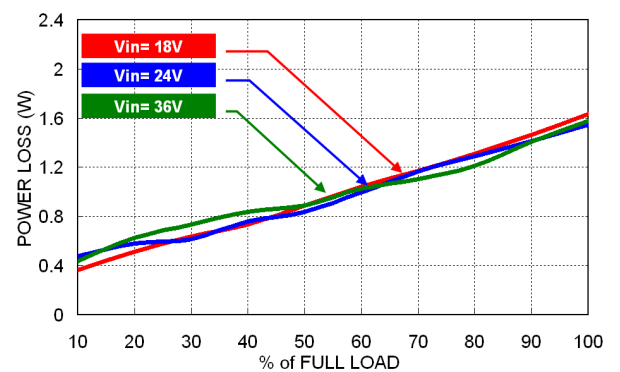
Efficiency versus Input Voltage



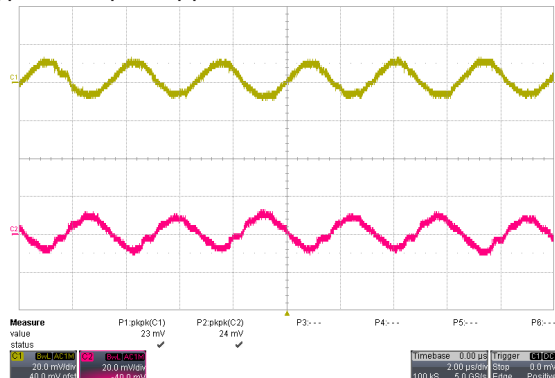
Derating Output Load versus Ambient Temperature



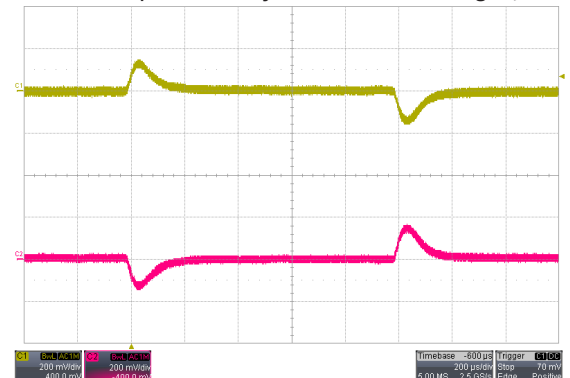
Power Dissipation versus Output Load



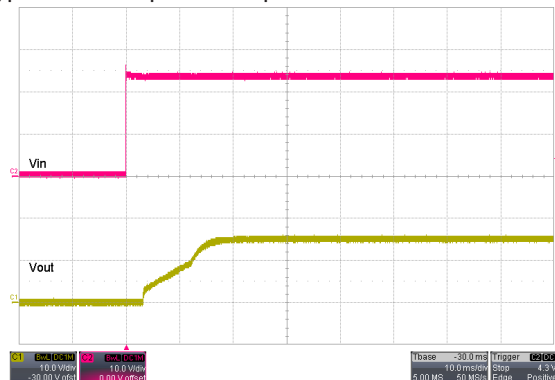
Typical Output Ripple and Noise



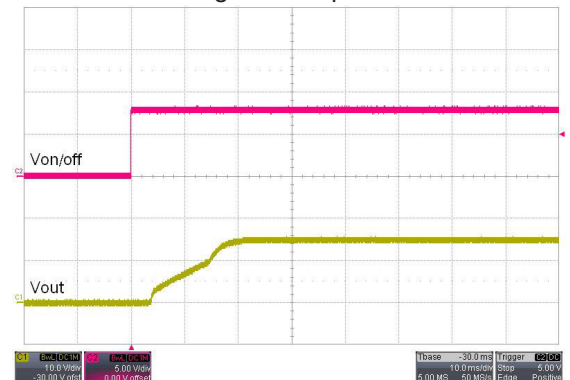
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



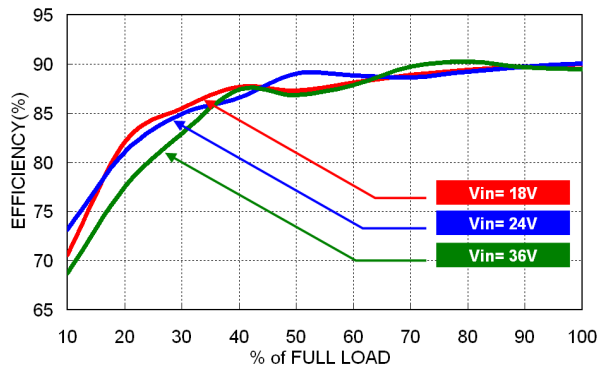
Remote on/off Voltage Start-Up Characteristic



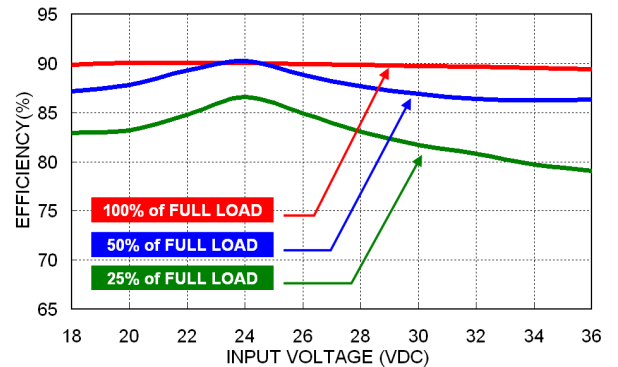
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-2425N

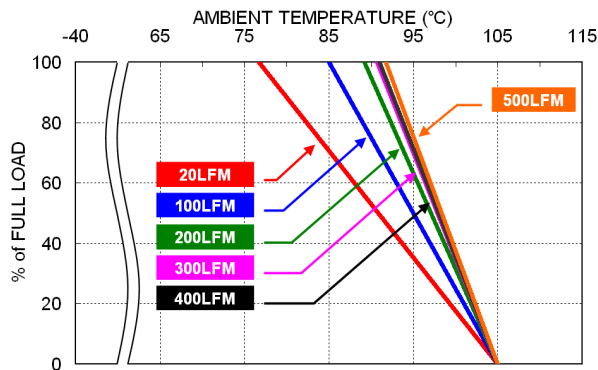
Efficiency versus Output Load



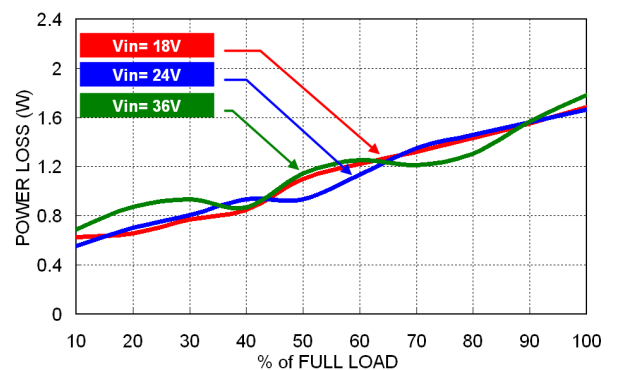
Efficiency versus Input Voltage



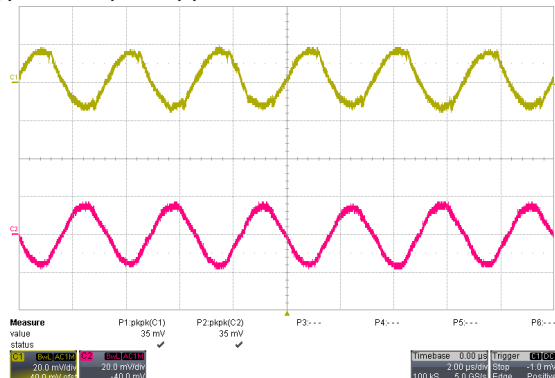
Derating Output Load versus Ambient Temperature



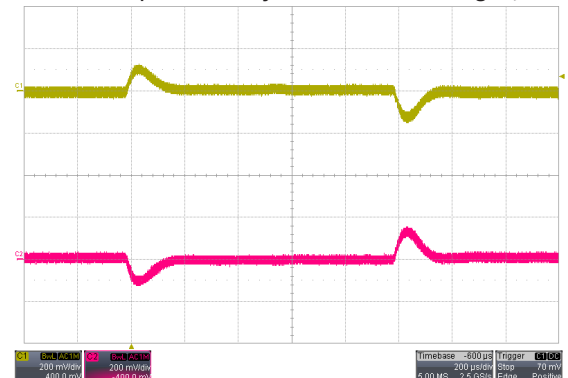
Power Dissipation versus Output Load



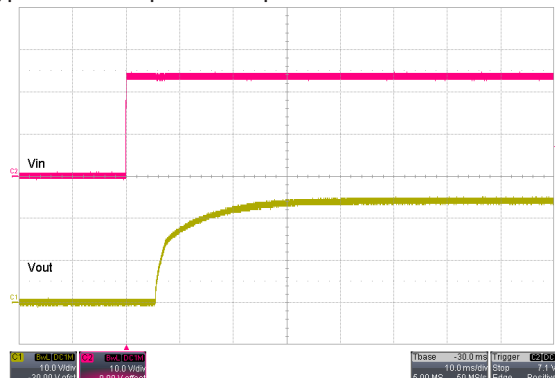
Typical Output Ripple and Noise



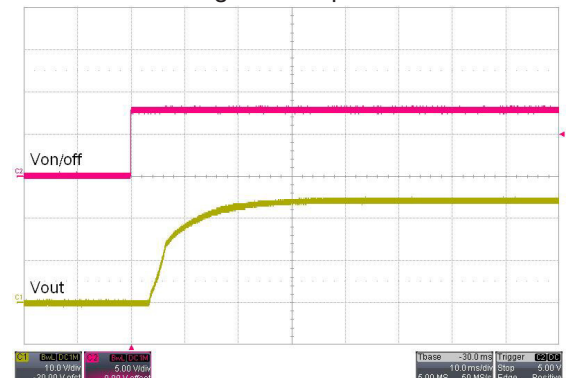
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



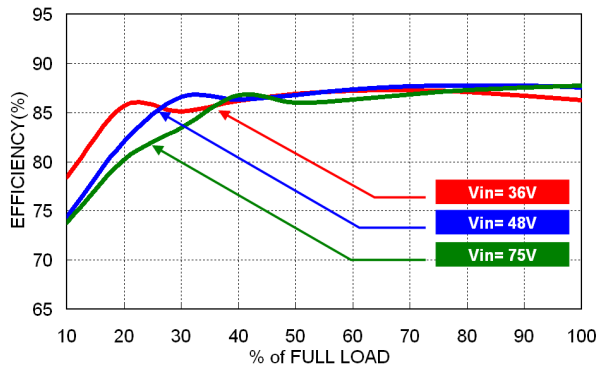
Remote on/off Voltage Start-Up Characteristic



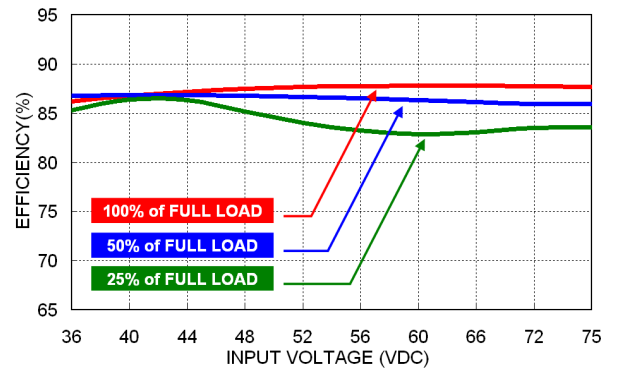
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-4810N

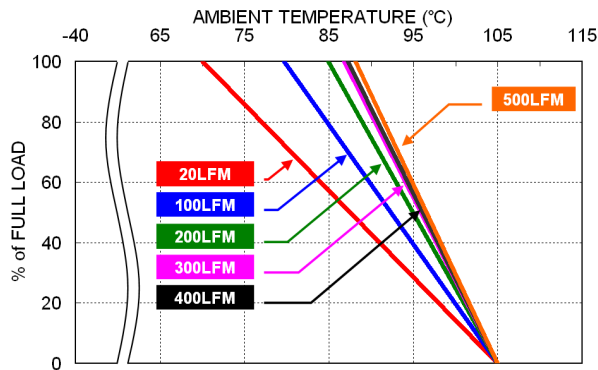
Efficiency versus Output Load



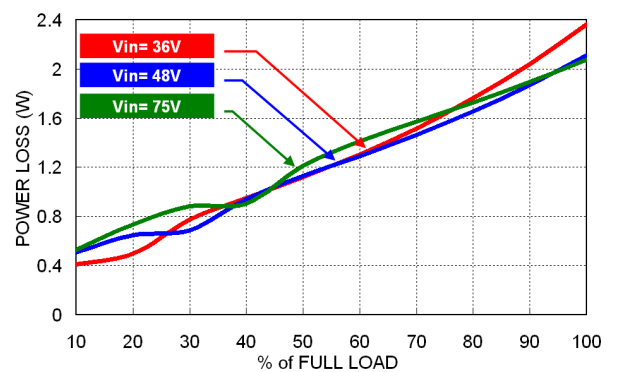
Efficiency versus Input Voltage



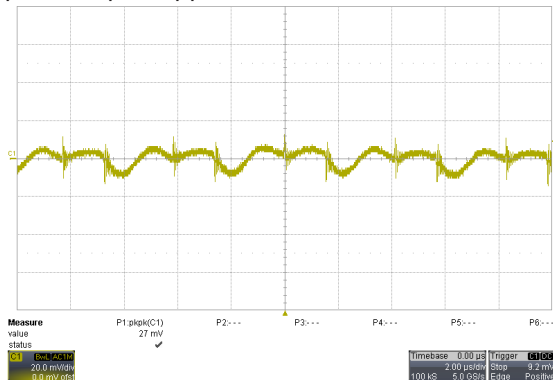
Derating Output Load versus Ambient Temperature



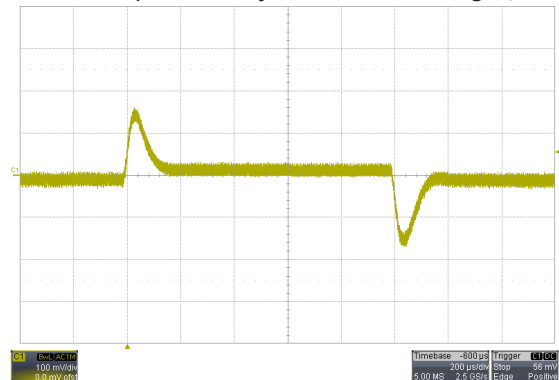
Power Dissipation versus Output Load



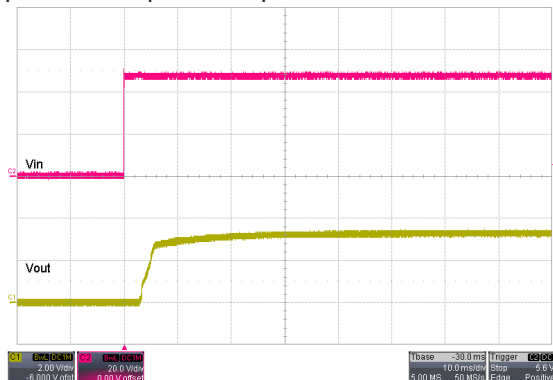
Typical Output Ripple and Noise



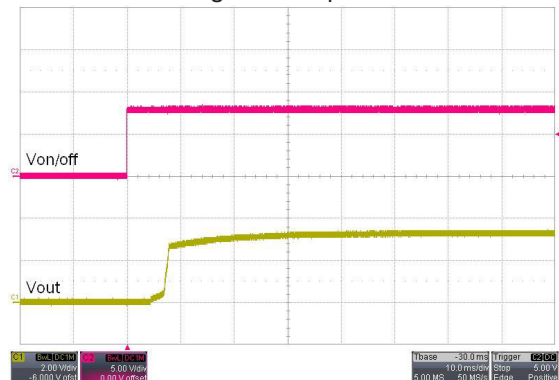
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



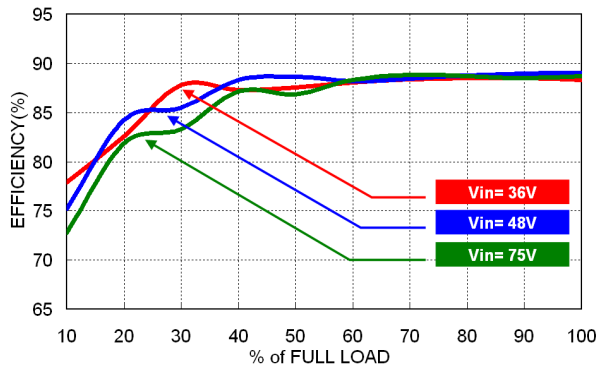
Remote on/off Voltage Start-Up Characteristic



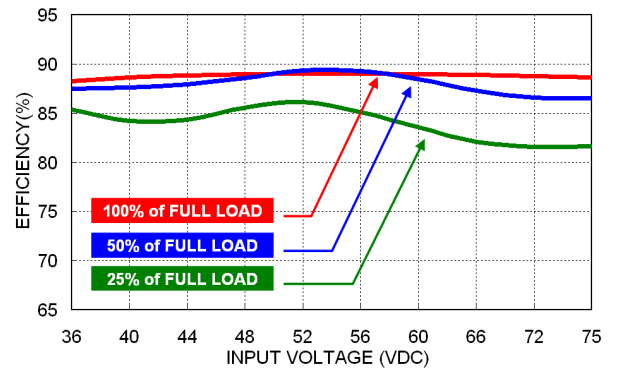
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-4811N

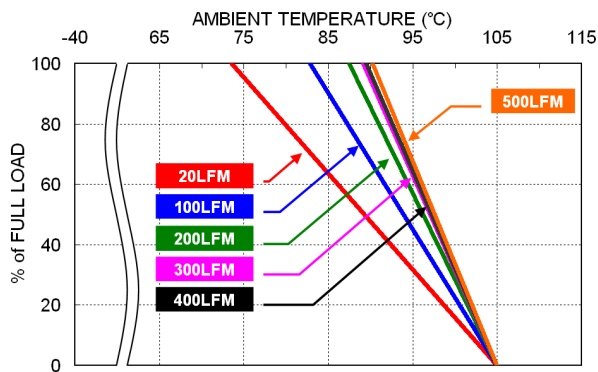
Efficiency versus Output Load



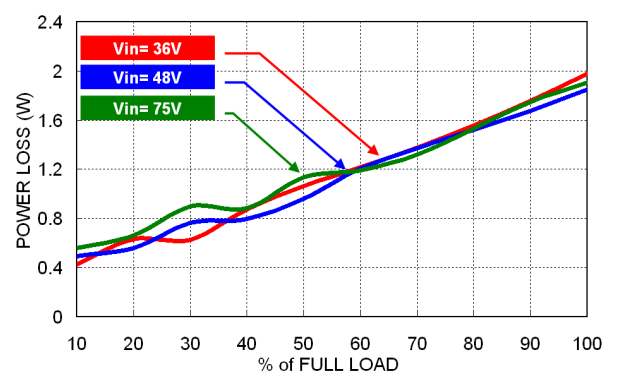
Efficiency versus Input Voltage



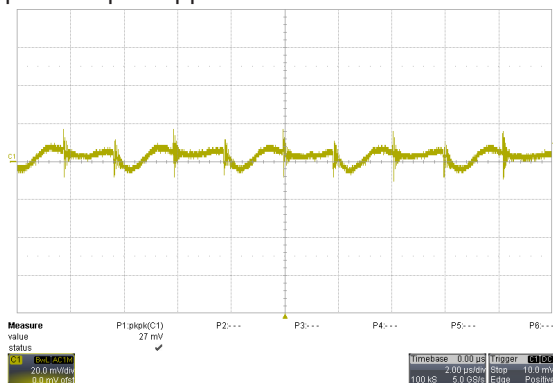
Derating Output Load versus Ambient Temperature



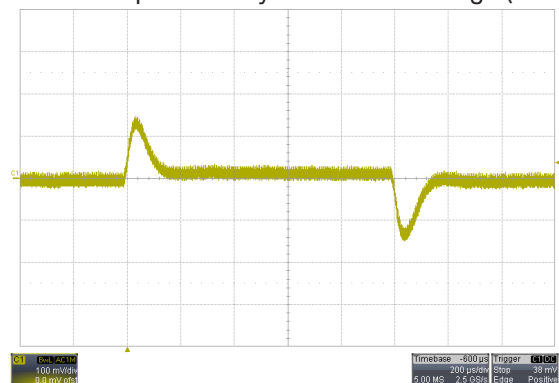
Power Dissipation versus Output Load



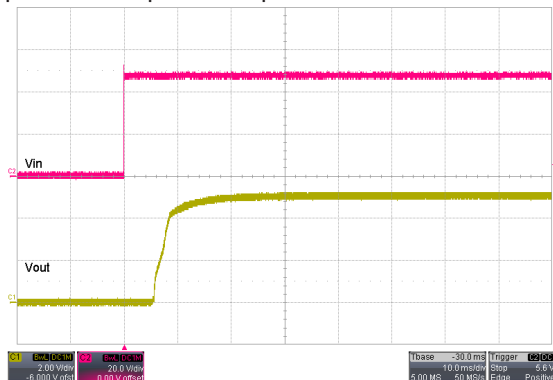
Typical Output Ripple and Noise



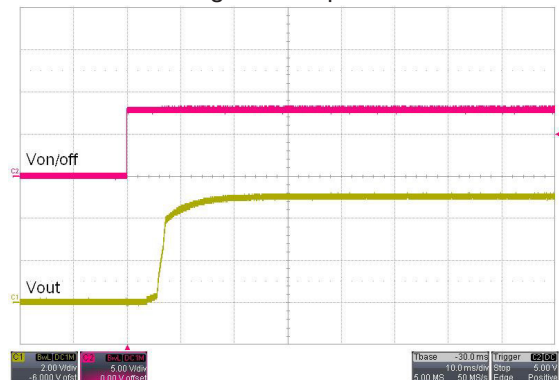
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



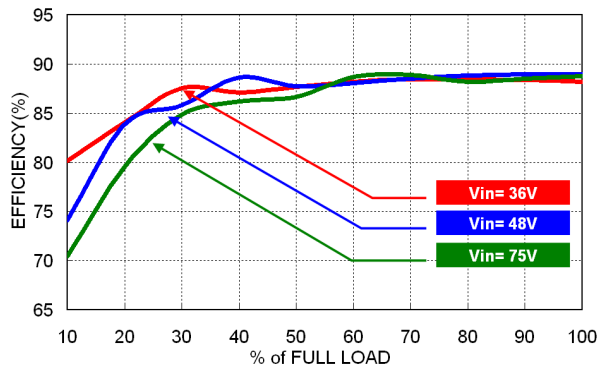
Remote on/off Voltage Start-Up Characteristic



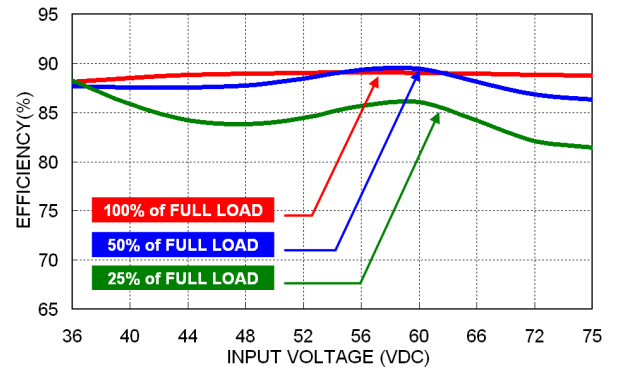
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-4812N

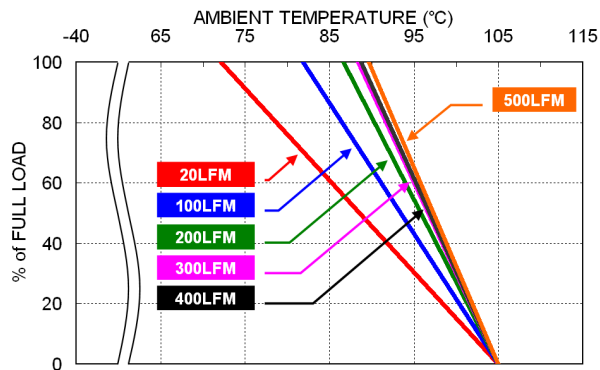
Efficiency versus Output Load



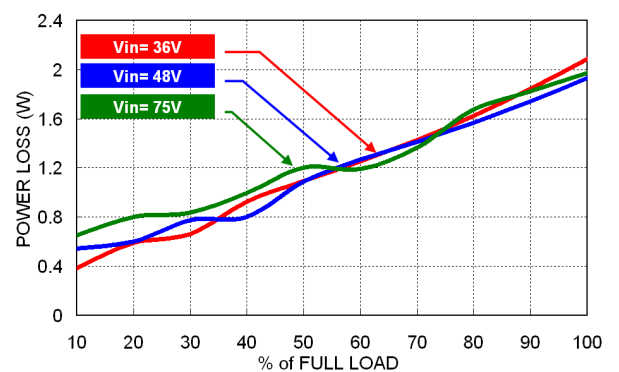
Efficiency versus Input Voltage



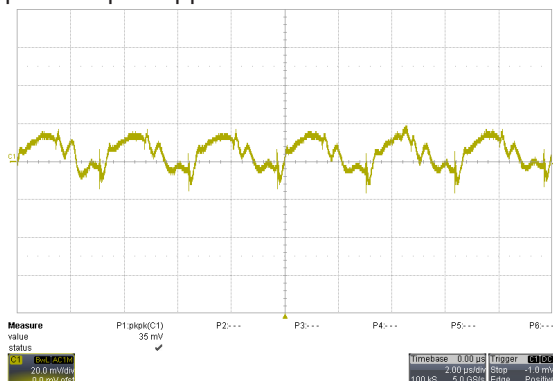
Derating Output Load versus Ambient Temperature



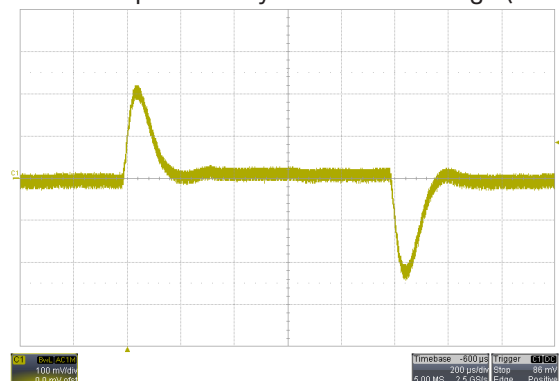
Power Dissipation versus Output Load



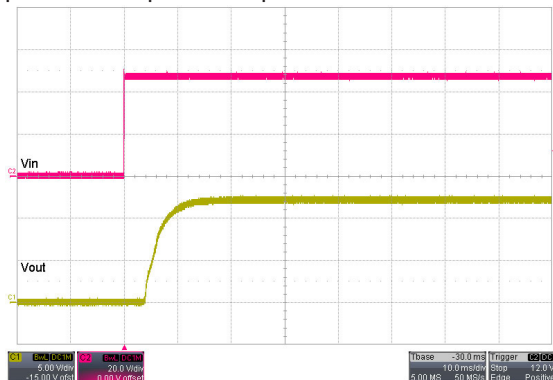
Typical Output Ripple and Noise



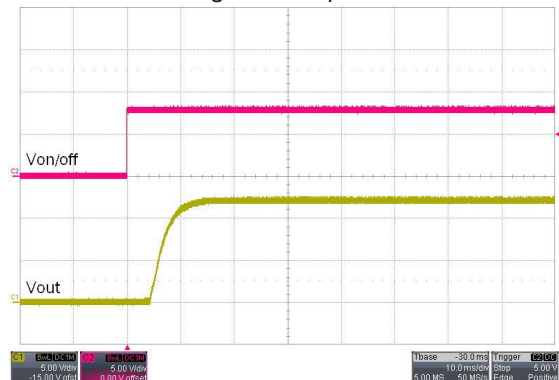
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic

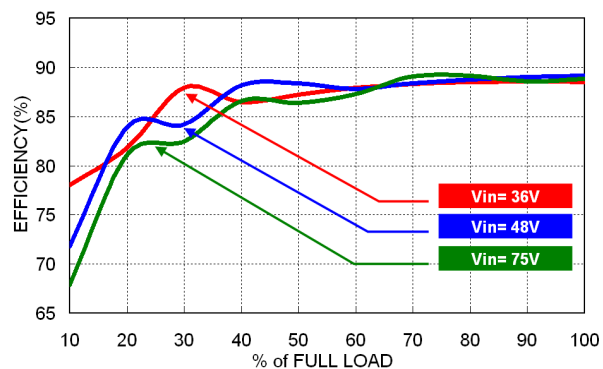


Remote on/off Voltage Start-Up Characteristic

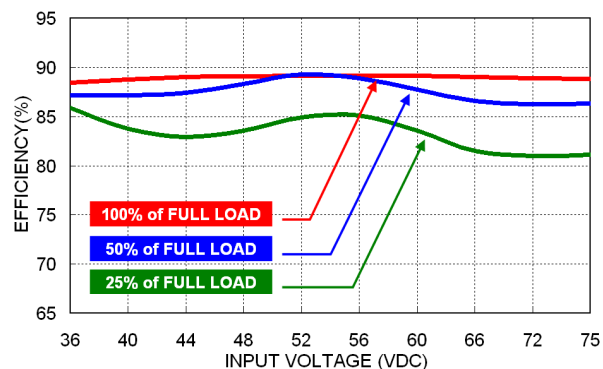


All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

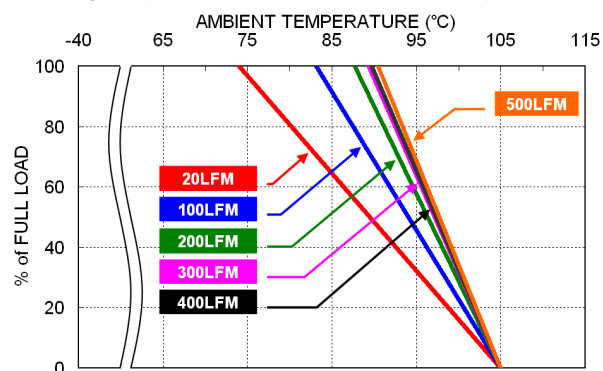
Efficiency versus Output Load



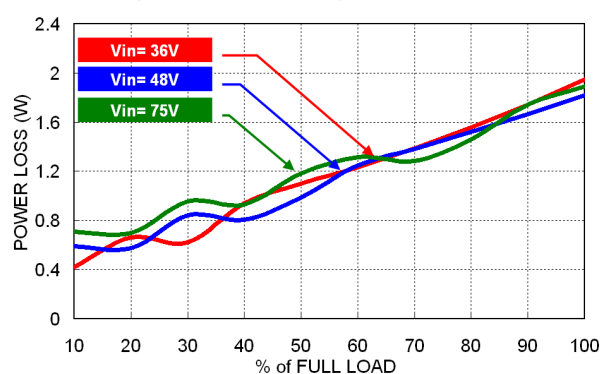
Efficiency versus Input Voltage



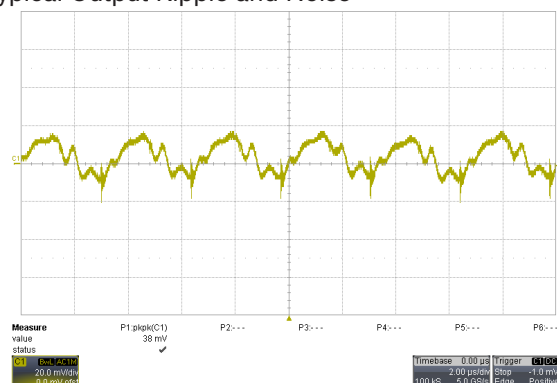
Derating Output Load versus Ambient Temperature



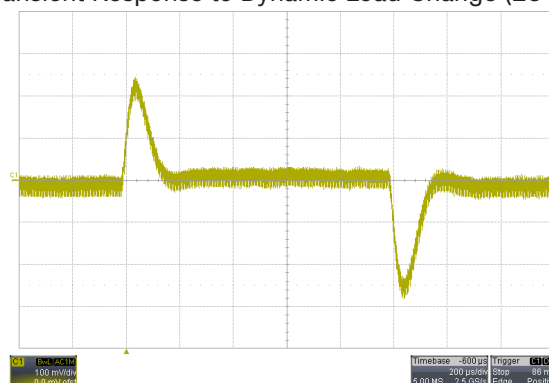
Power Dissipation versus Output Load



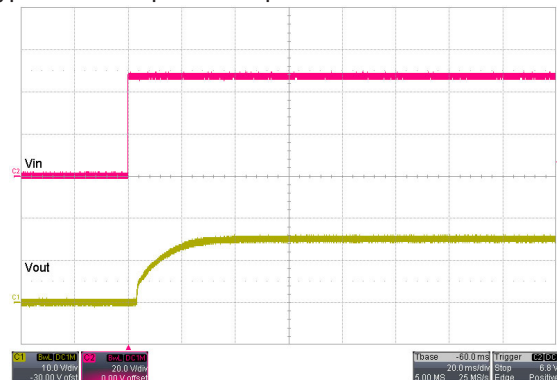
Typical Output Ripple and Noise



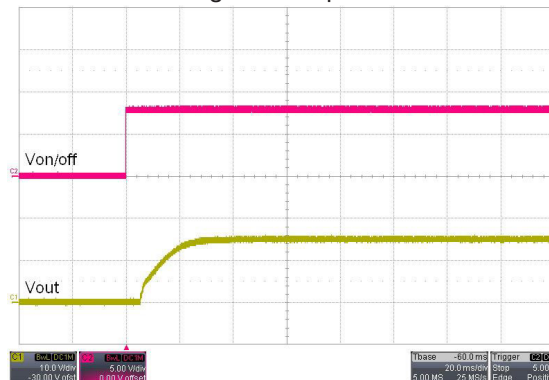
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



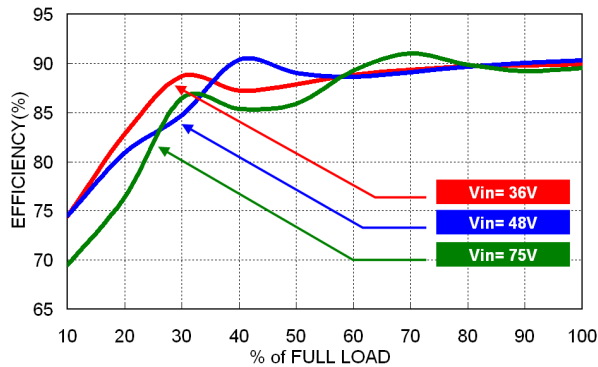
Remote on/off Voltage Start-Up Characteristic



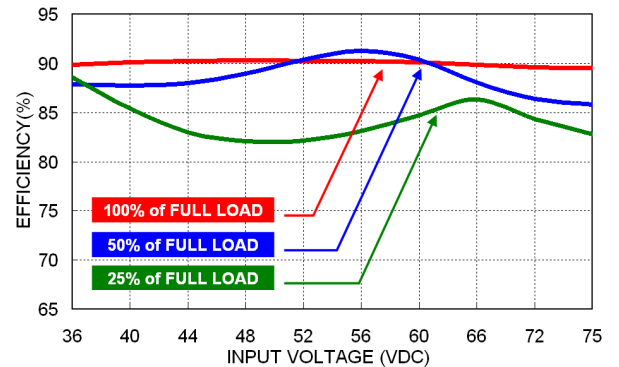
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-4815N

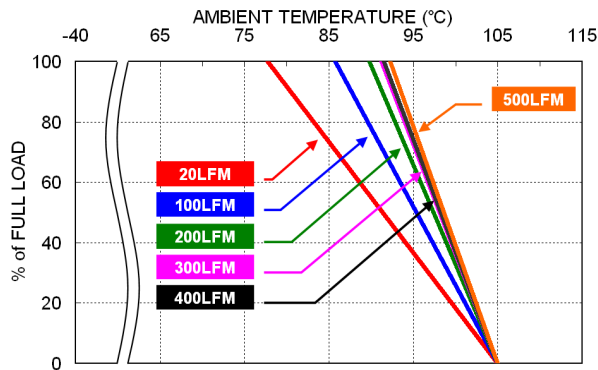
Efficiency versus Output Load



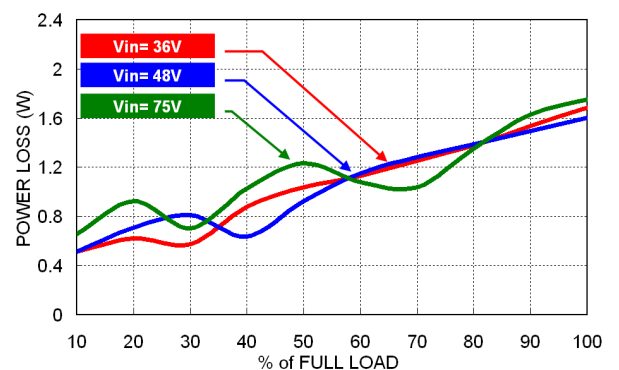
Efficiency versus Input Voltage



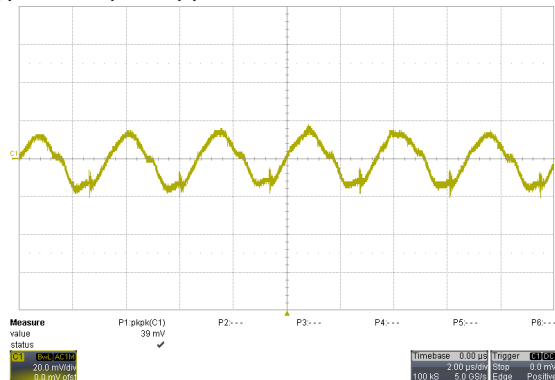
Derating Output Load versus Ambient Temperature



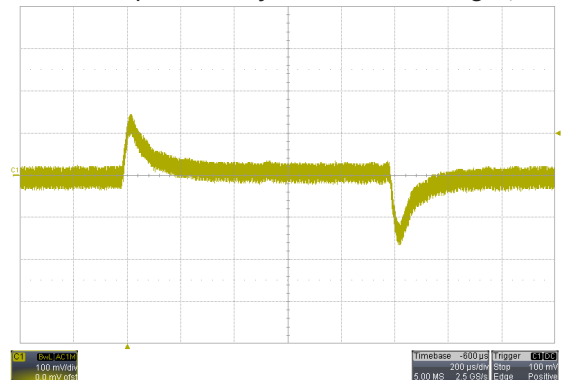
Power Dissipation versus Output Load



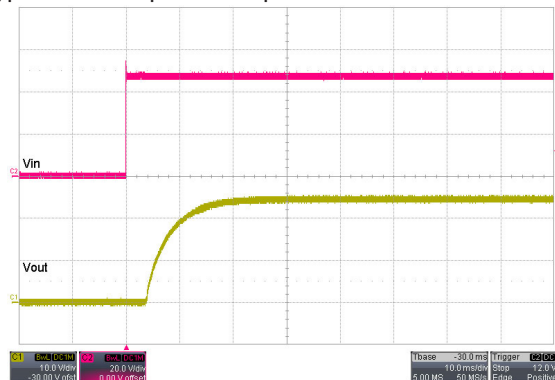
Typical Output Ripple and Noise



Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



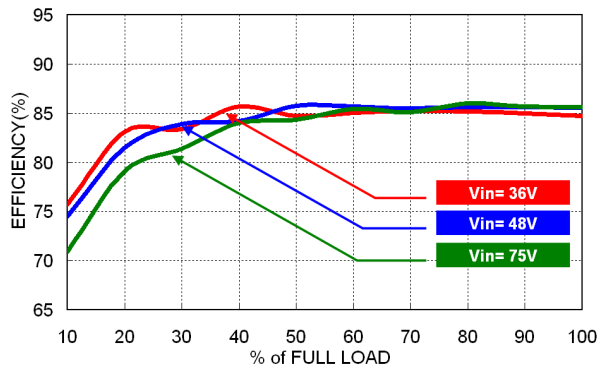
Remote on/off Voltage Start-Up Characteristic



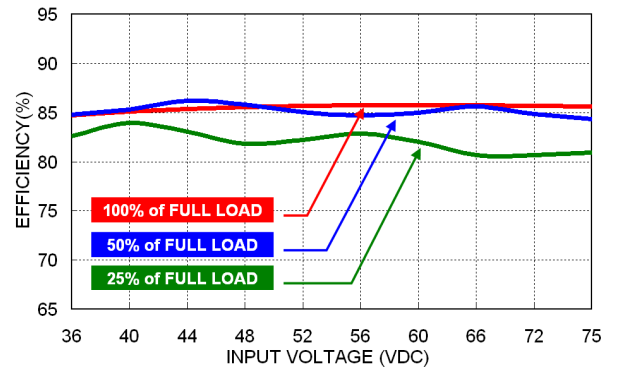
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-4821N

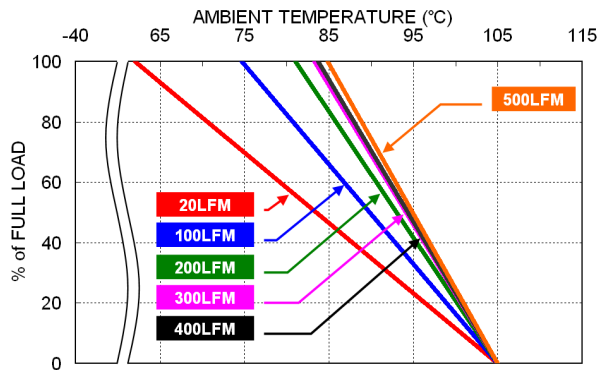
Efficiency versus Output Load



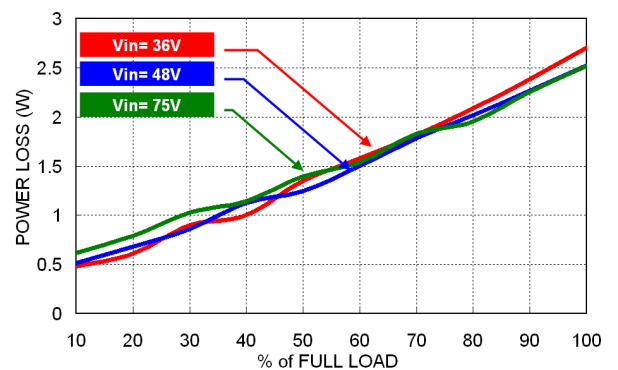
Efficiency versus Input Voltage



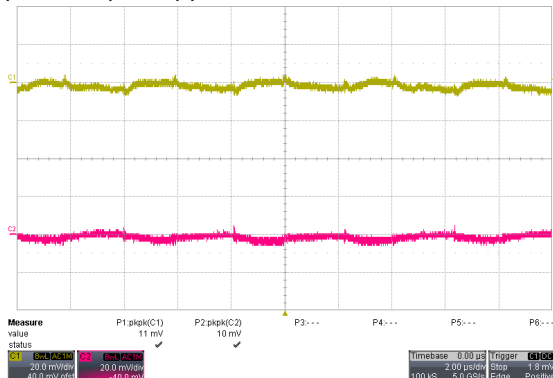
Derating Output Load versus Ambient Temperature



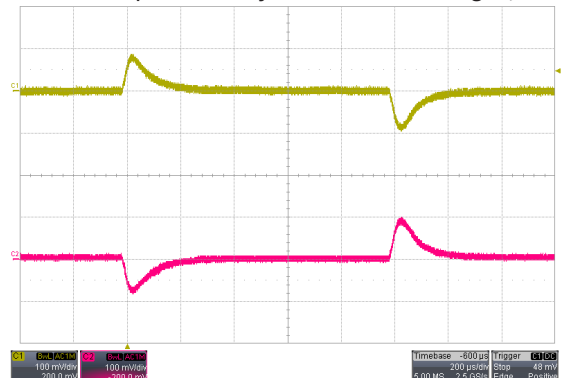
Power Dissipation versus Output Load



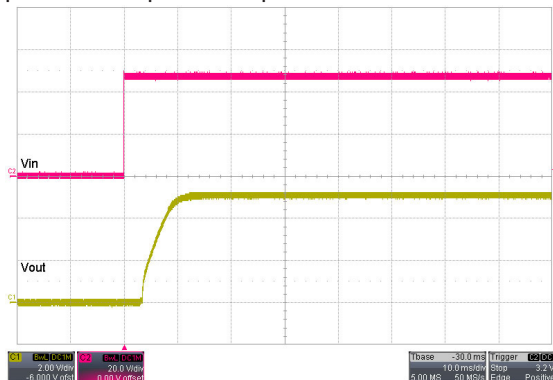
Typical Output Ripple and Noise



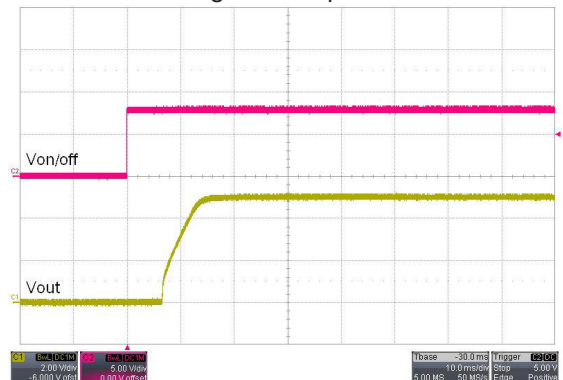
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



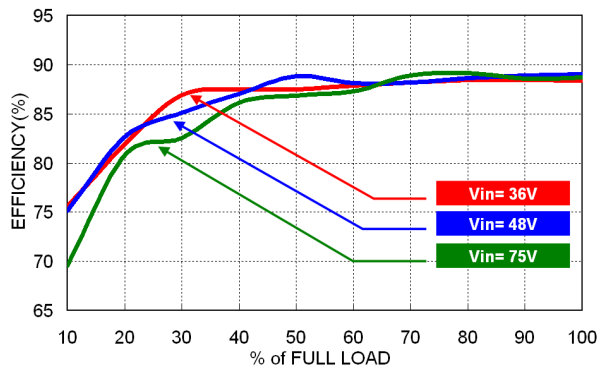
Remote on/off Voltage Start-Up Characteristic



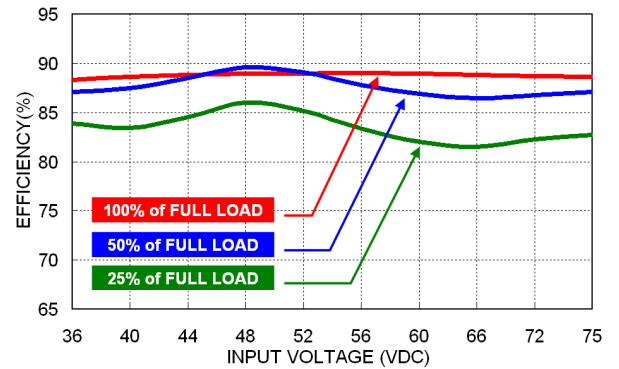
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-4822N

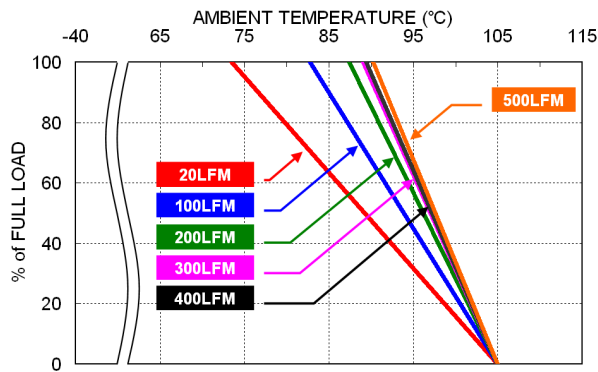
Efficiency versus Output Load



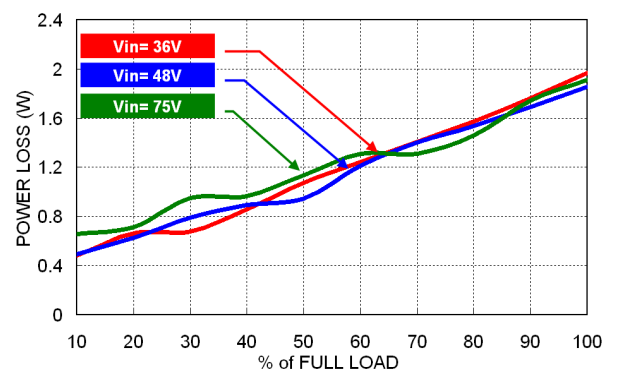
Efficiency versus Input Voltage



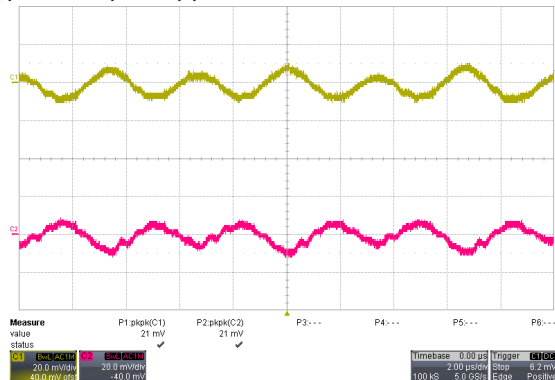
Derating Output Load versus Ambient Temperature



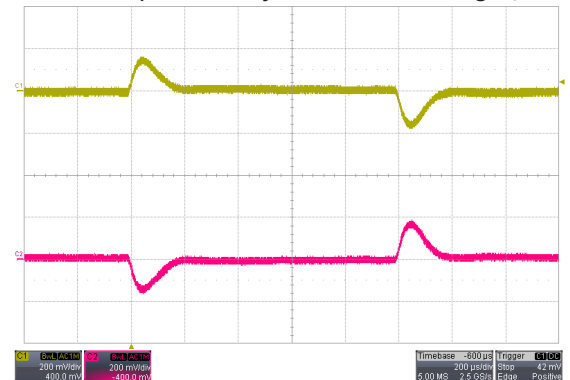
Power Dissipation versus Output Load



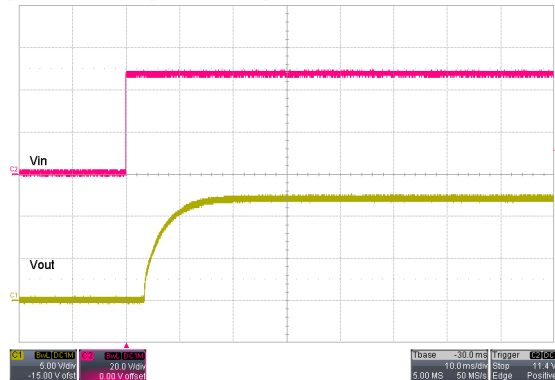
Typical Output Ripple and Noise



Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



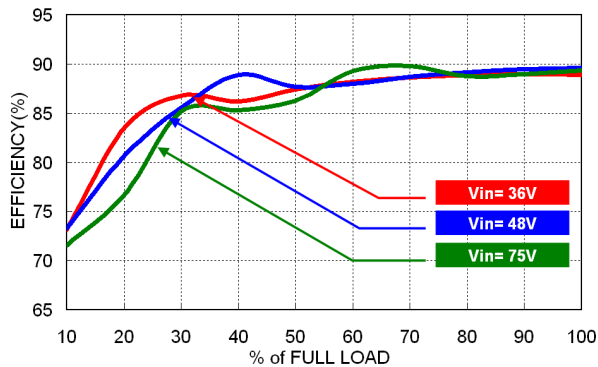
Remote on/off Voltage Start-Up Characteristic



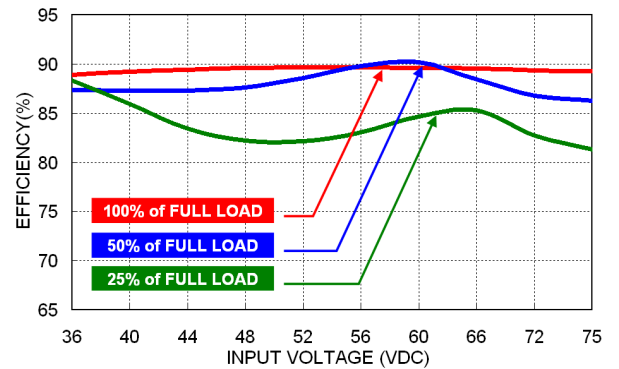
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-4823N

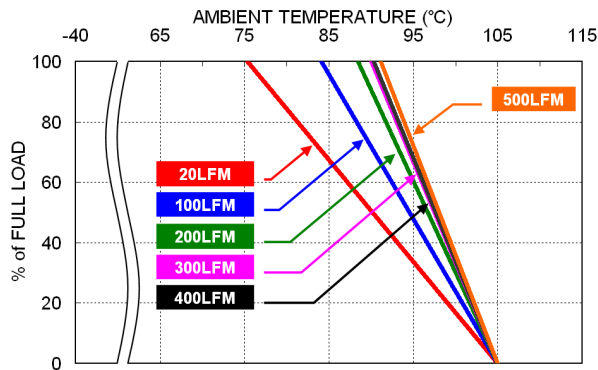
Efficiency versus Output Load



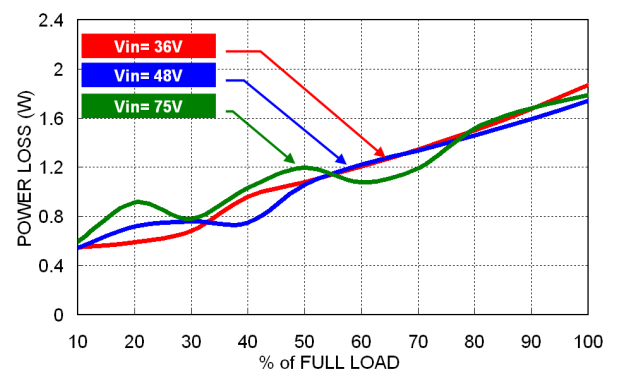
Efficiency versus Input Voltage



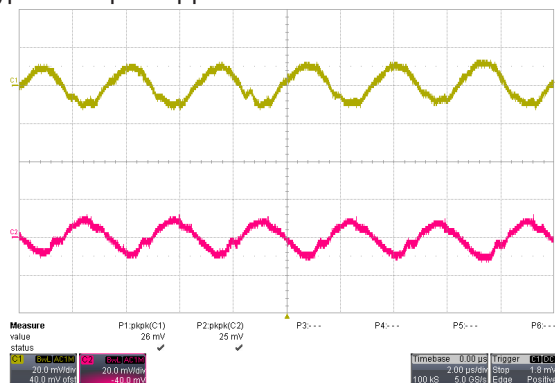
Derating Output Load versus Ambient Temperature



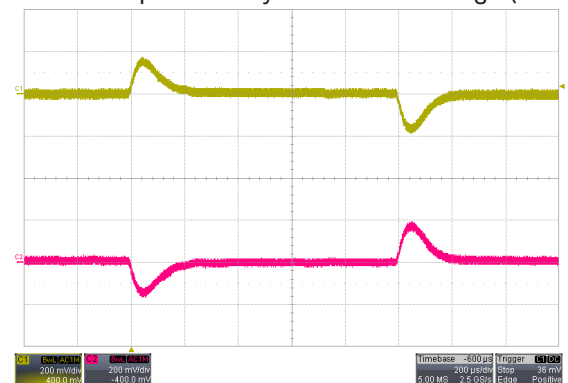
Power Dissipation versus Output Load



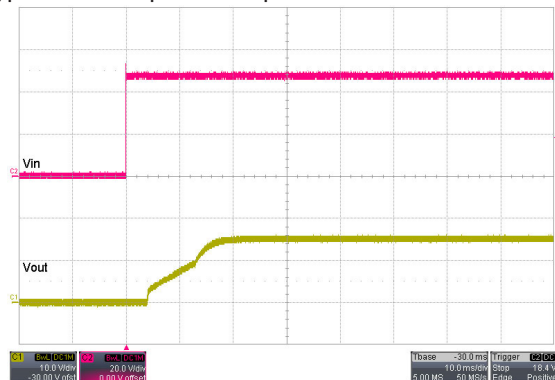
Typical Output Ripple and Noise



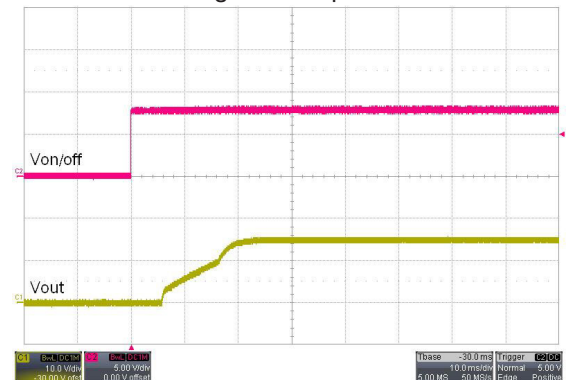
Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



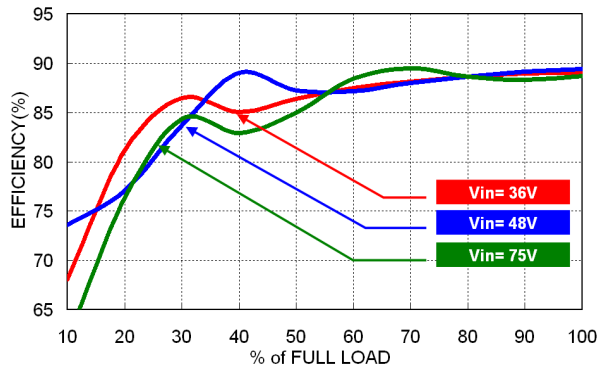
Remote on/off Voltage Start-Up Characteristic



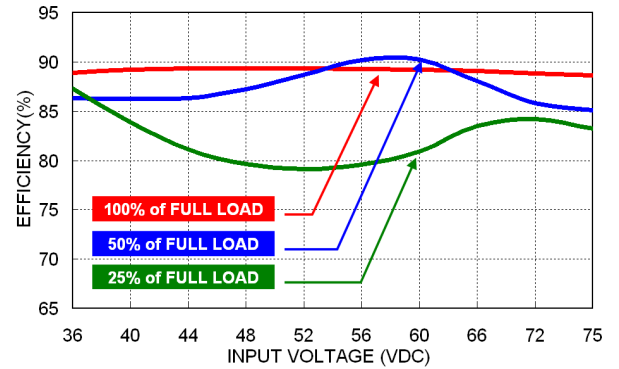
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

THN 15-4825N

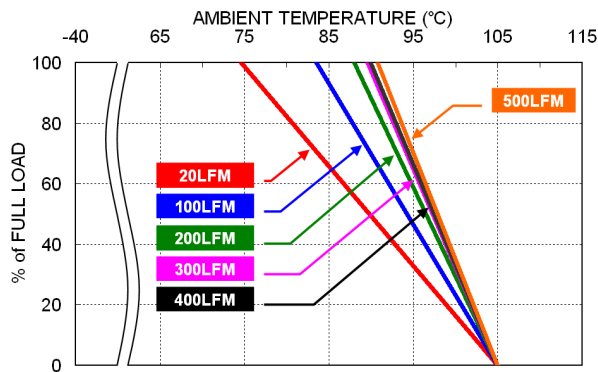
Efficiency versus Output Load



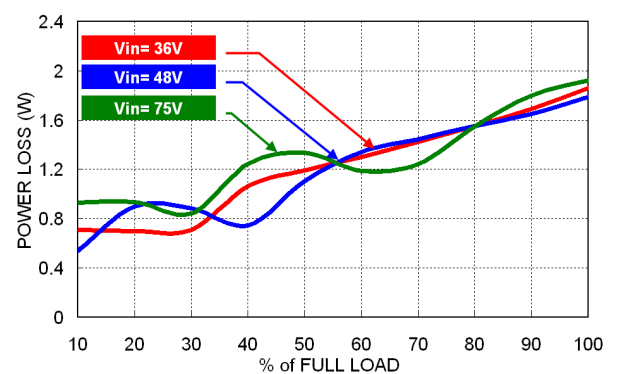
Efficiency versus Input Voltage



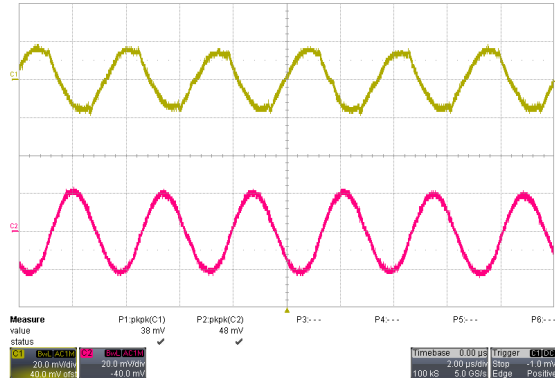
Derating Output Load versus Ambient Temperature



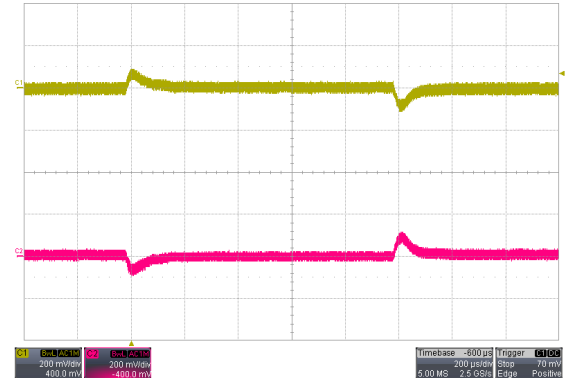
Power Dissipation versus Output Load



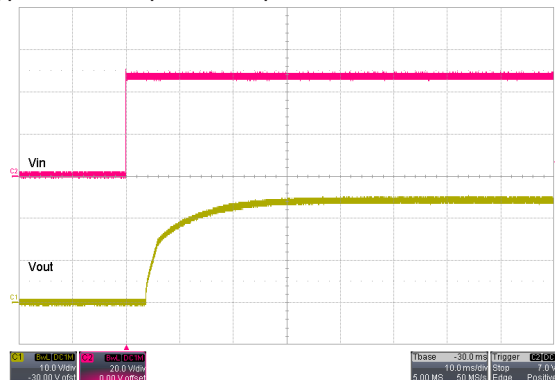
Typical Output Ripple and Noise



Transient Response to Dynamic Load Change (25%)



Typical Start-Up and Output Rise Characteristic



Remote on/off Voltage Start-Up Characteristic

