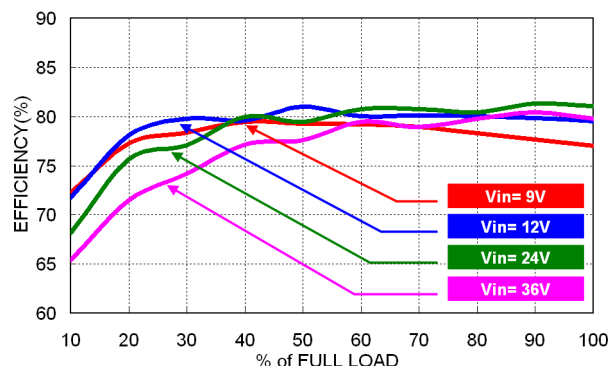# TRACO POWER

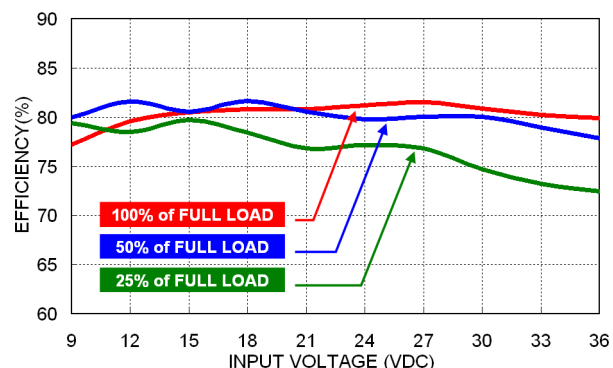## Characteristic Curves
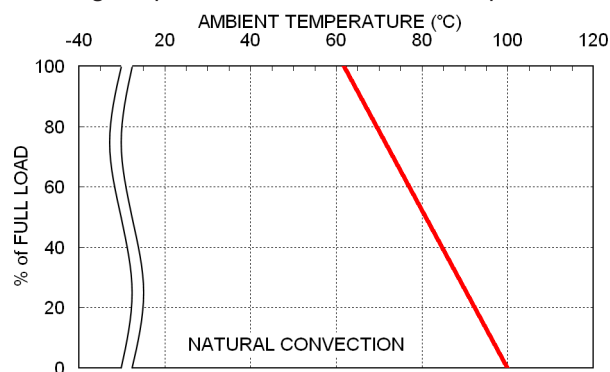
TMR 6-2410WIR

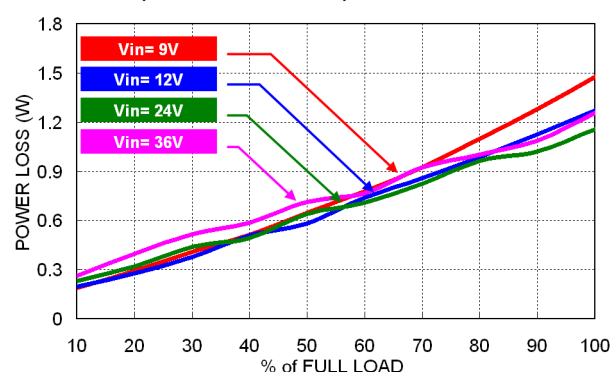Efficiency versus Output Load

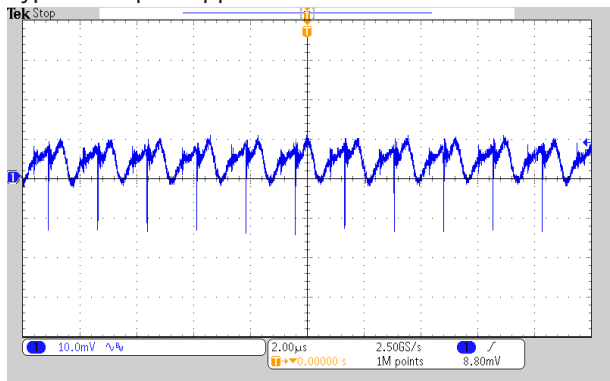

Efficiency versus Input Voltage

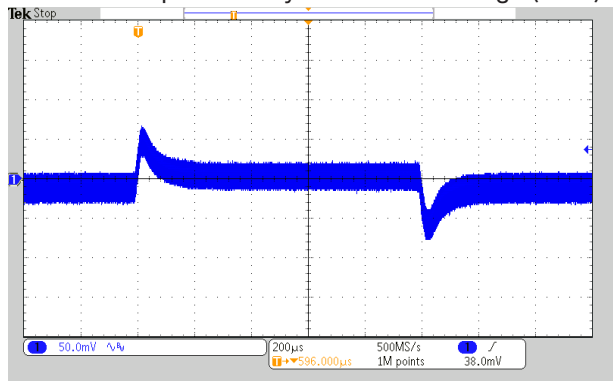Derating Output Load versus Ambient Temperature

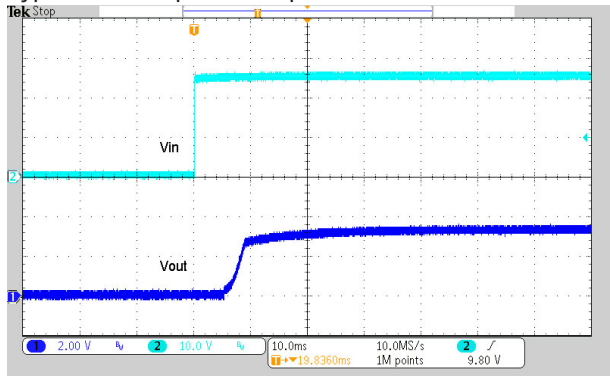Power Dissipation versus Output Load

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

TMR 6-2411WIR

Efficiency versus Output Load

Efficiency versus Input Voltage

Derating Output Load versus Ambient Temperature

Power Dissipation versus Output Load

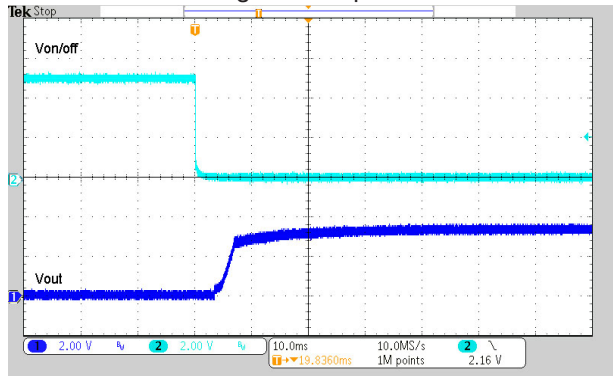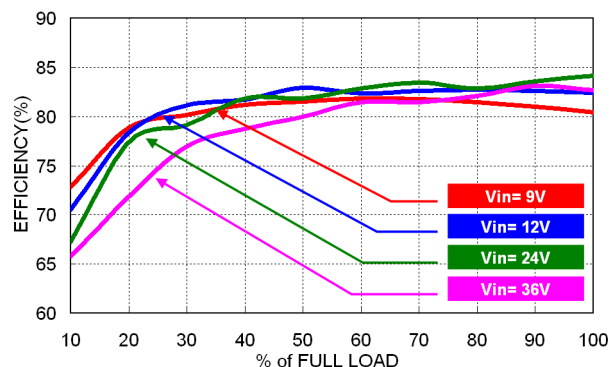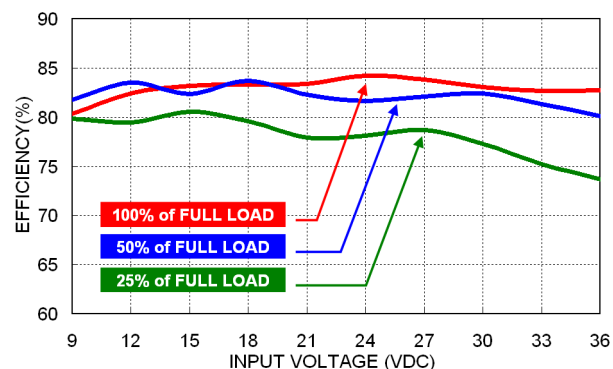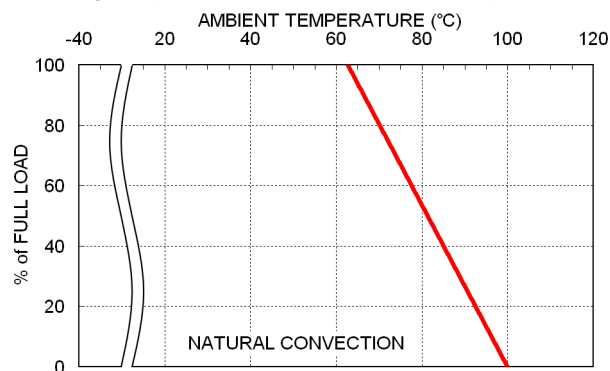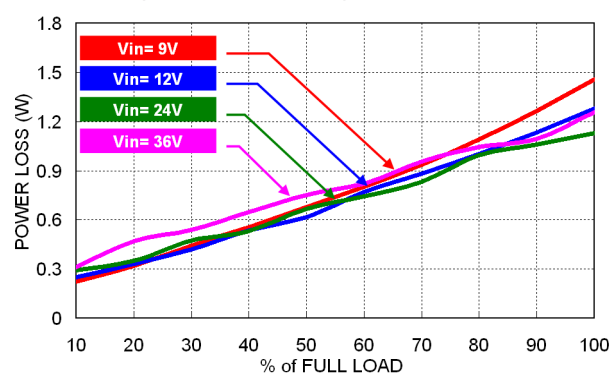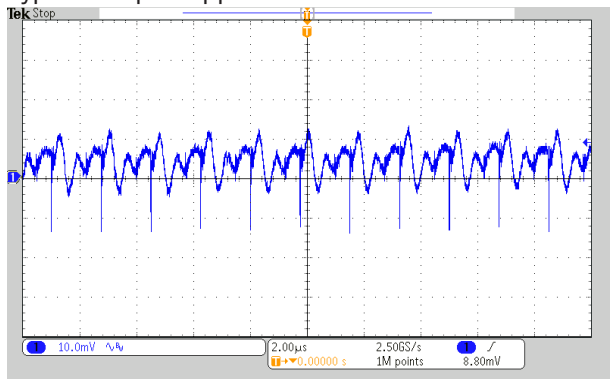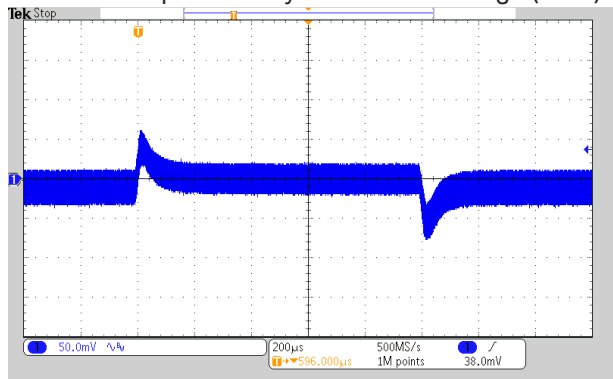### Typical Output Ripple and Noise

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.

TMR 6-2419WIR

Efficiency versus Output Load

Efficiency versus Input Voltage

Derating Output Load versus Ambient Temperature

Power Dissipation versus Output Load
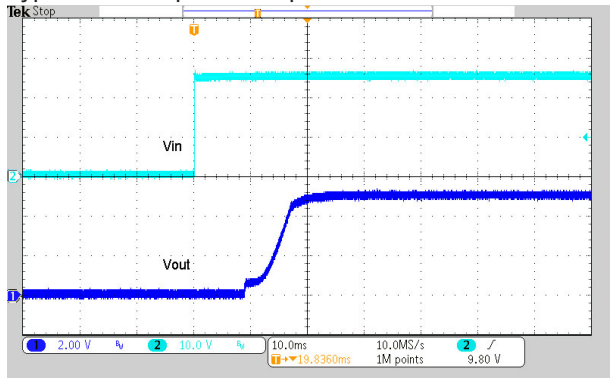

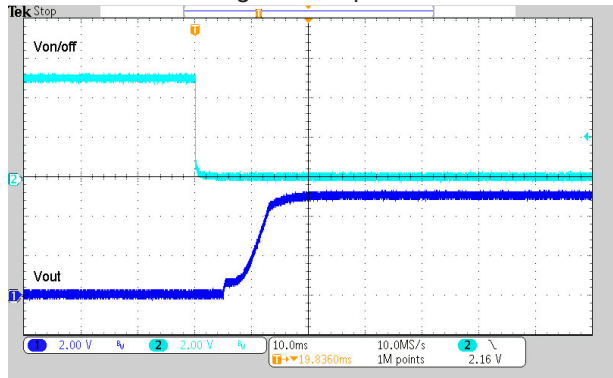### Typical Output Ripple and Noise

Transient Response to Dynamic Load Change (25%)

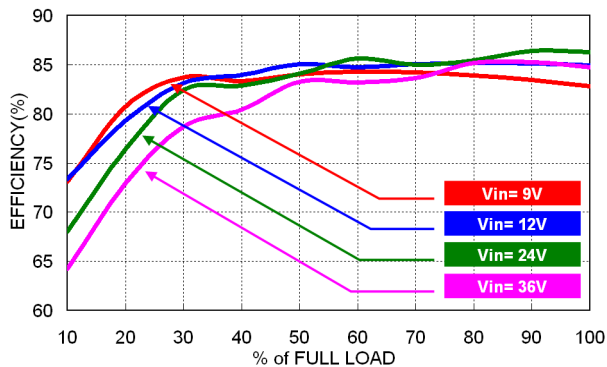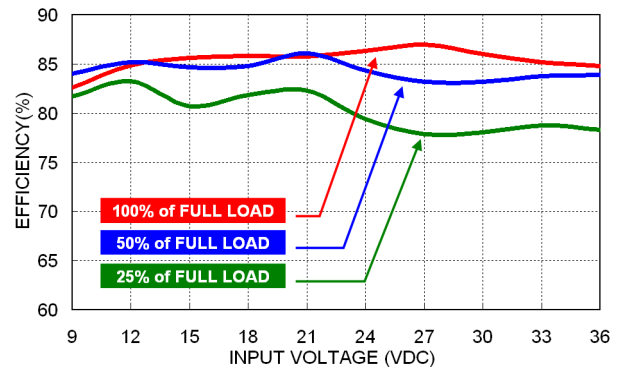### Typical Start-Up and Output Rise Characteristic

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.
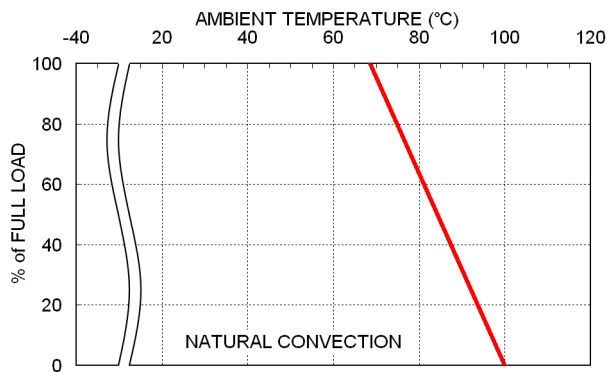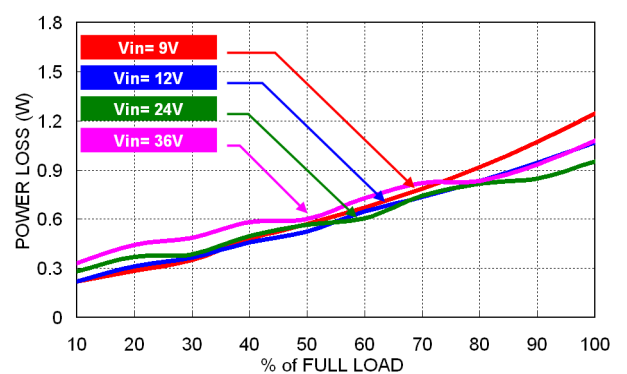
TRACO POWER

TMR 6-2412WIR

Efficiency versus Output Load

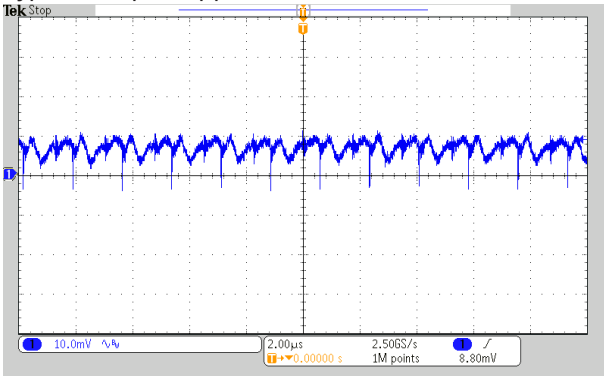### Efficiency versus Input Voltage

Derating Output Load versus Ambient Temperature
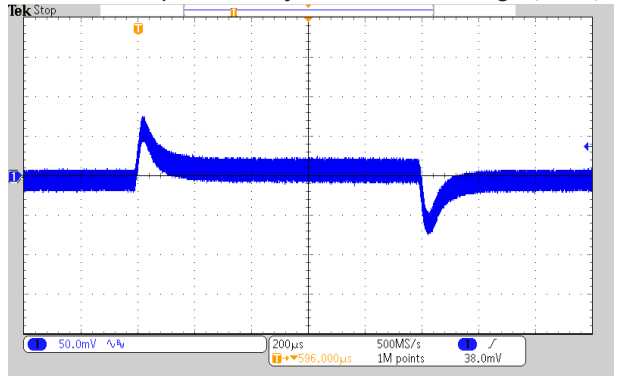

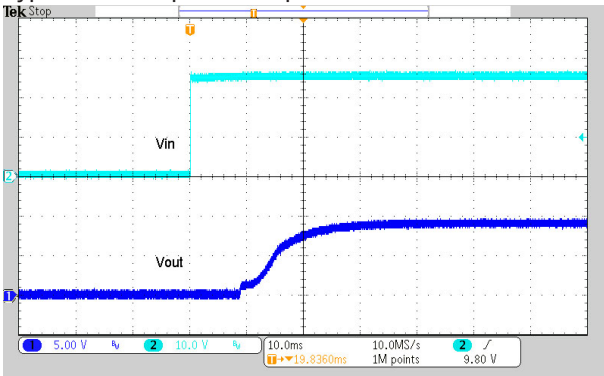### Power Dissipation versus Output Load

Typical Output Ripple and Noise
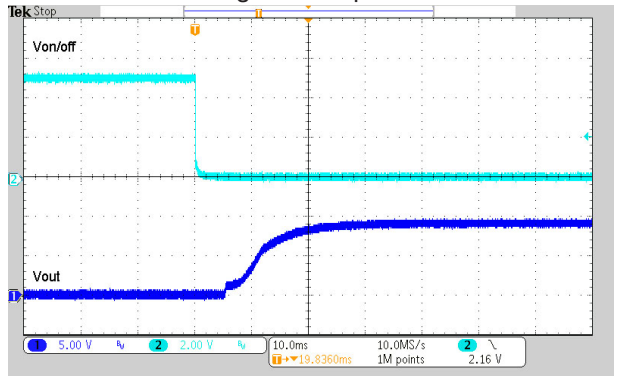

Transient Response to Dynamic Load Change (25%)

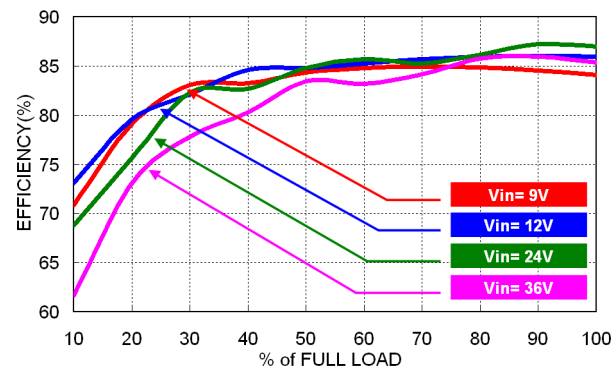### Typical Start-Up and Output Rise Characteristic
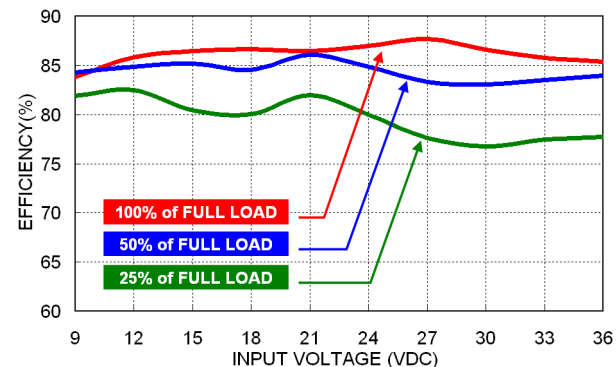

Remote on/off Voltage Start-Up Characteristic

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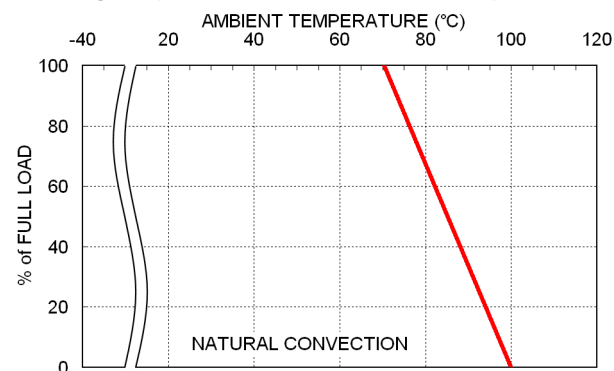
TRACO **POWER**

TMR 6-2413WIR
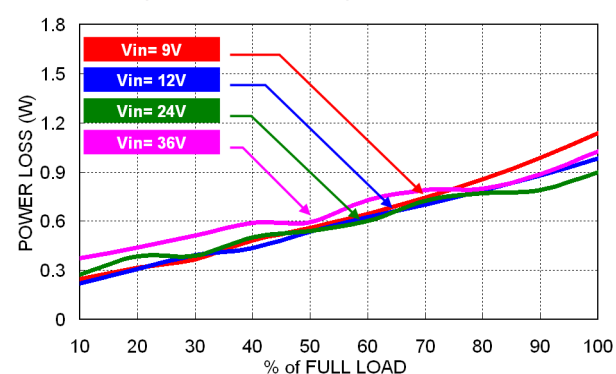
Efficiency versus Output Load

Efficiency versus Input Voltage
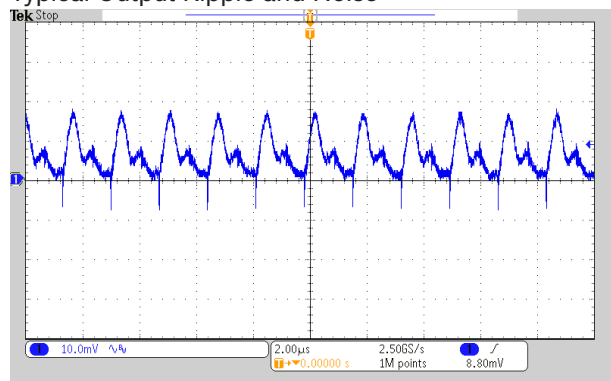

Derating Output Load versus Ambient Temperature
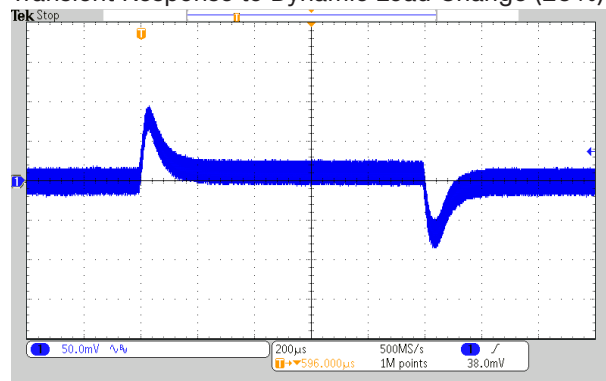

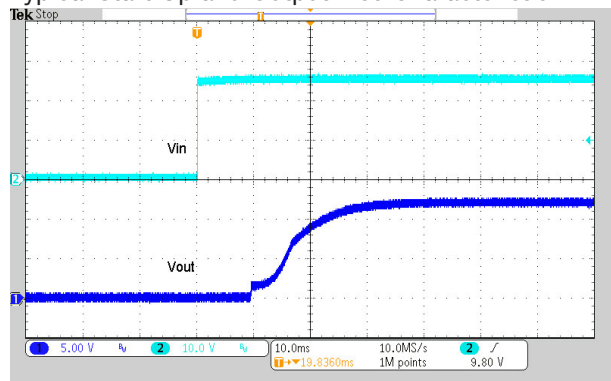### Power Dissipation versus Output Load

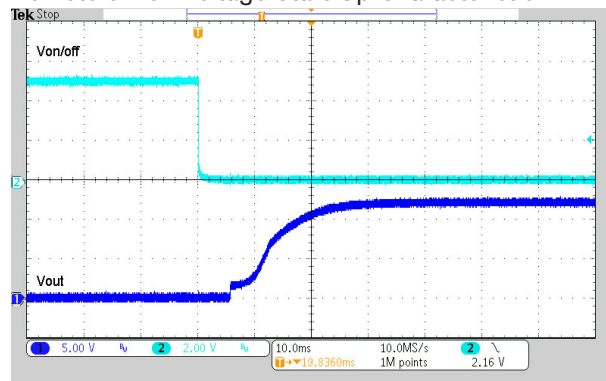### Typical Output Ripple and Noise

Transient Response to Dynamic Load Change (25%)

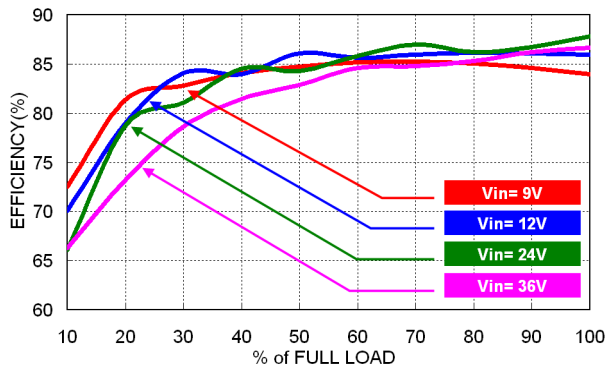### Typical Start-Up and Output Rise Characteristic

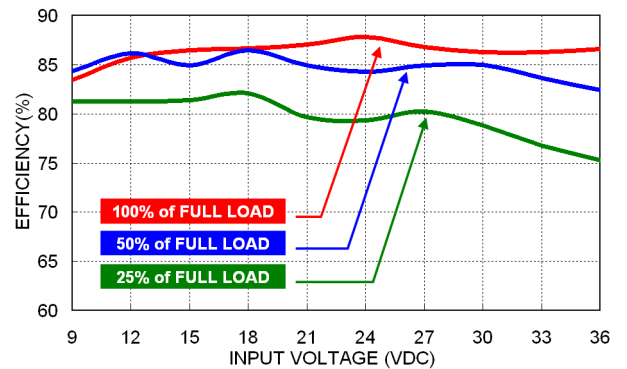### Remote on/off Voltage Start-Up Characteristic

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.
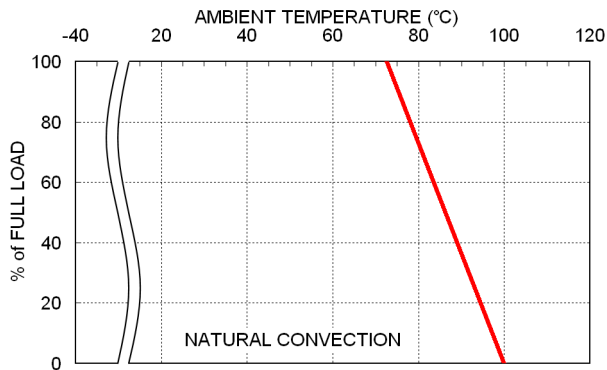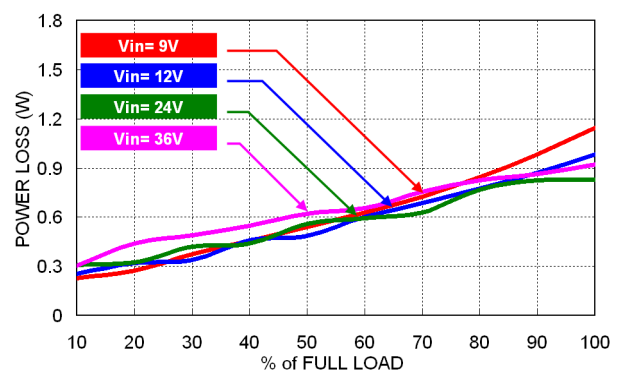
TMR 6-2415WIR

Efficiency versus Output Load

Vin= 9V
Vin= 12V
Vin= 24V
Vin= 36V

Efficiency versus Input Voltage

100% of FULL LOAD
50% of FULL LOAD
25% of FULL LOAD

Derating Output Load versus Ambient Temperature

NATURAL CONVECTION

Power Dissipation versus Output Load

Vin= 9V
Vin= 12V
Vin= 24V
Vin= 36V

Typical Output Ripple and Noise

Transient Response to Dynamic Load Change (25%)

Typical Start-Up and Output Rise Characteristic

Vin

Vout

Remote on/off Voltage Start-Up Characteristic

Von/off

Vout

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

TRACO POWER

TMR 6-2421WIR

Efficiency versus Output Load
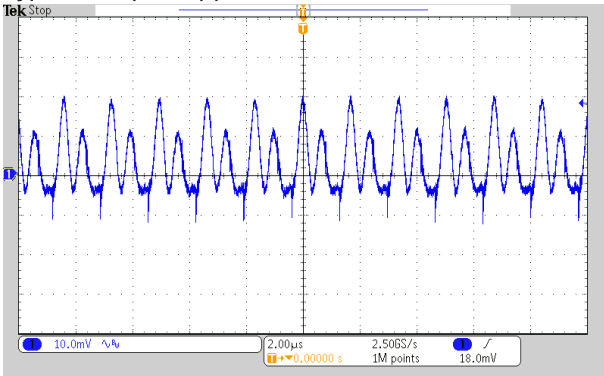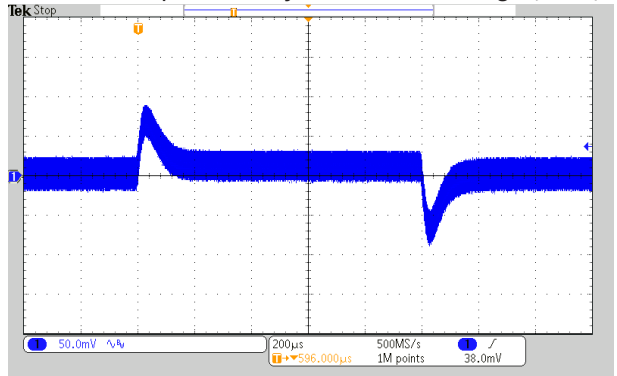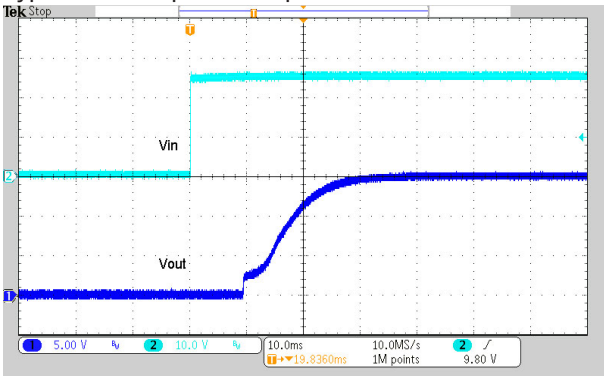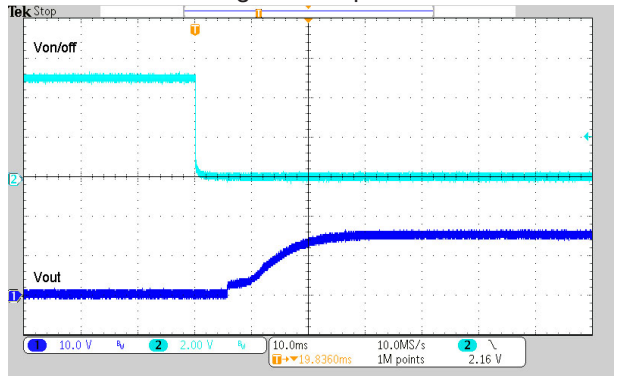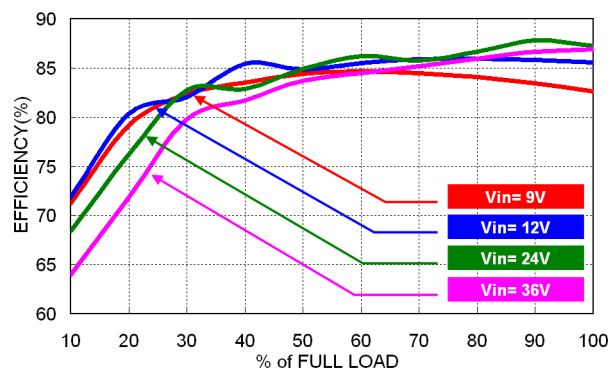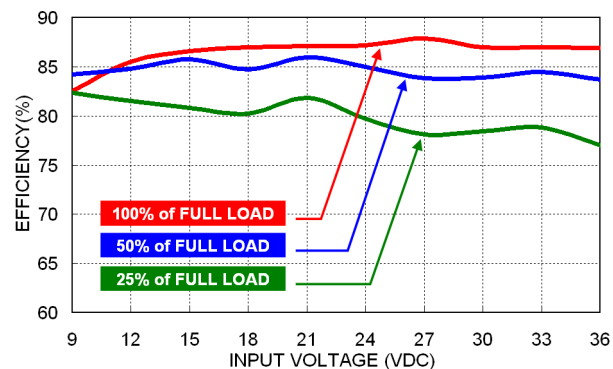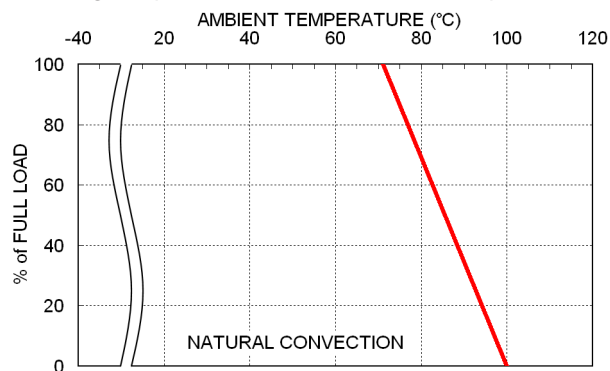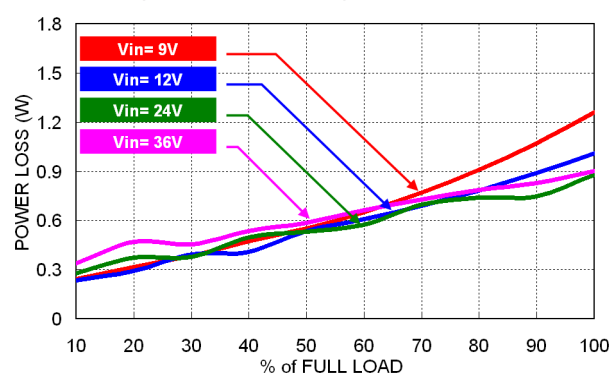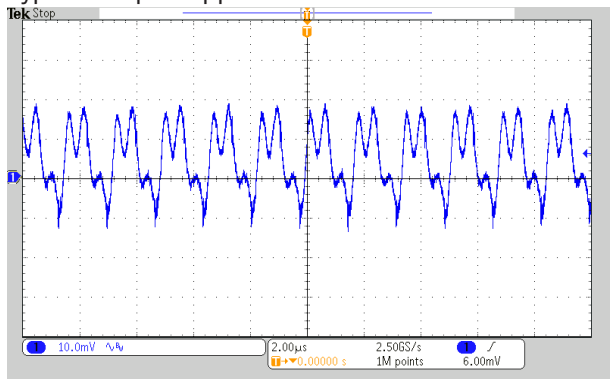

Efficiency versus Input Voltage

Derating Output Load versus Ambient Temperature
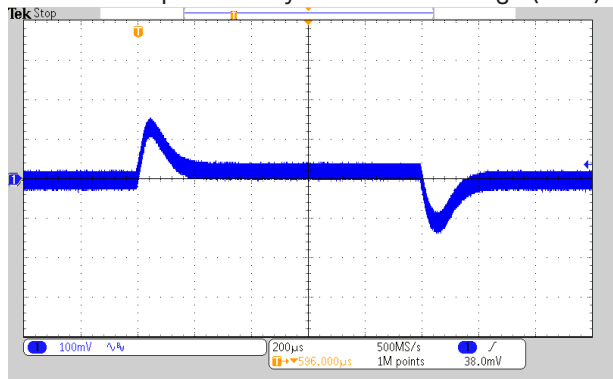

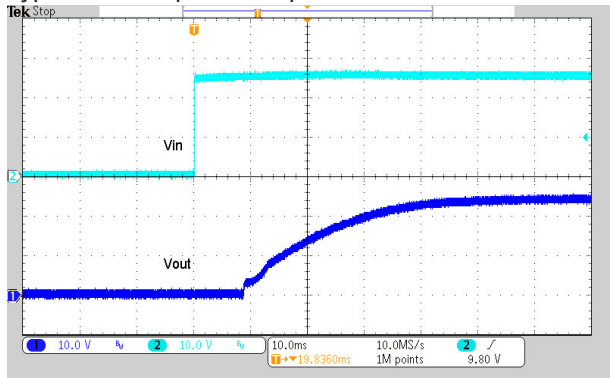## Power Dissipation versus Output Load
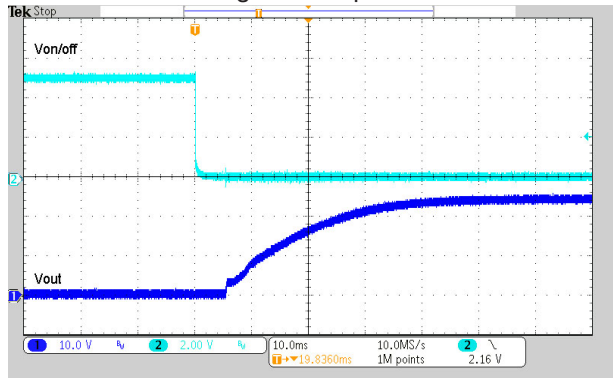

Typical Output Ripple and Noise

Transient Response to Dynamic Load Change (25%)

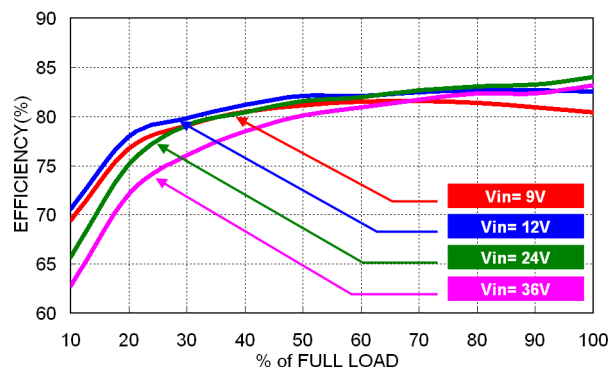## Typical Start-Up and Output Rise Characteristic

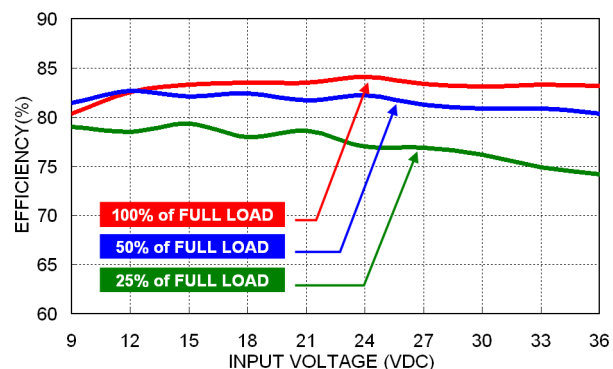## Remote on/off Voltage Start-Up Characteristic

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.
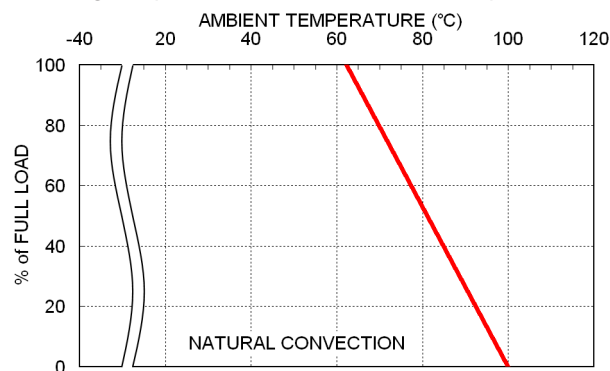
TMR 6-2422WIR
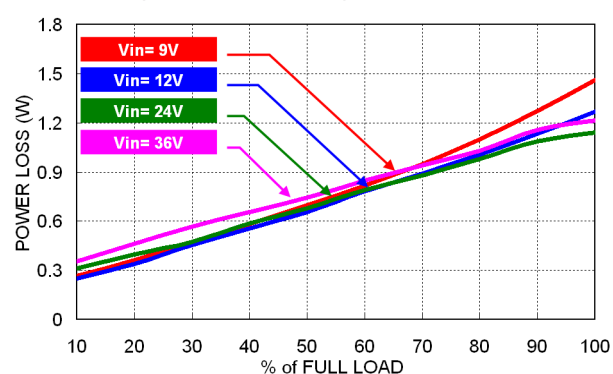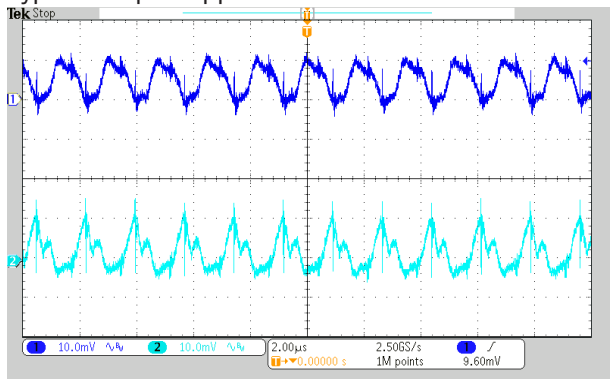
Efficiency versus Output Load

Efficiency versus Input Voltage

Derating Output Load versus Ambient Temperature
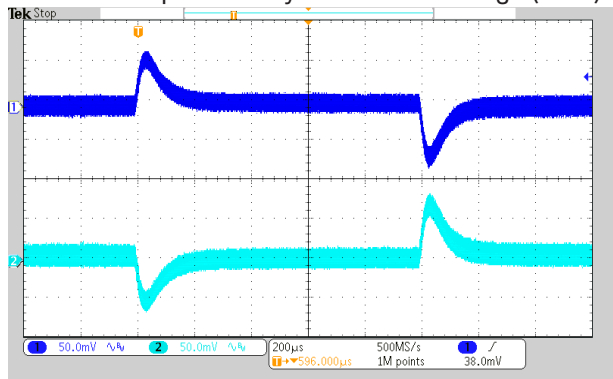

NATURAL CONVECTION

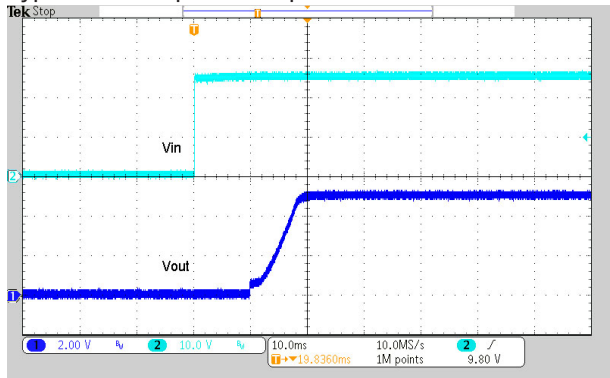**Power Dissipation versus Output Load**
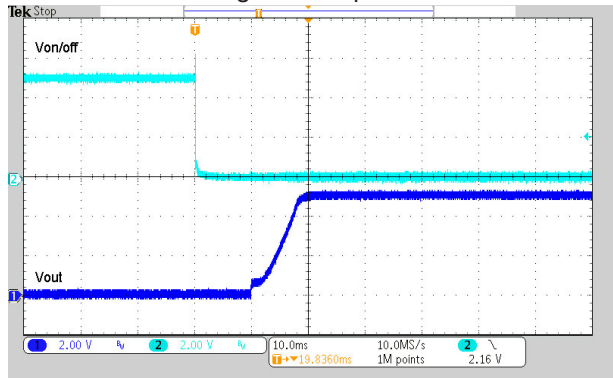

Typical Output Ripple and Noise

Transient Response to Dynamic Load Change (25%)

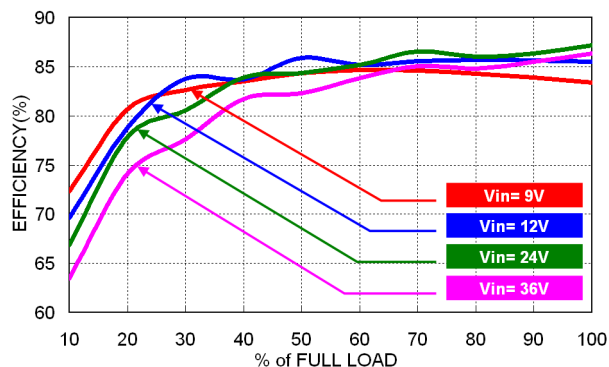**Typical Start-Up and Output Rise Characteristic**

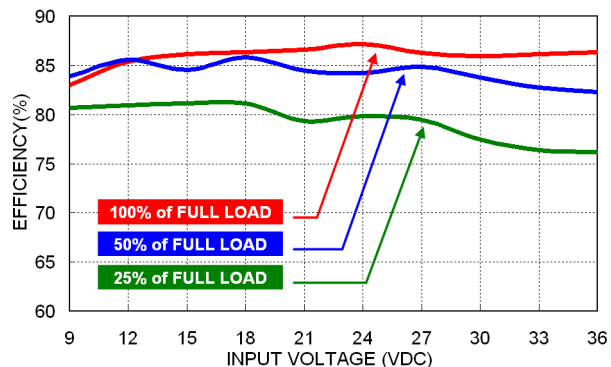**Remote on/off Voltage Start-Up Characteristic**

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.
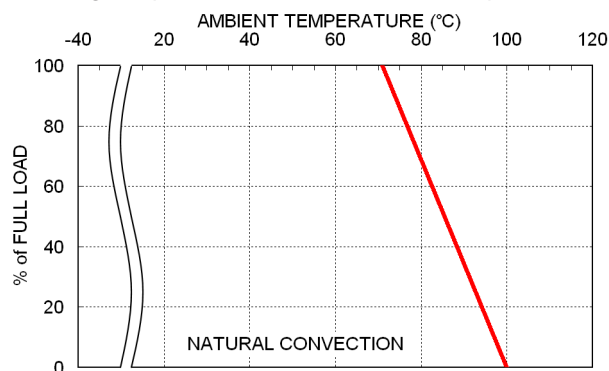
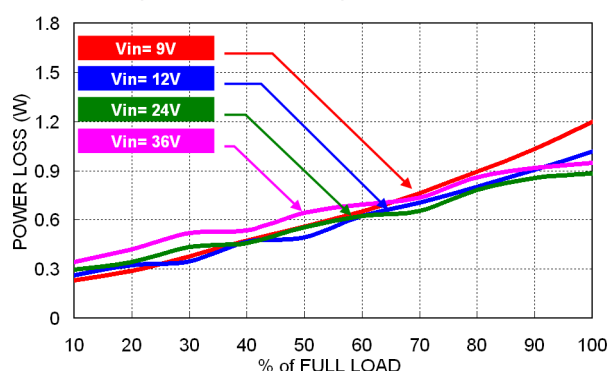## TMR 6-2423WIR

Efficiency versus Output Load

EFFICIENCY (%) vs % of FULL LOAD

- Vin= 9V
- Vin= 12V
- Vin= 24V
- Vin= 36V

Efficiency versus Input Voltage

EFFICIENCY (%) vs INPUT VOLTAGE (VDC)

- 100% of FULL LOAD
- 50% of FULL LOAD
- 25% of FULL LOAD

Derating Output Load versus Ambient Temperature

AMBIENT TEMPERATURE (°C) vs % of FULL LOAD

NATURAL CONVECTION

Power Dissipation versus Output Load

POWER LOSS (W) vs % of FULL LOAD

- Vin= 9V
- Vin= 12V
- Vin= 24V
- Vin= 36V

Typical Output Ripple and Noise

Transient Response to Dynamic Load Change (25%)

Typical Start-Up and Output Rise Characteristic

Vin

Vout

Remote on/off Voltage Start-Up Characteristic

Von/off

Vout

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

TMR 6-4810WIR

Efficiency versus Output Load

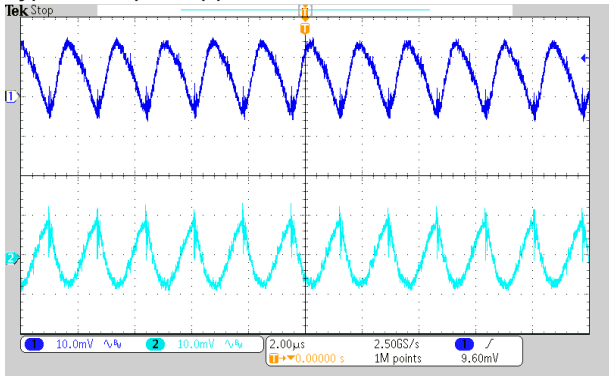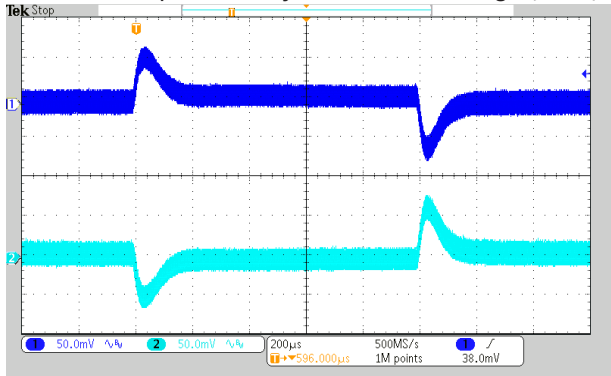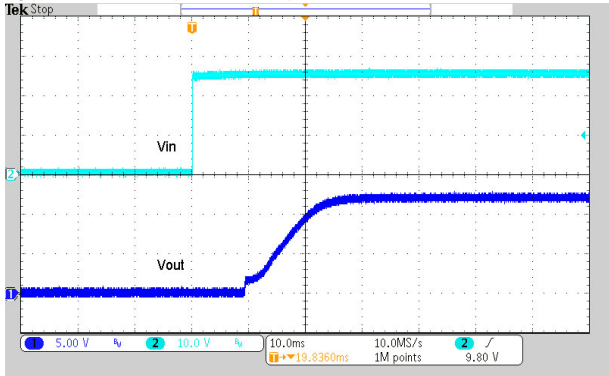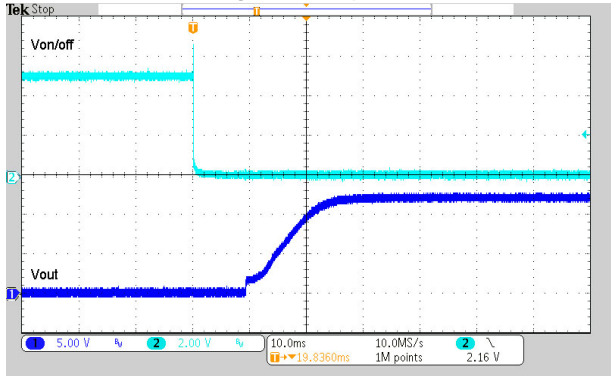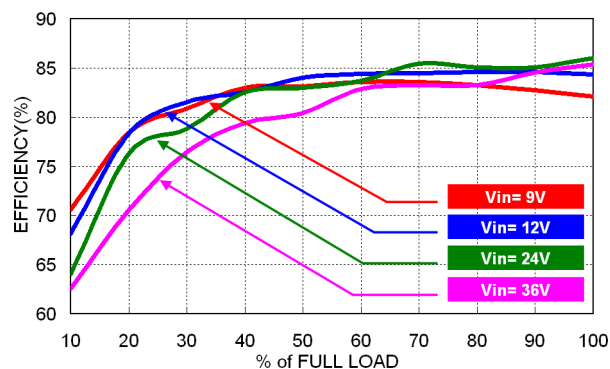### Efficiency versus Input Voltage

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
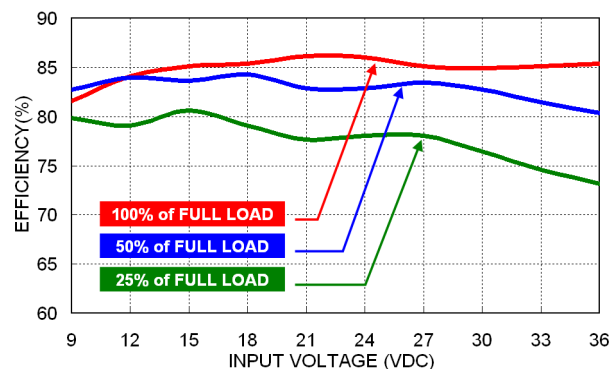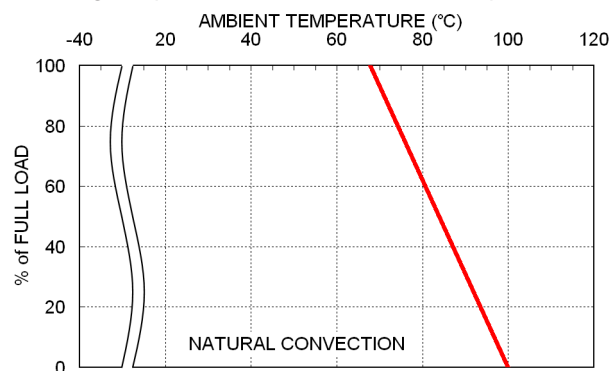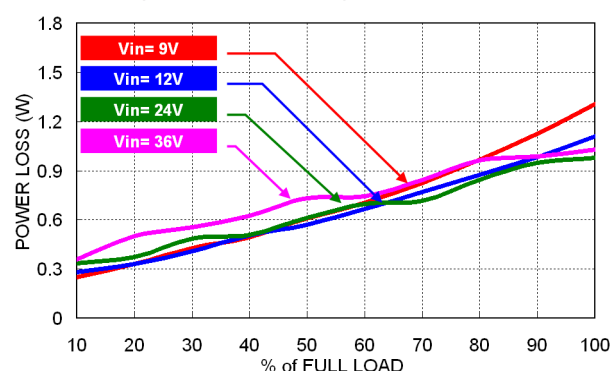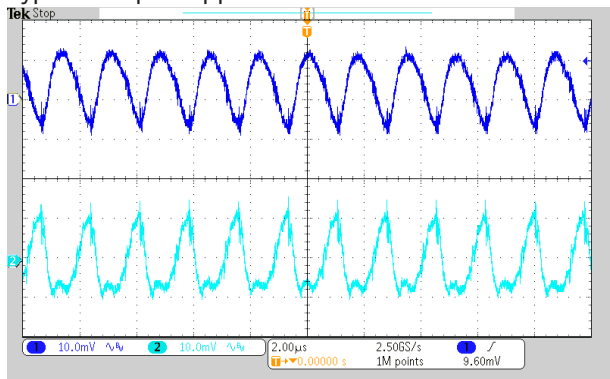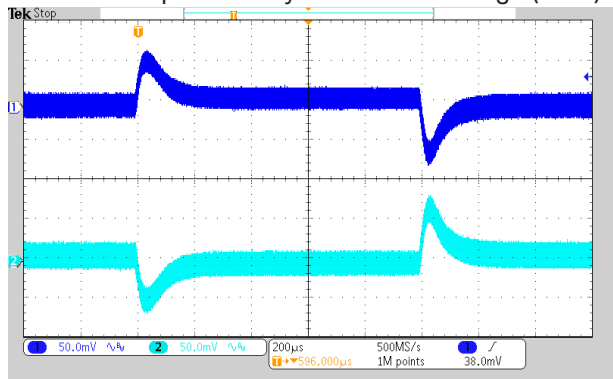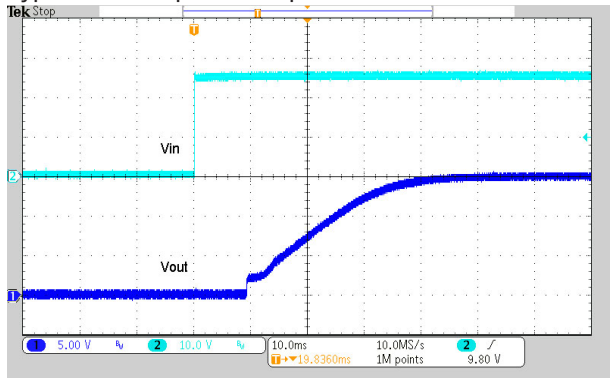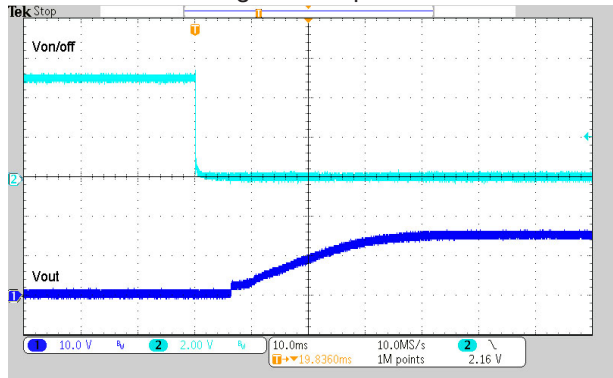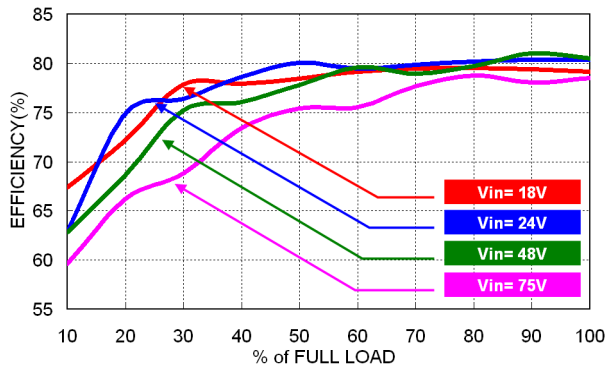

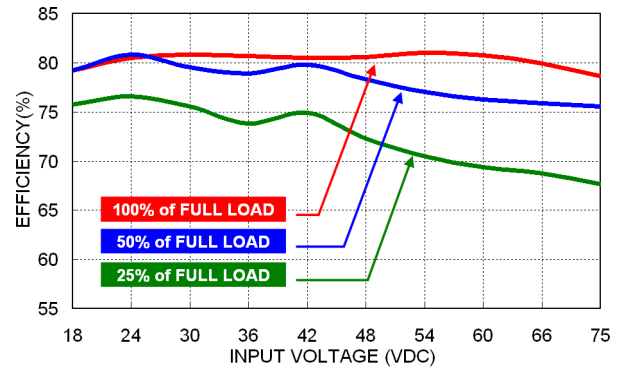### Remote on/off Voltage Start-Up Characteristic

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.
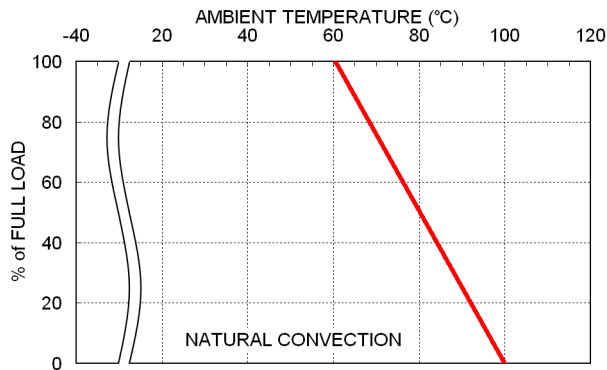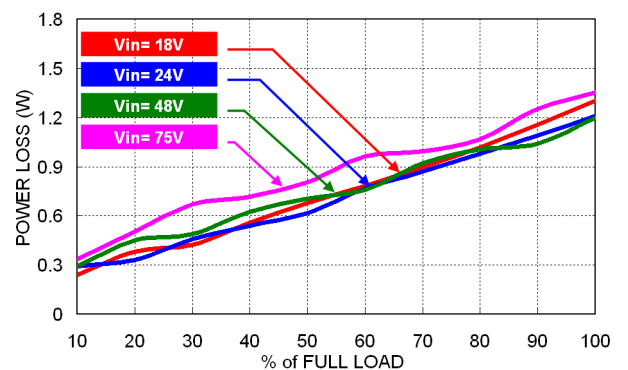
TMR 6-4811WIR

Efficiency versus Output Load
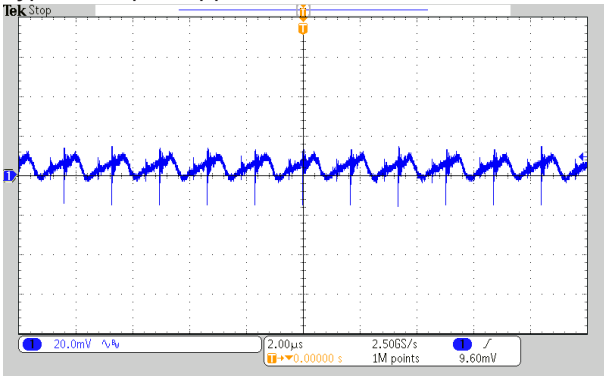

Efficiency versus Input Voltage

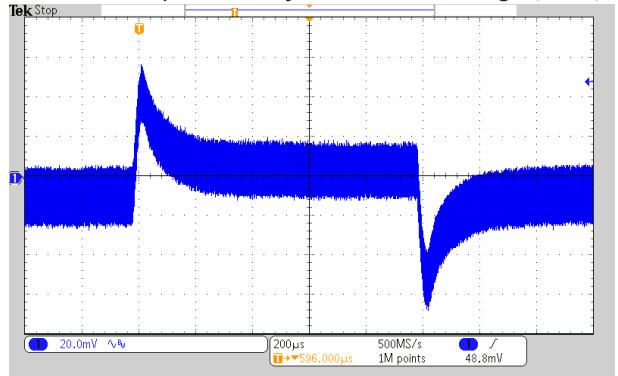### Derating Output Load versus Ambient Temperature

Power Dissipation versus Output Load
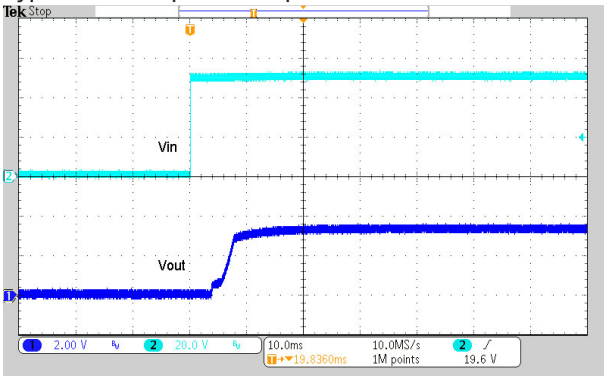

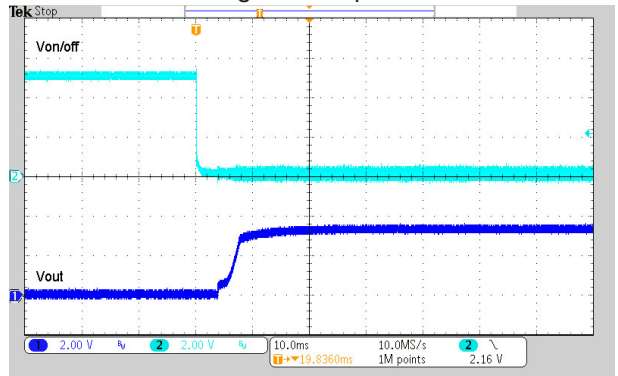### Typical Output Ripple and Noise

Transient Response to Dynamic Load Change (25%)

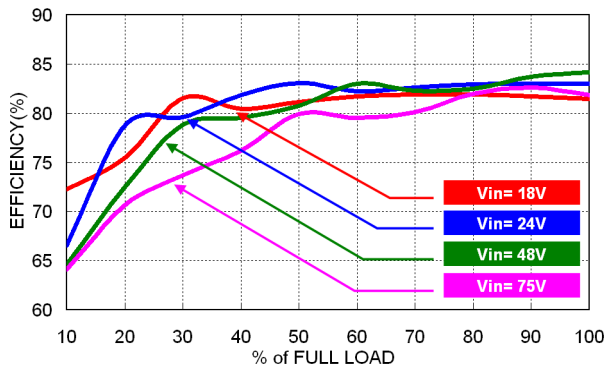### Typical Start-Up and Output Rise Characteristic

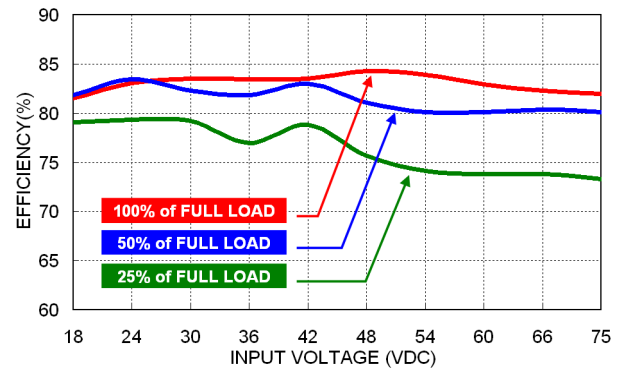### Remote on/off Voltage Start-Up Characteristic

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.
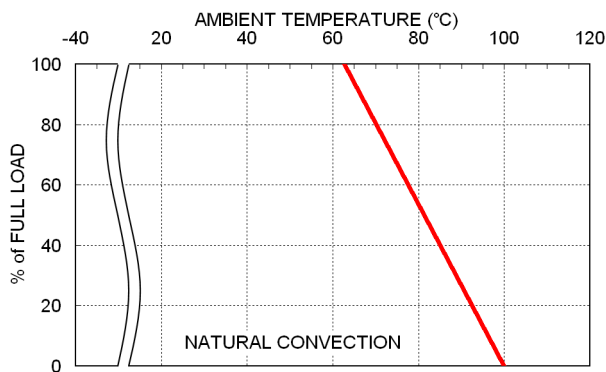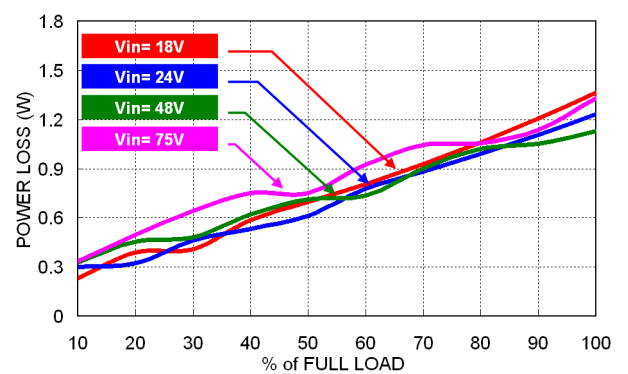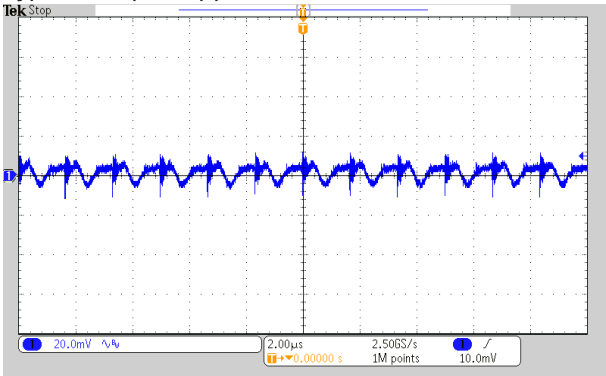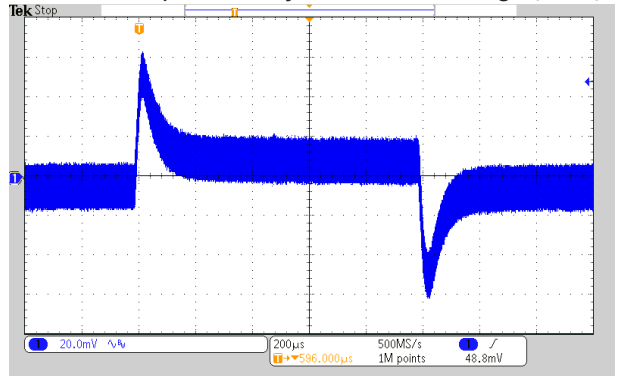
TMR 6-4819WIR

Efficiency versus Output Load

Vin= 18V
Vin= 24V
Vin= 48V
Vin= 75V

Efficiency versus Input Voltage

100% of FULL LOAD
50% of FULL LOAD
25% of FULL LOAD

Derating Output Load versus Ambient Temperature

NATURAL CONVECTION

Power Dissipation versus Output Load

Vin= 18V
Vin= 24V
Vin= 48V
Vin= 75V

Typical Output Ripple and Noise

Transient Response to Dynamic Load Change (25%)

Typical Start-Up and Output Rise Characteristic

Vin

Vout

Remote on/off Voltage Start-Up Characteristic

Von/off

Vout

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

TMR 6-4812WIR

Efficiency versus Output Load

Efficiency versus Input Voltage

Derating Output Load versus Ambient Temperature

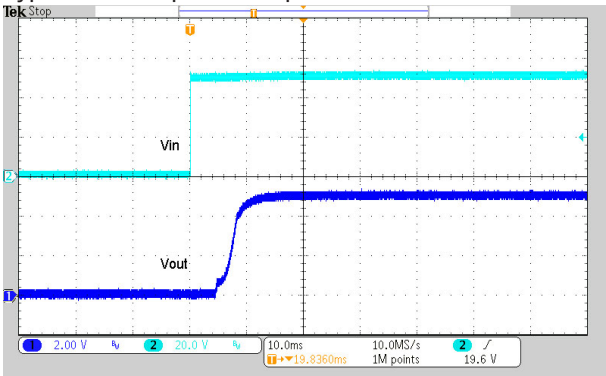Power Dissipation versus Output Load

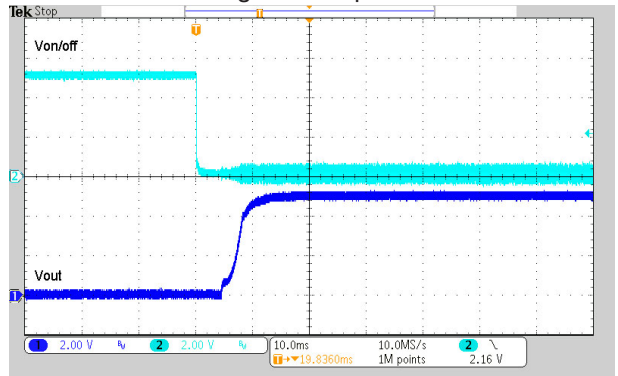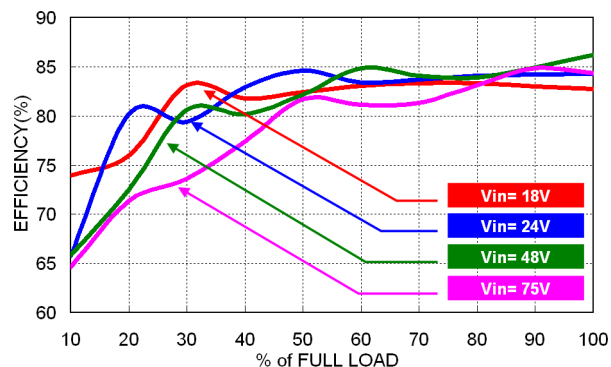Typical Output Ripple and Noise

Transient Response to Dynamic Load Change (25%)

Typical Start-Up and Output Rise Characteristic

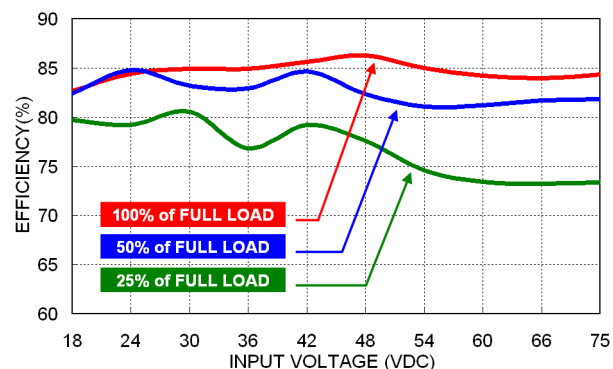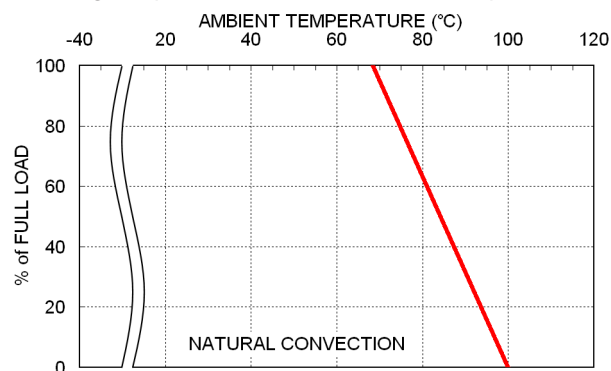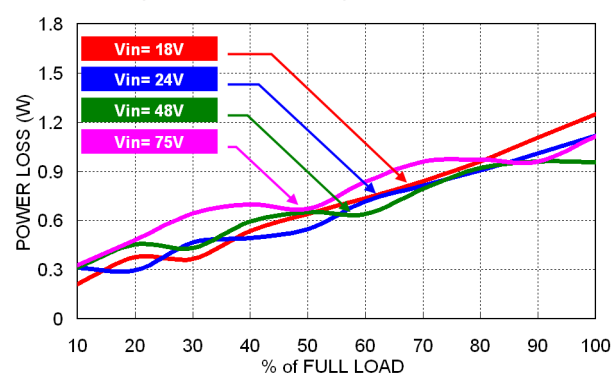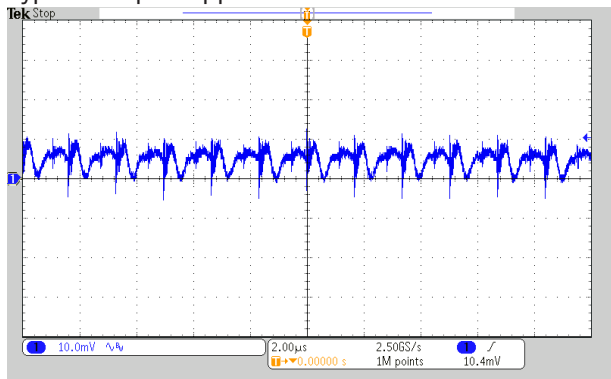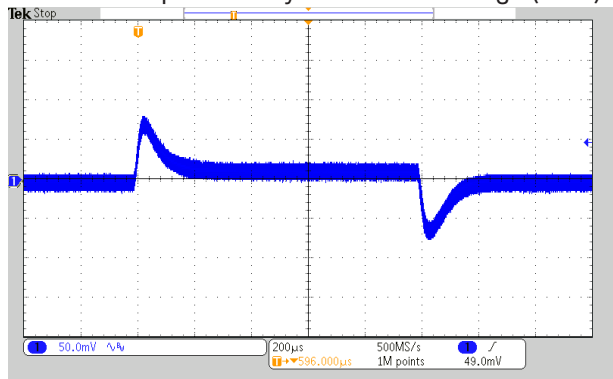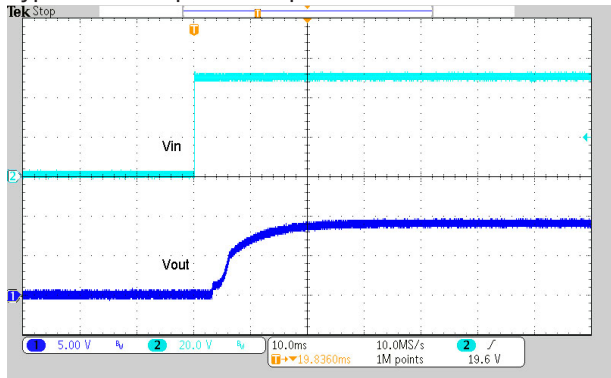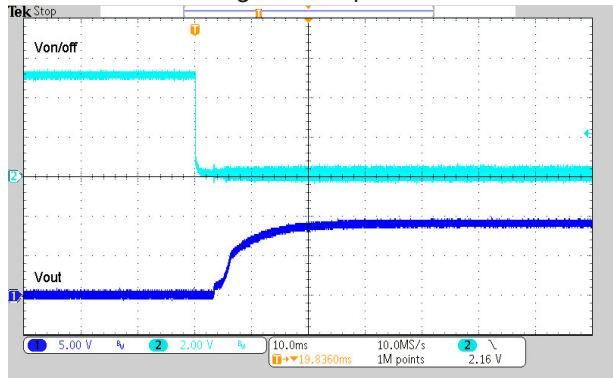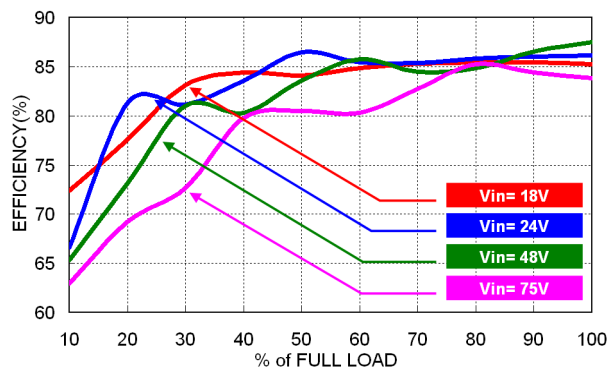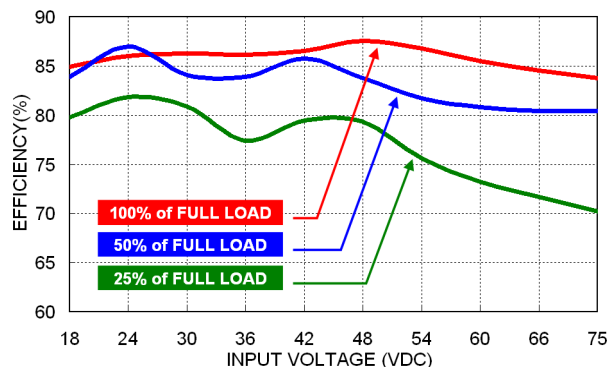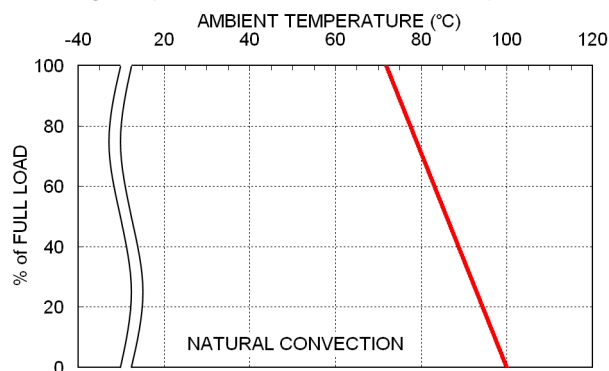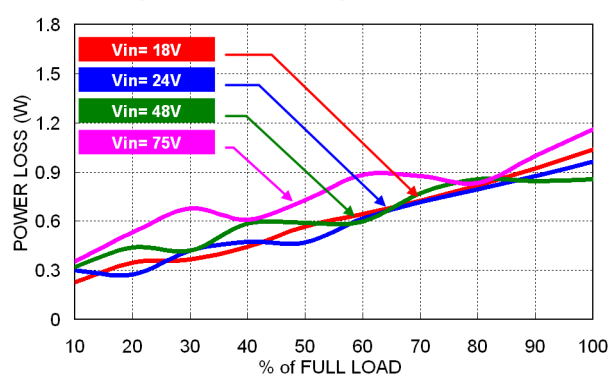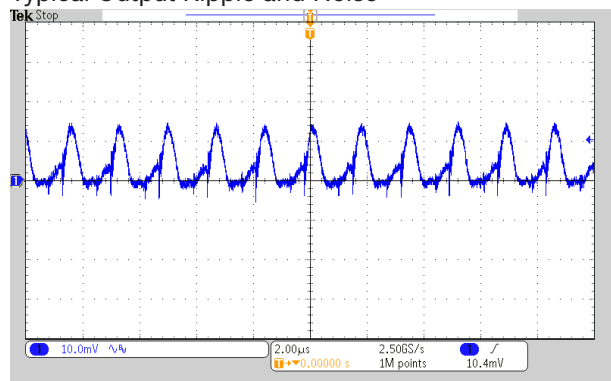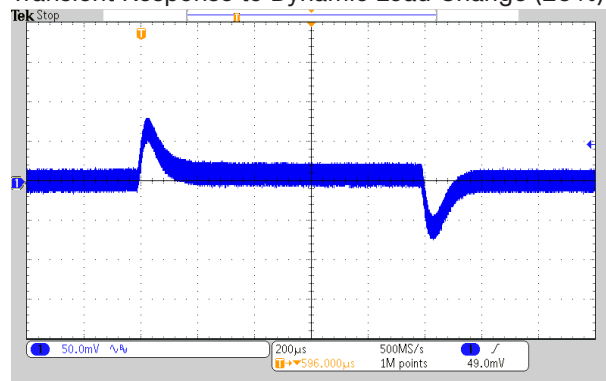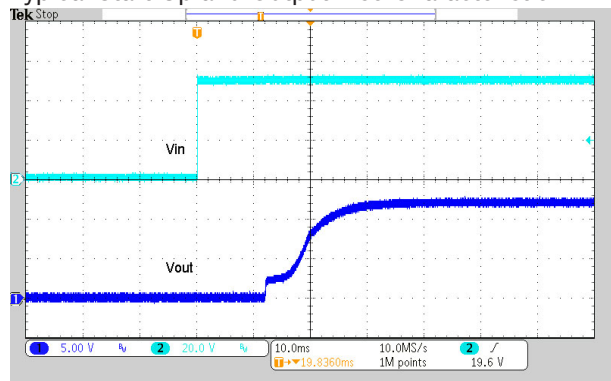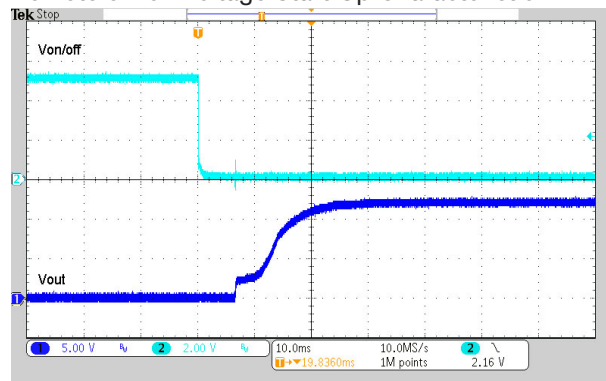Remote on/off Voltage Start-Up Characteristic

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

TMR 6-4813WIR

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%)

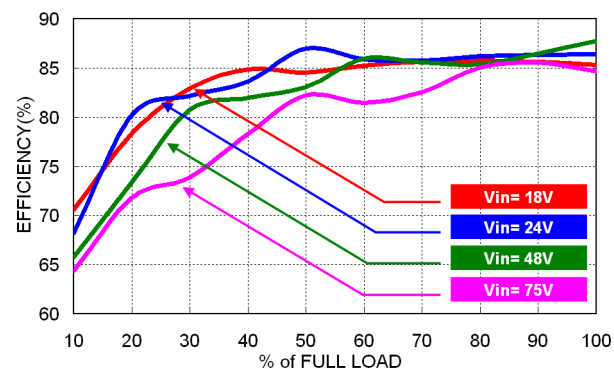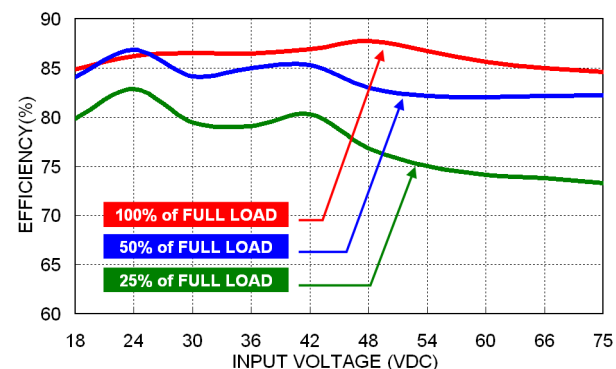### Typical Start-Up and Output Rise Characteristic

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.
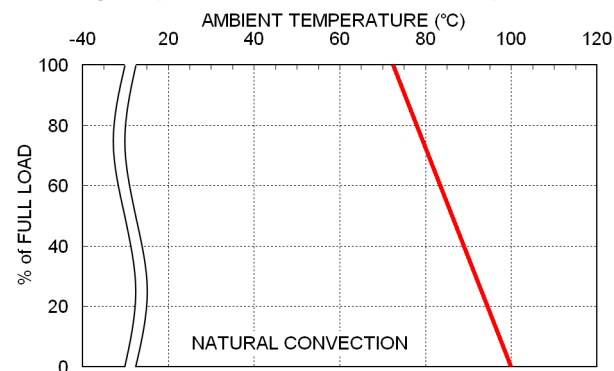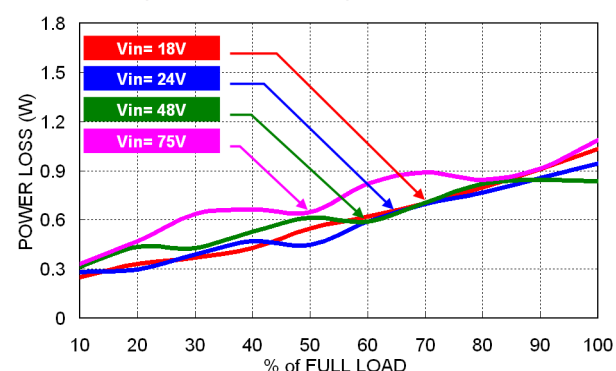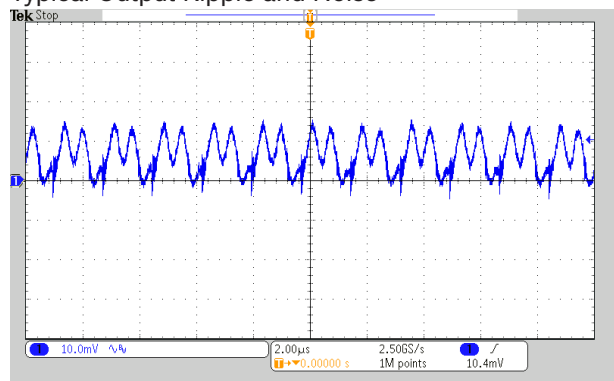
TMR 6-4815WIR

Efficiency versus Output Load

Efficiency versus Input Voltage

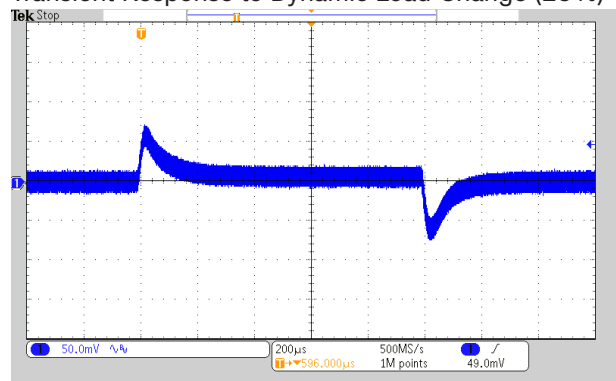### Derating Output Load versus Ambient Temperature

Power Dissipation versus Output Load
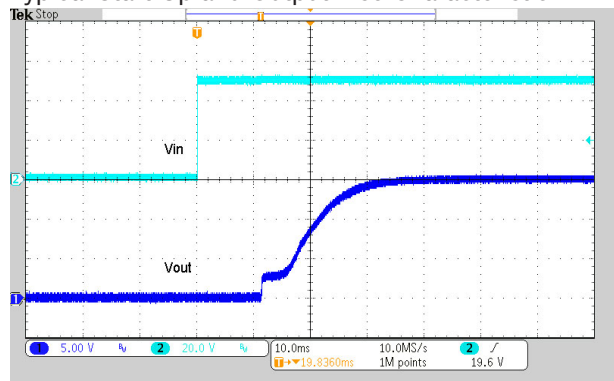

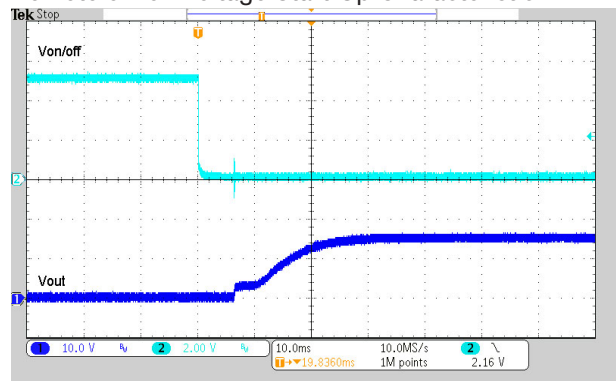### Typical Output Ripple and Noise

Transient Response to Dynamic Load Change (25%)

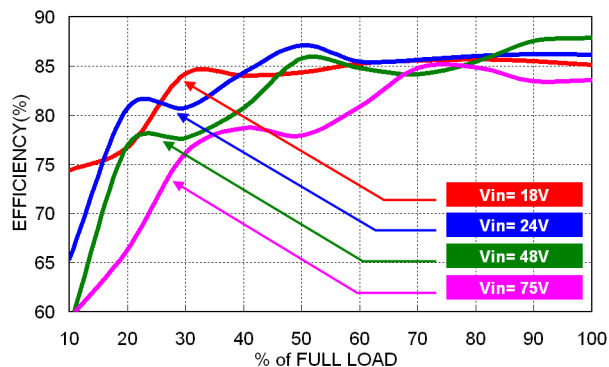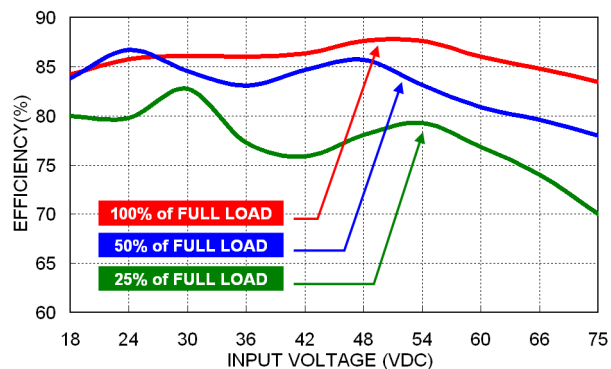### Typical Start-Up and Output Rise Characteristic

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.
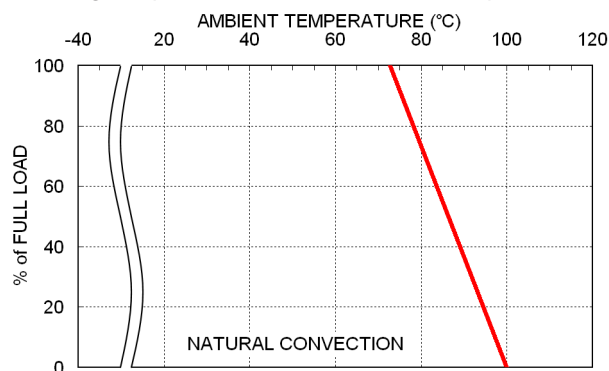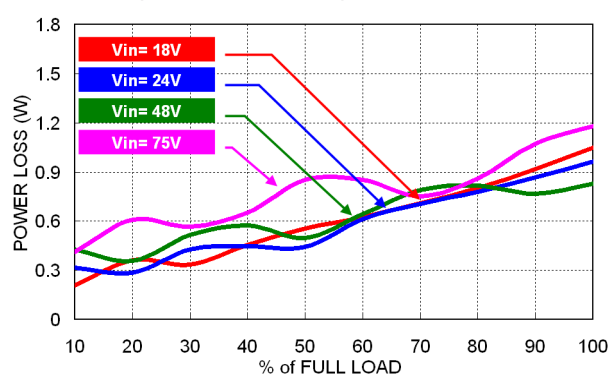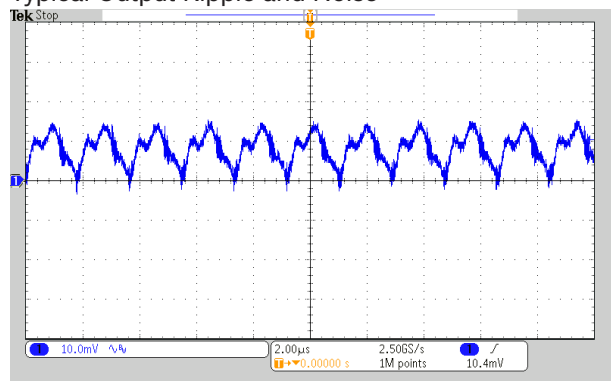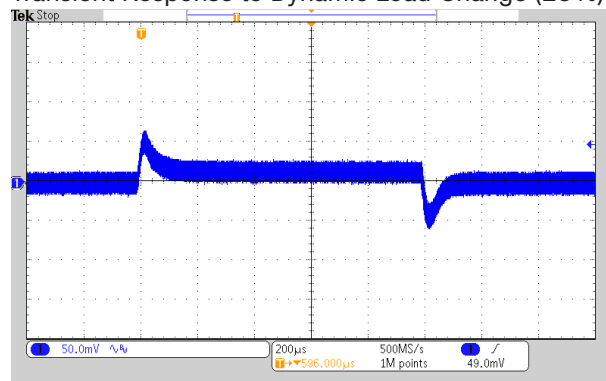
TRACO POWER

TMR 6-4821WIR

Efficiency versus Output Load

Vin= 18V
Vin= 24V
Vin= 48V
Vin= 75V

Efficiency versus Input Voltage

100% of FULL LOAD
50% of FULL LOAD
25% of FULL LOAD

Derating Output Load versus Ambient Temperature

NATURAL CONVECTION

Power Dissipation versus Output Load
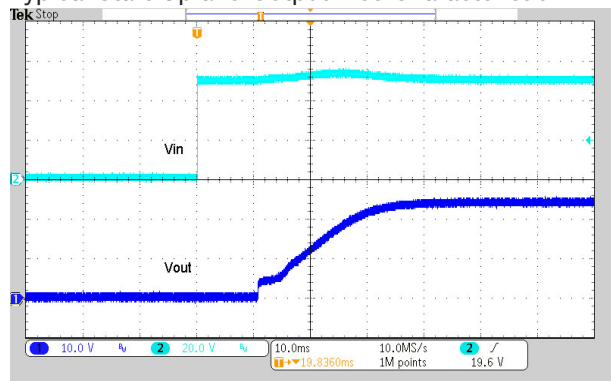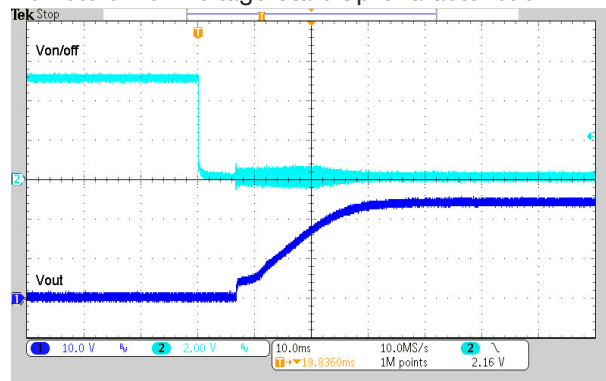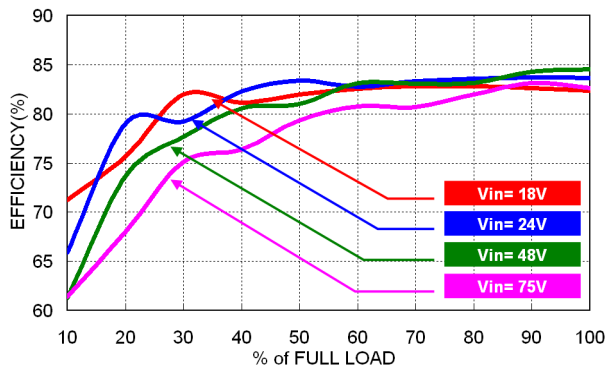

Vin= 18V
Vin= 24V
Vin= 48V
Vin= 75V

Typical Output Ripple and Noise

Transient Response to Dynamic Load Change (25%)

Typical Start-Up and Output Rise Characteristic

Vin

Vout

Remote on/off Voltage Start-Up Characteristic

Von/off

Vout

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

TRACO POWER

TMR 6-4822WIR

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

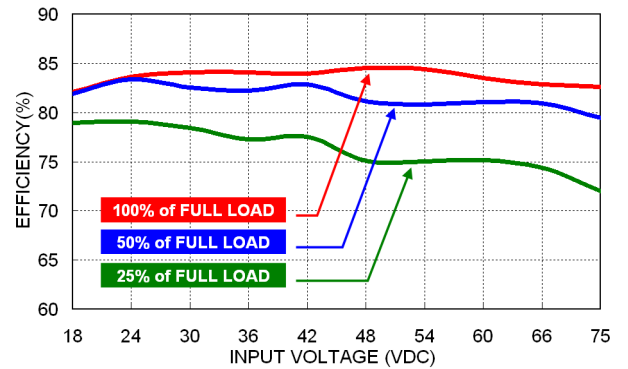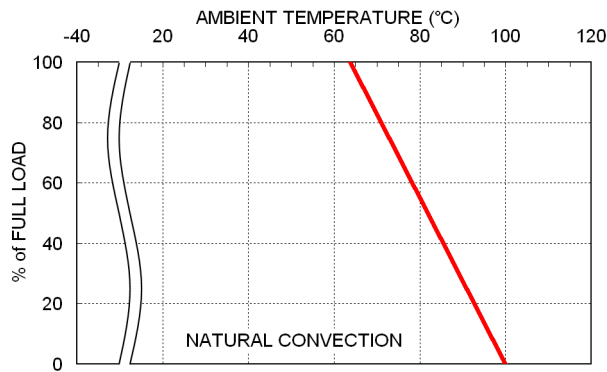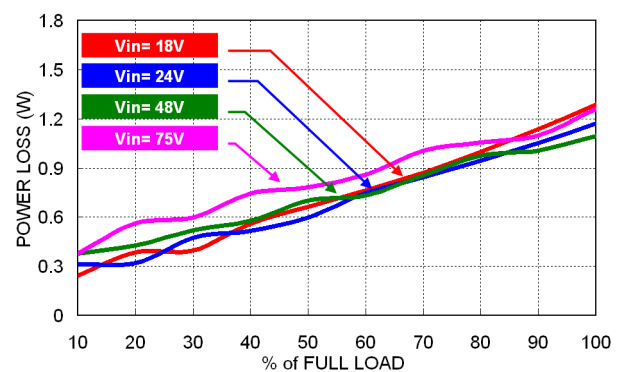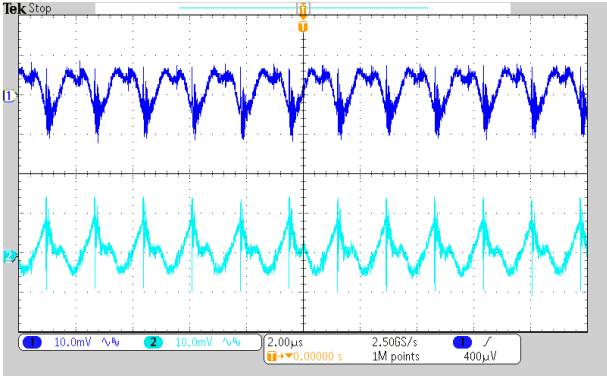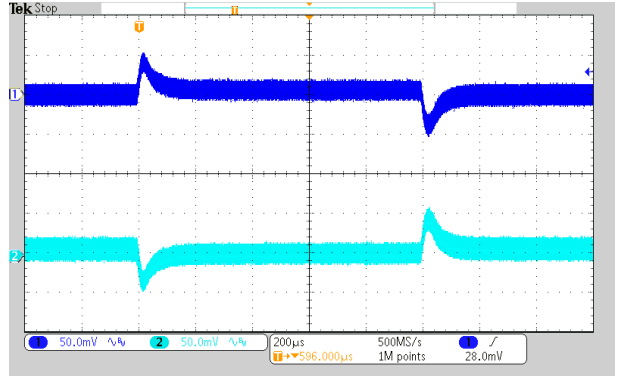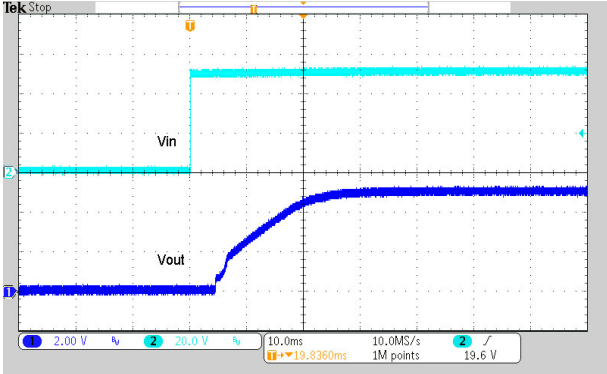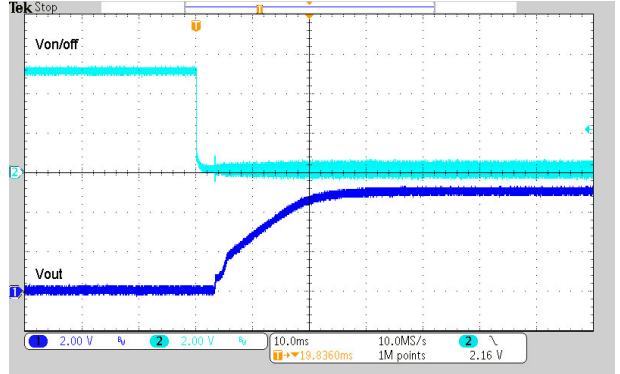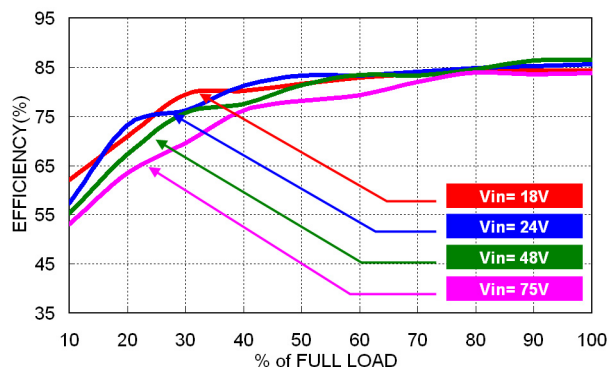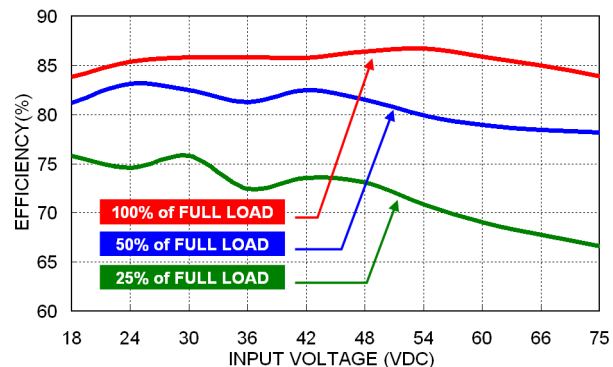### Remote on/off Voltage Start-Up Characteristic

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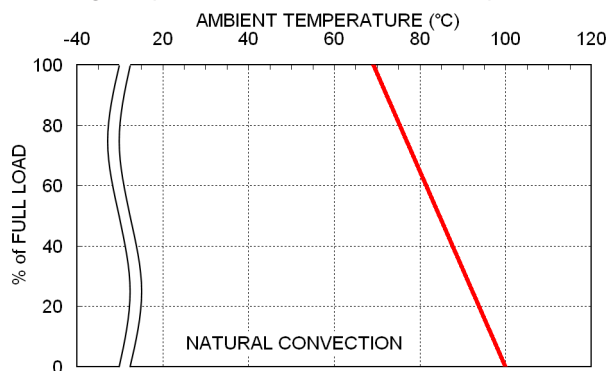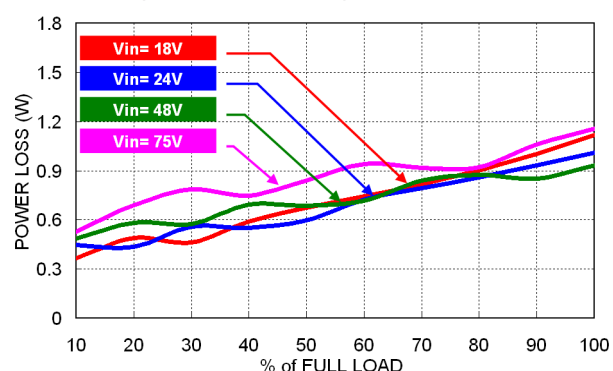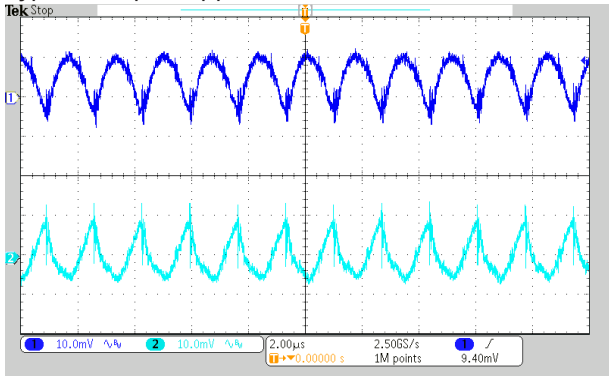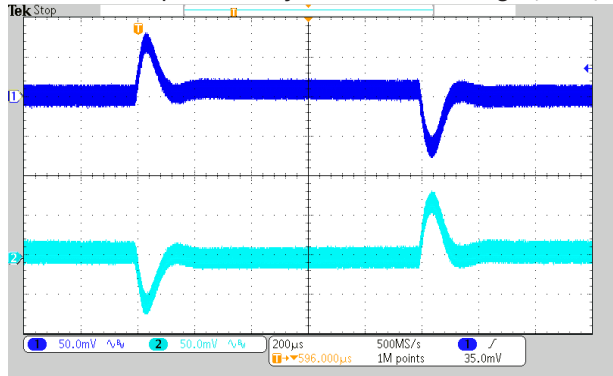
TRACO POWER

TMR 6-4823WIR

Efficiency versus Output Load

Vin= 18V	
Vin= 24V	
Vin= 48V	
Vin= 75V	

Efficiency versus Input Voltage

100% of FULL LOAD
50% of FULL LOAD
25% of FULL LOAD

Derating Output Load versus Ambient Temperature

NATURAL CONVECTION

Power Dissipation versus Output Load
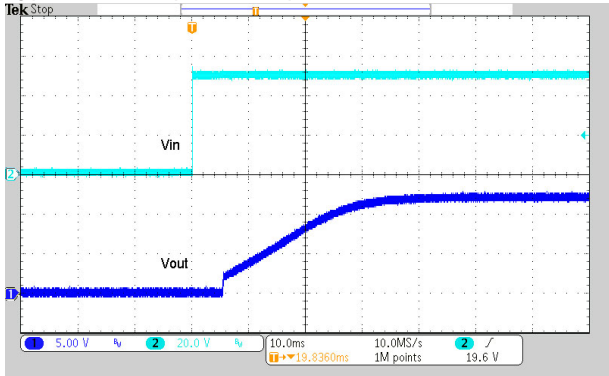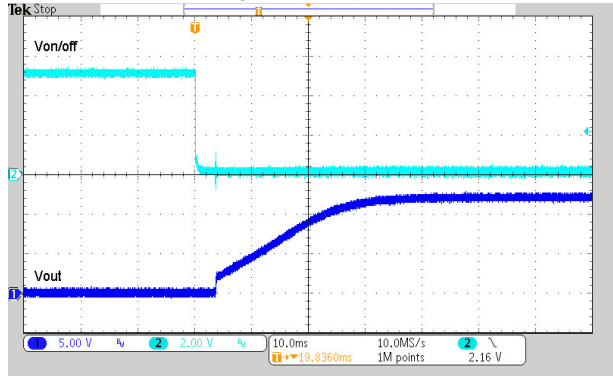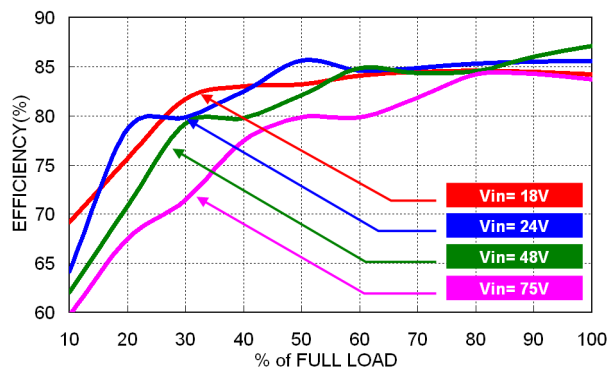

Vin= 18V
Vin= 24V
Vin= 48V
Vin= 75V

Typical Output Ripple and Noise

Transient Response to Dynamic Load Change (25%)

Typical Start-Up and Output Rise Characteristic

Vin

Vout

Remote on/off Voltage Start-Up Characteristic

Von/off

Vout

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

TMR 6-7210WIR

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
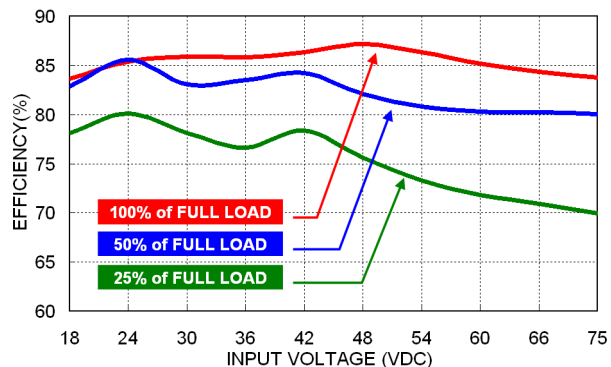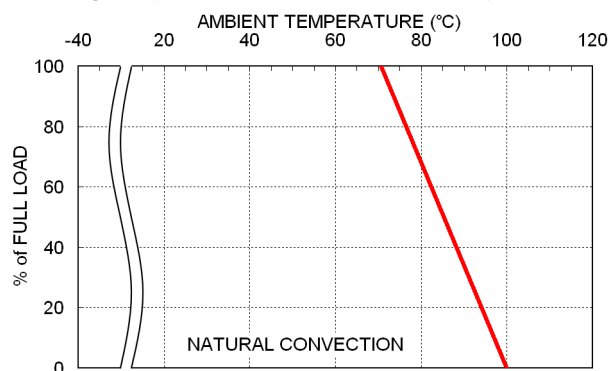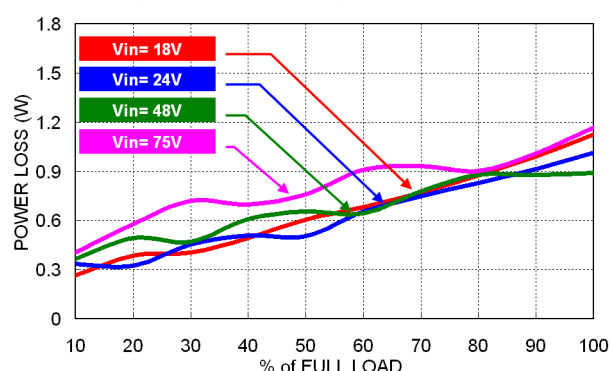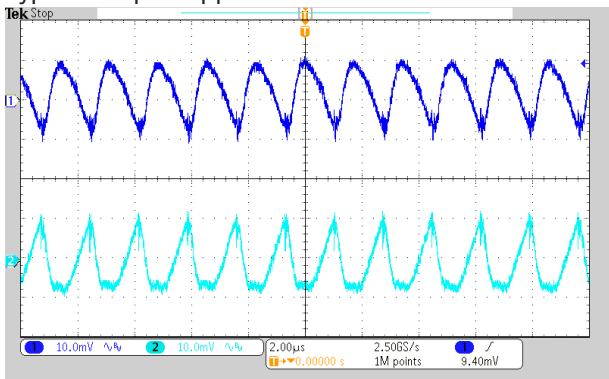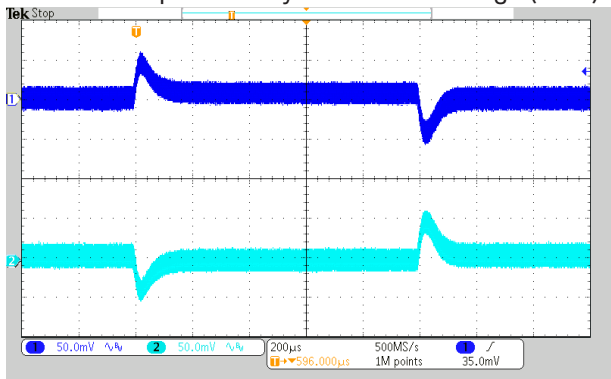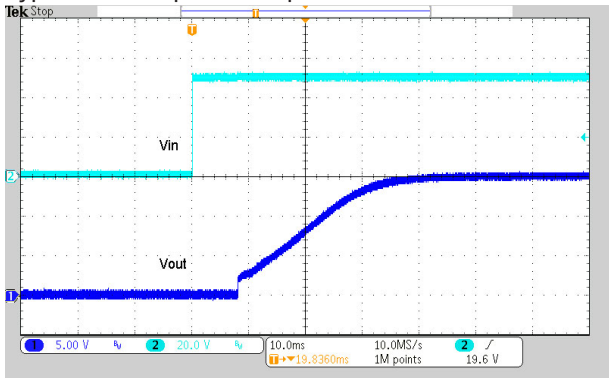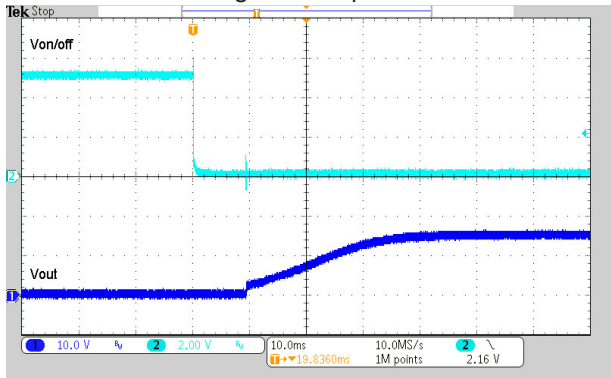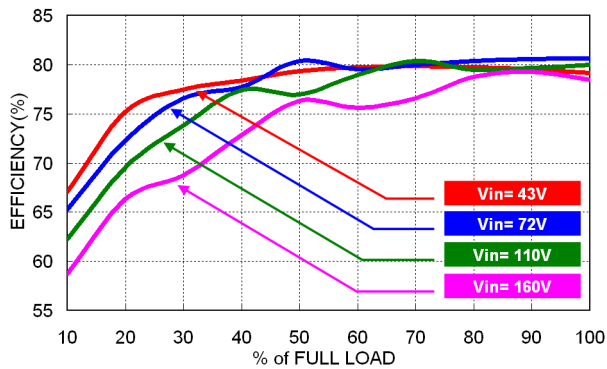

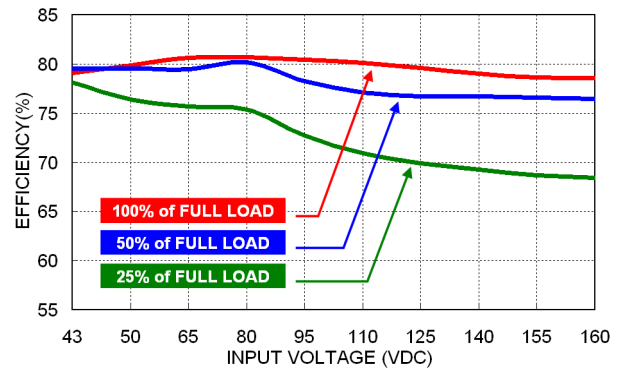### Remote on/off Voltage Start-Up Characteristic

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.
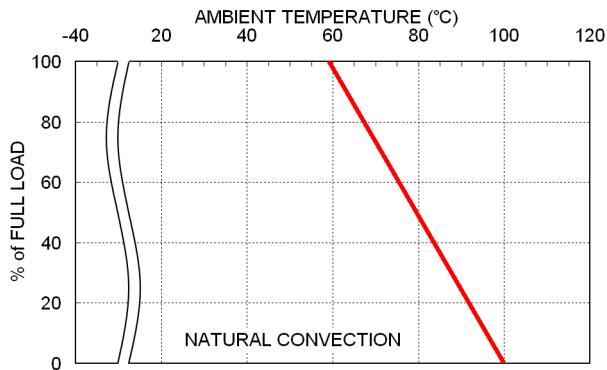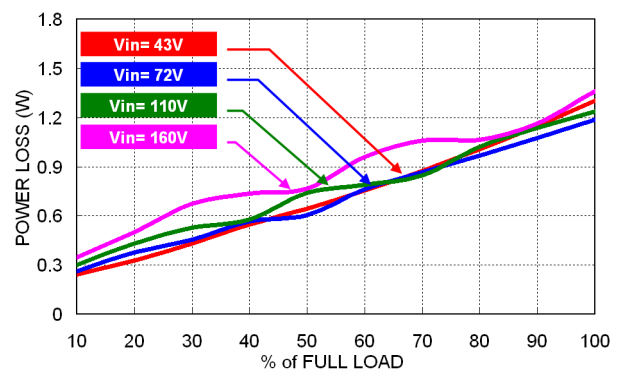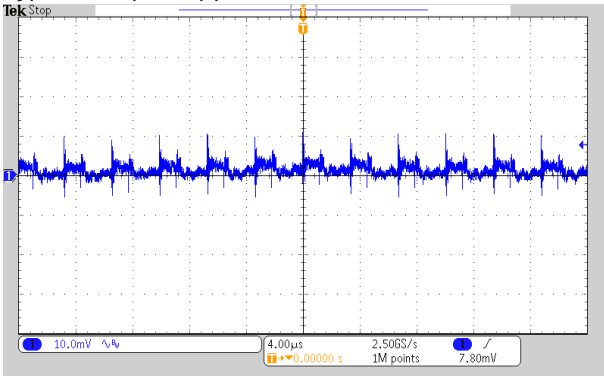
TMR 6-7211WIR

Efficiency versus Output Load

Efficiency versus Input Voltage

Derating Output Load versus Ambient Temperature
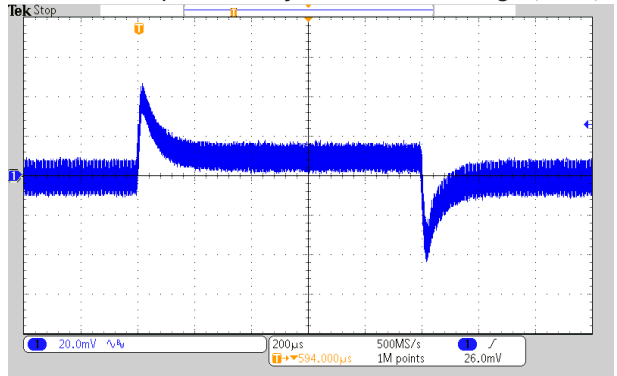

NATURAL CONVECTION

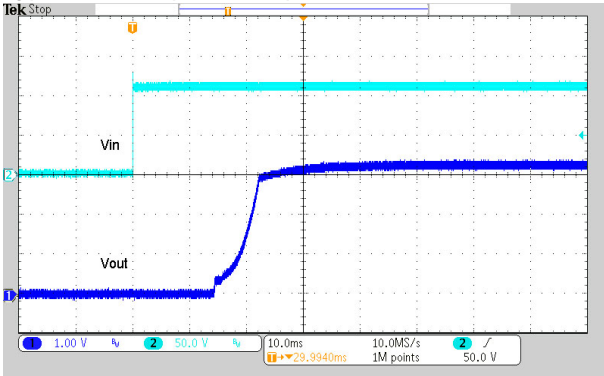### Power Dissipation versus Output Load

Typical Output Ripple and Noise
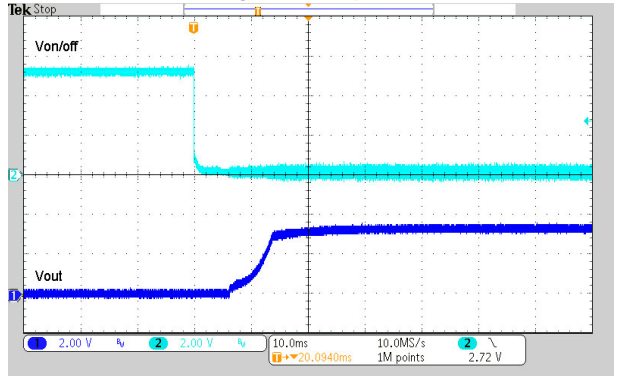

Transient Response to Dynamic Load Change (25%)

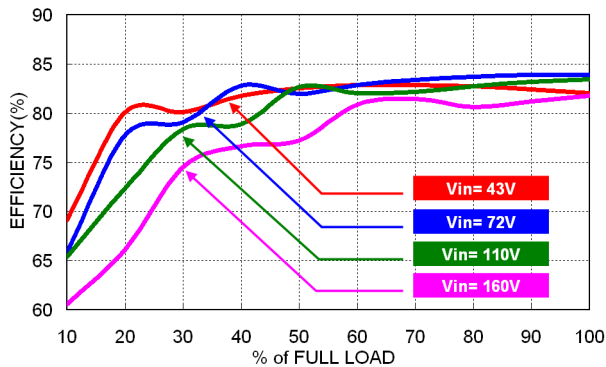### Typical Start-Up and Output Rise Characteristic

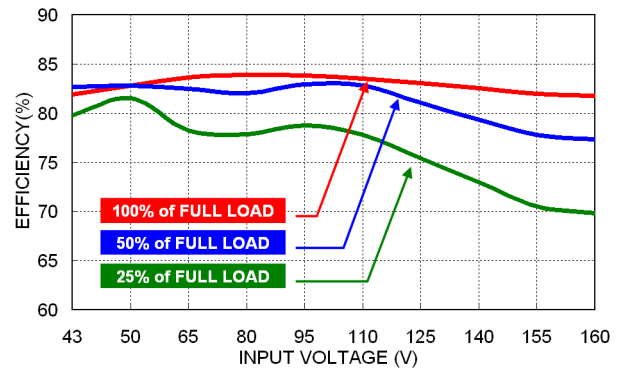### Remote on/off Voltage Start-Up Characteristic

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.
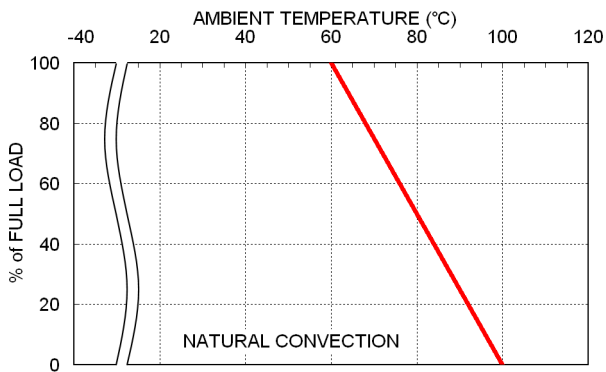
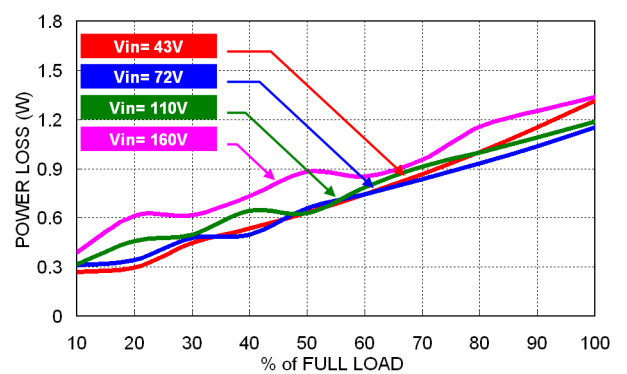## TMR 6-7219WIR

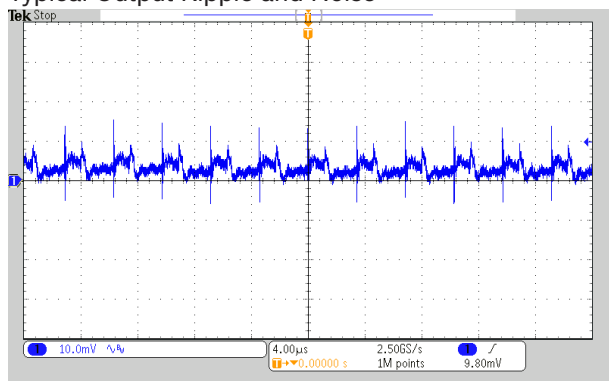### Efficiency versus Output Load

Efficiency versus Input Voltage

Derating Output Load versus Ambient Temperature

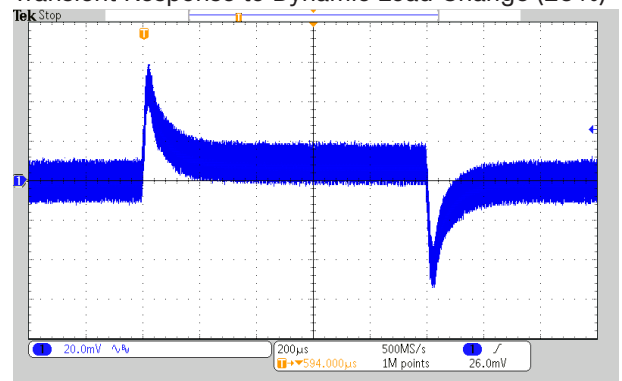NATURAL CONVECTION
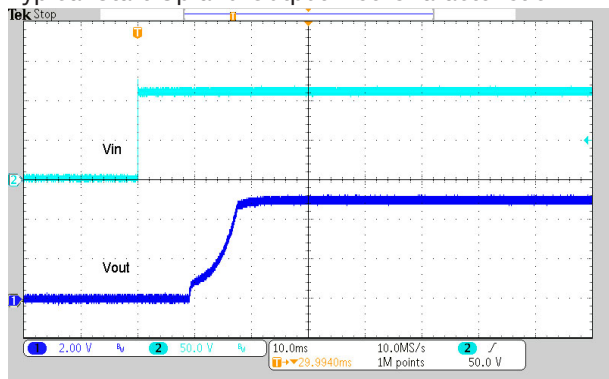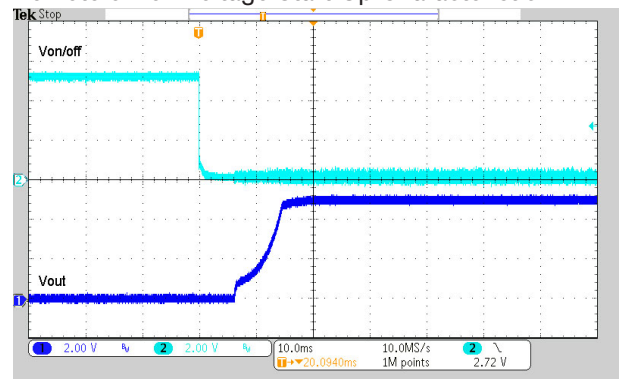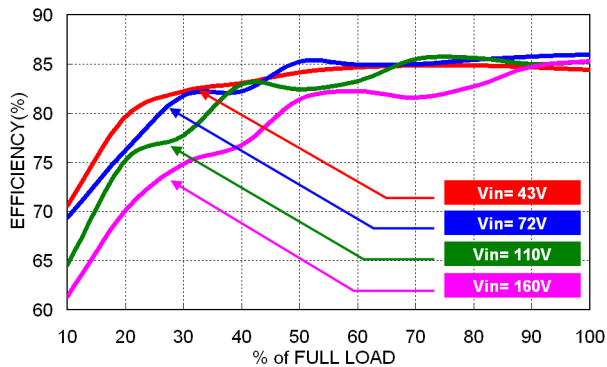
Power Dissipation versus Output Load

Typical Output Ripple and Noise

Transient Response to Dynamic Load Change (25%)

Typical Start-Up and Output Rise Characteristic

Vin

Vout

Remote on/off Voltage Start-Up Characteristic
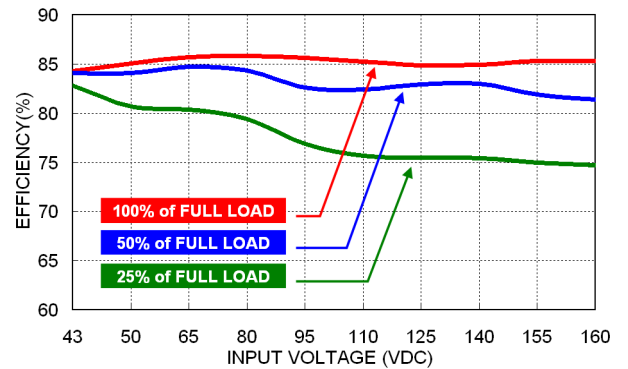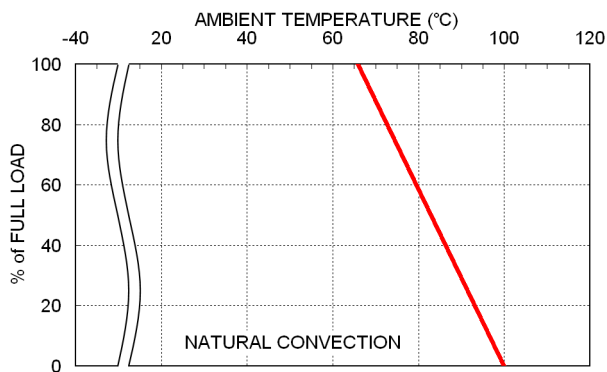

Von/off

Vout

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

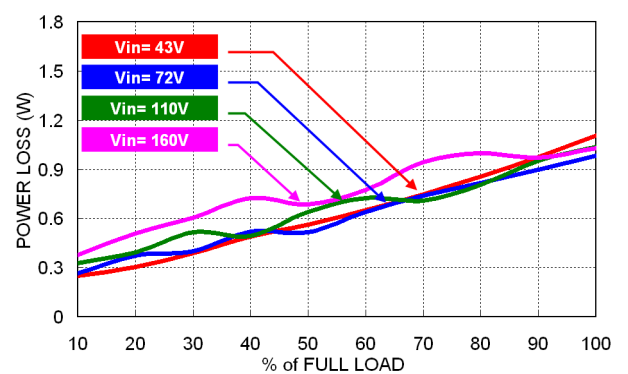## TMR 6-7212WIR

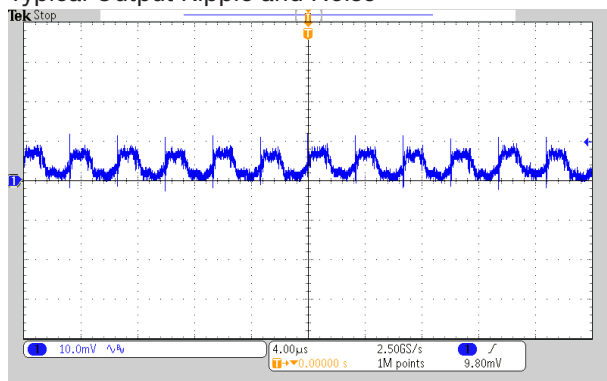### Efficiency versus Output Load

Efficiency versus Input Voltage

Derating Output Load versus Ambient Temperature
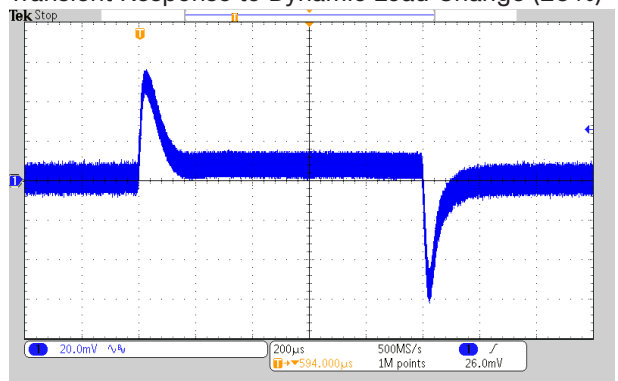

NATURAL CONVECTION

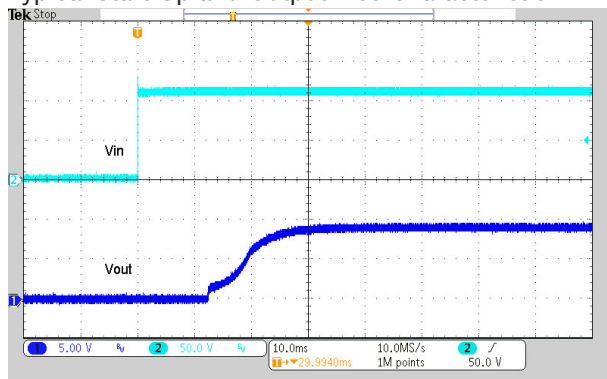### Power Dissipation versus Output Load

Typical Output Ripple and Noise
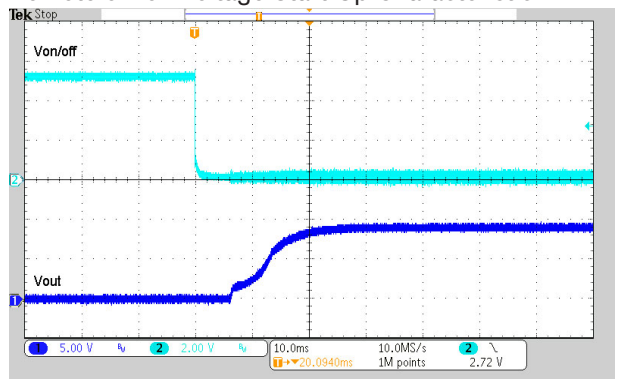

Transient Response to Dynamic Load Change (25%)

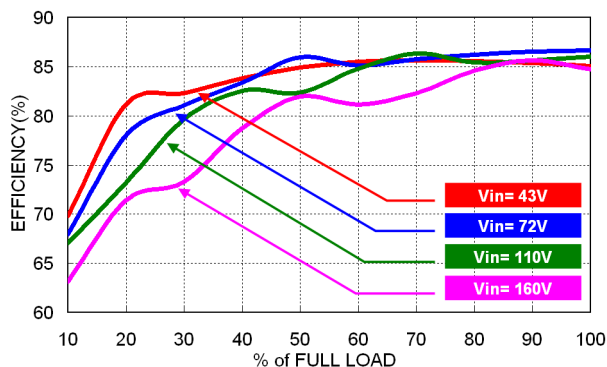### Typical Start-Up and Output Rise Characteristic

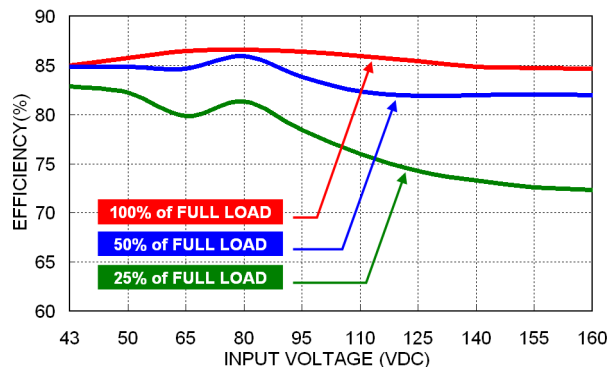### Remote on/off Voltage Start-Up Characteristic

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.
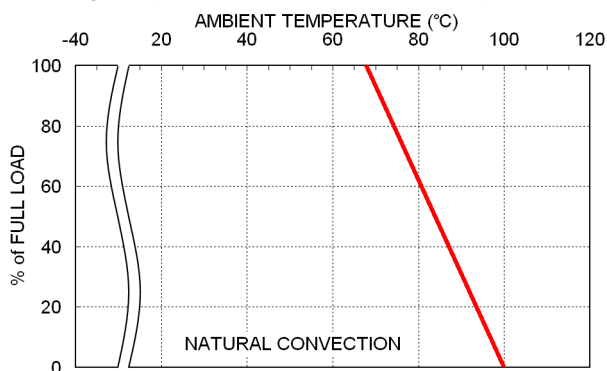
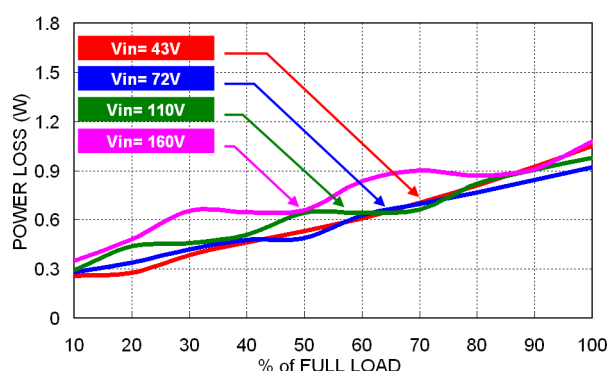## TMR 6-7213WIR
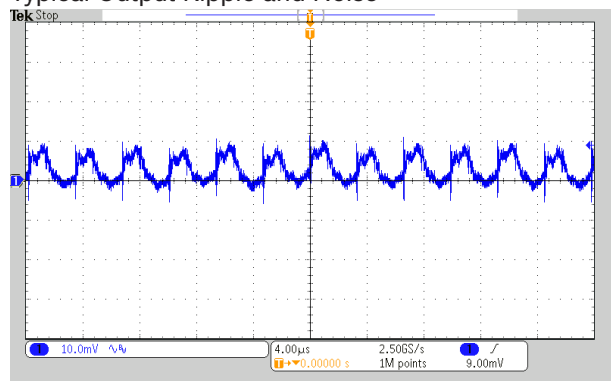
Efficiency versus Output Load

EFFICIENCY(%) vs % of FULL LOAD

Vin= 43V
Vin= 72V
Vin= 110V
Vin= 160V

Efficiency versus Input Voltage

EFFICIENCY(%) vs INPUT VOLTAGE (VDC)

100% of FULL LOAD
50% of FULL LOAD
25% of FULL LOAD

Derating Output Load versus Ambient Temperature

AMBIENT TEMPERATURE (°C)
% of FULL LOAD

NATURAL CONVECTION

Power Dissipation versus Output Load

POWER LOSS (W) vs % of FULL LOAD

Vin= 43V
Vin= 72V
Vin= 110V
Vin= 160V

Typical Output Ripple and Noise

Tek Stop

10.0mV 4.00µs 2.50GS/s 9.00mV
0.00000 s 1M points

Transient Response to Dynamic Load Change (25%)

Tek Stop

20.0mV 200µs 500MS/s 26.0mV
594.000µs 1M points

Typical Start-Up and Output Rise Characteristic

Tek Stop

Vin

Vout

5.00 V 50.0 V 10.0ms 10.0MS/s 50.0 V
29.9940ms 1M points

Remote on/off Voltage Start-Up Characteristic

Tek PreVu

Von/off

Vout

10.0 V 2.00 V 10.0ms 10.0MS/s 2.72 V
20.0940ms 1M points

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

TMR 6-7215WIR

Efficiency versus Output Load

Efficiency versus Input Voltage

Derating Output Load versus Ambient Temperature
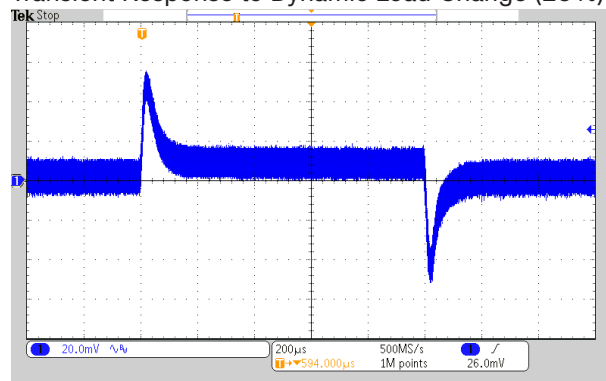

NATURAL CONVECTION

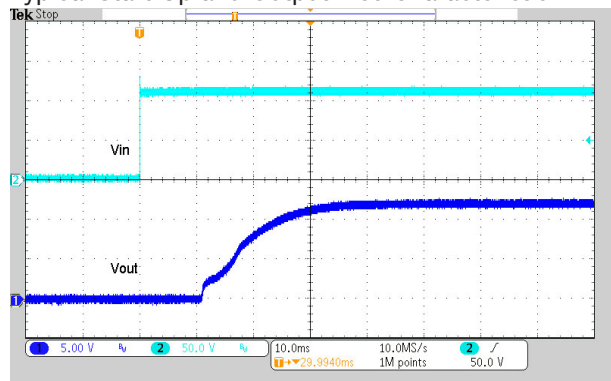Power Dissipation versus Output Load
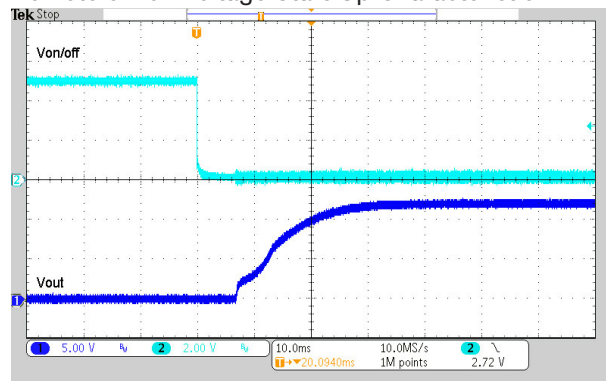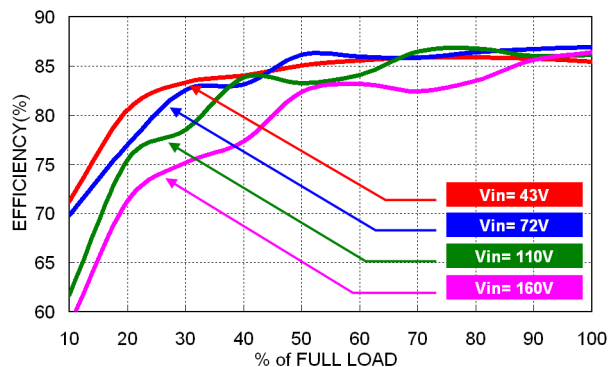

Typical Output Ripple and Noise

Transient Response to Dynamic Load Change (25%)

Typical Start-Up and Output Rise Characteristic

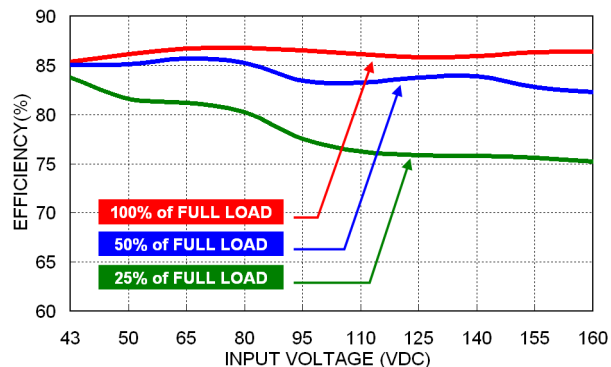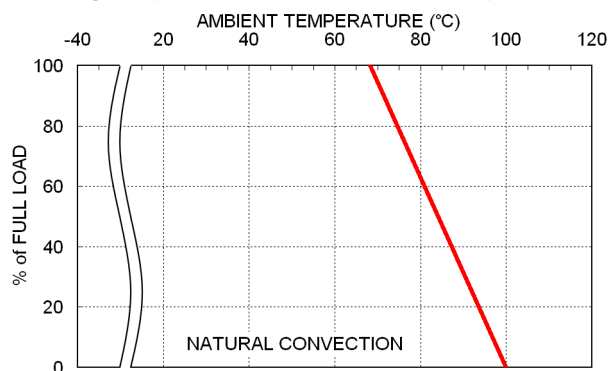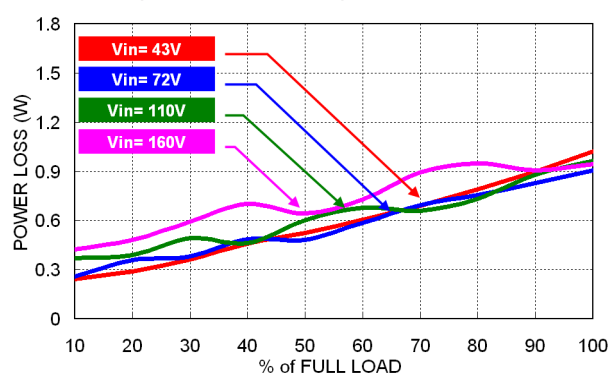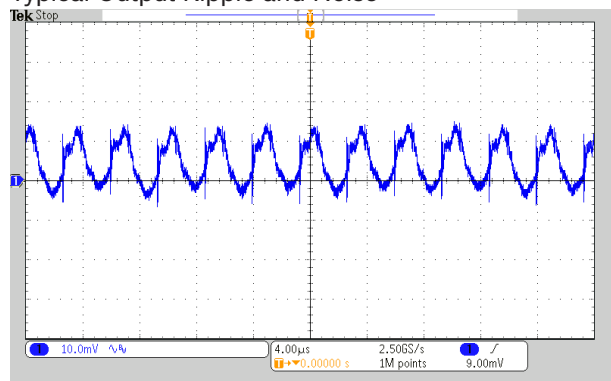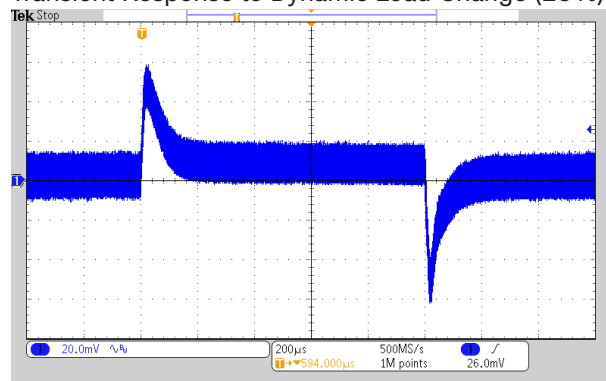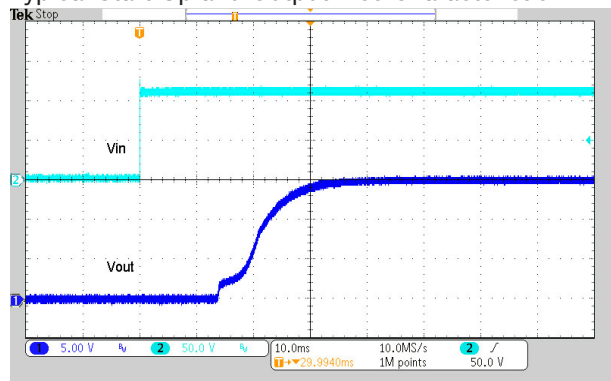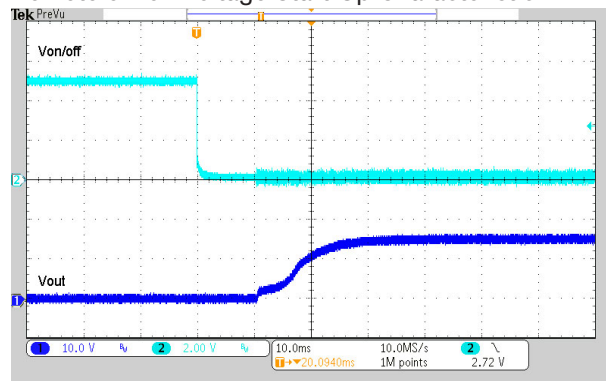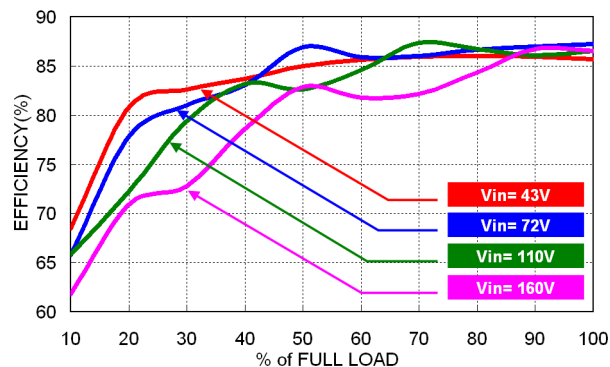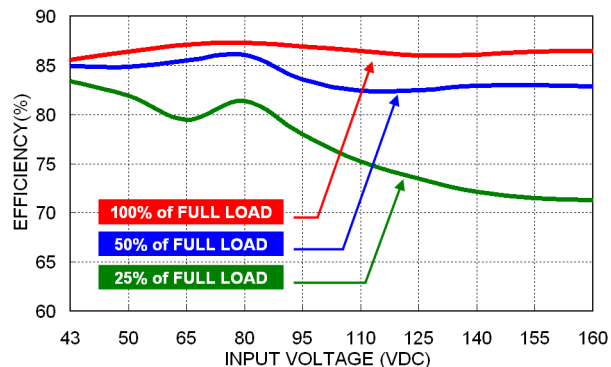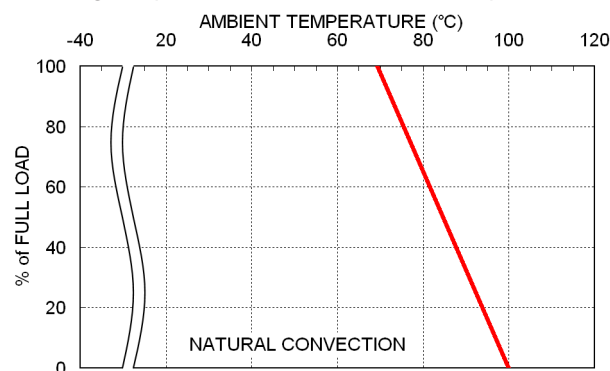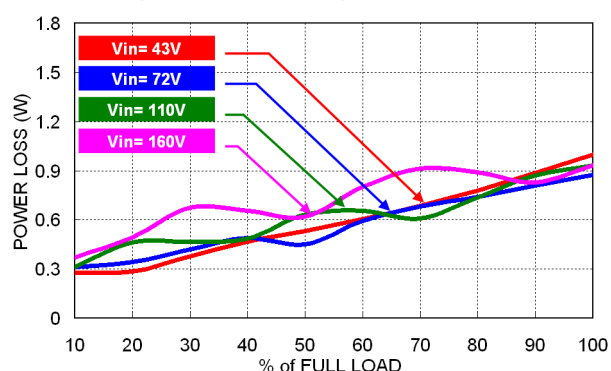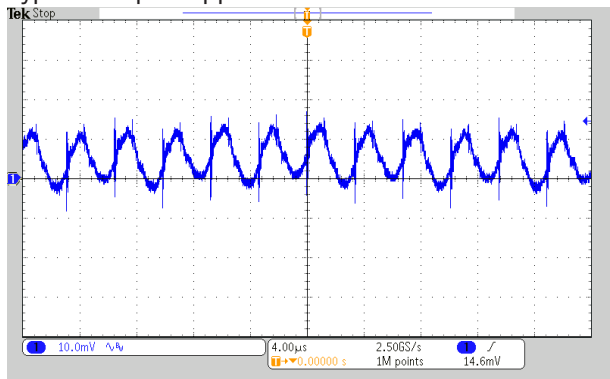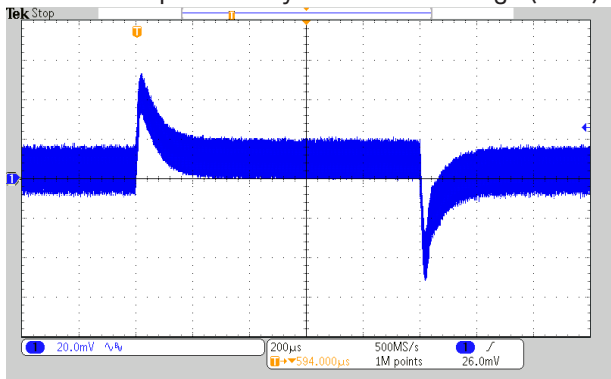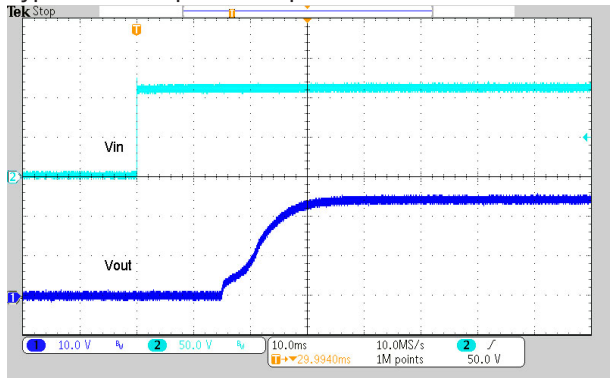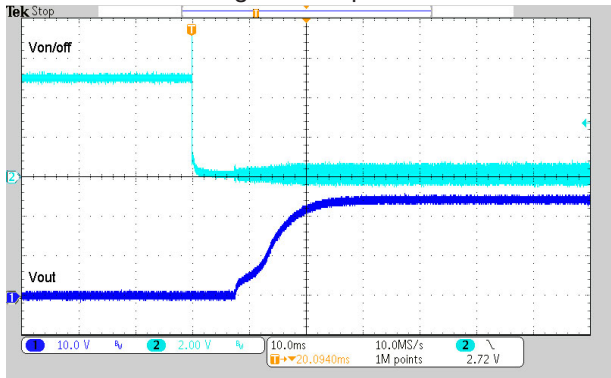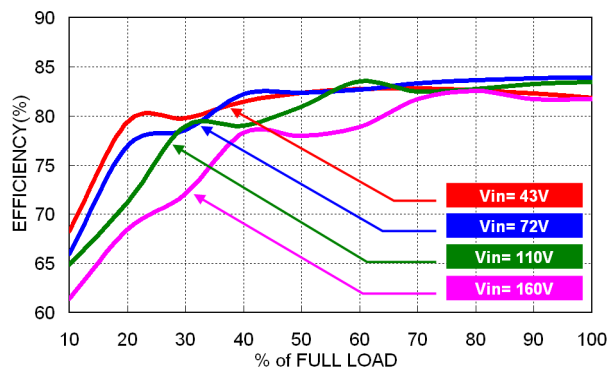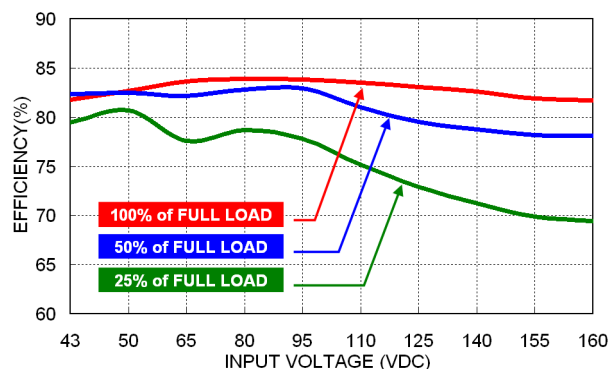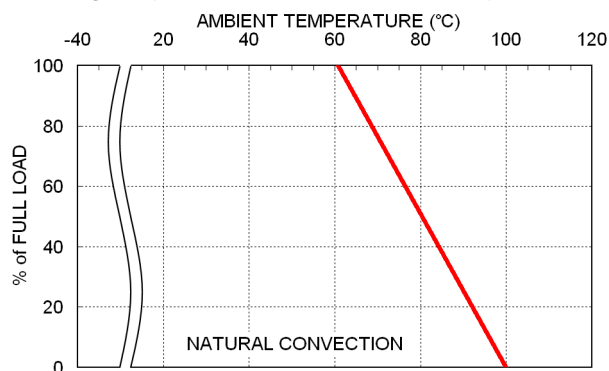Remote on/off Voltage Start-Up Characteristic

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

TRACO POWER

TMR 6-7221WIR

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.

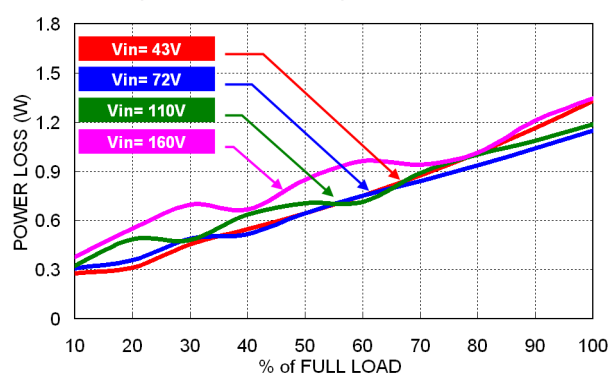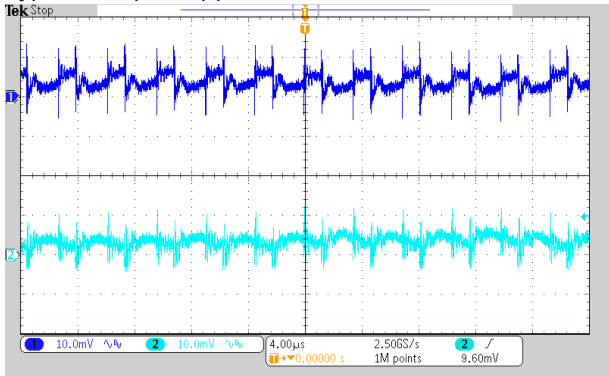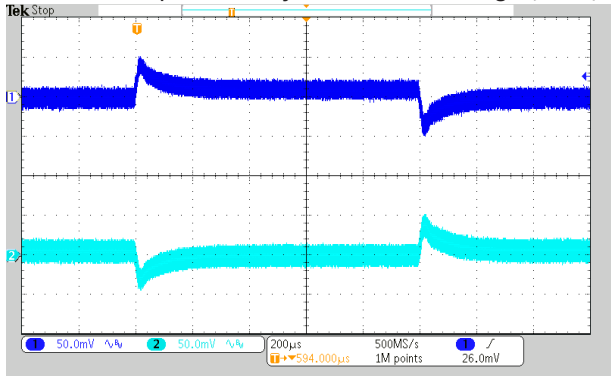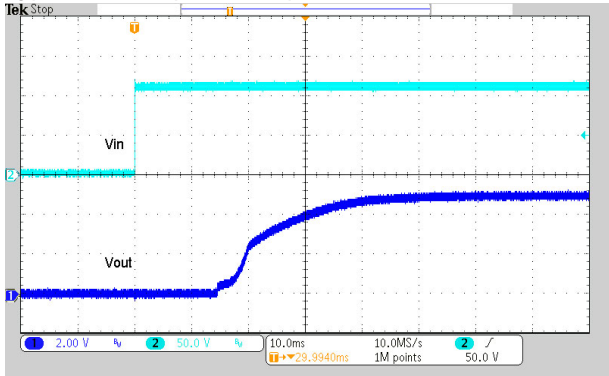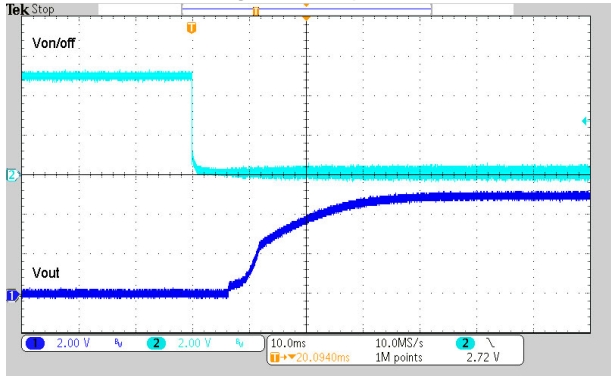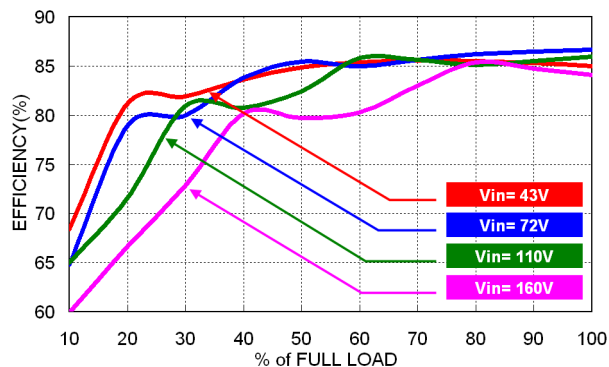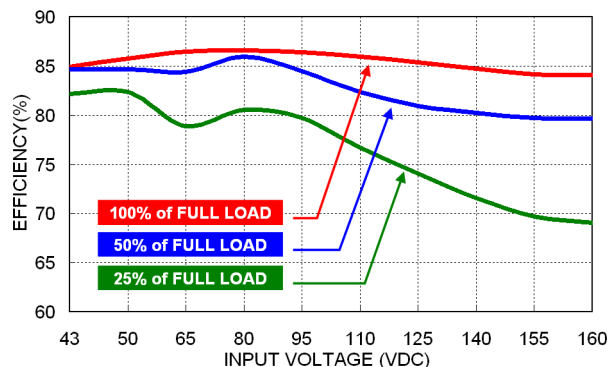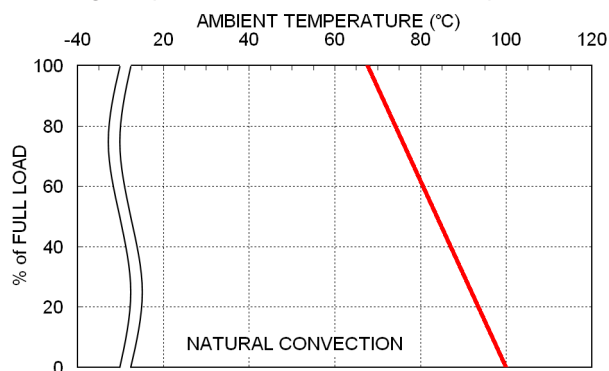## TMR 6-7222WIR

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.
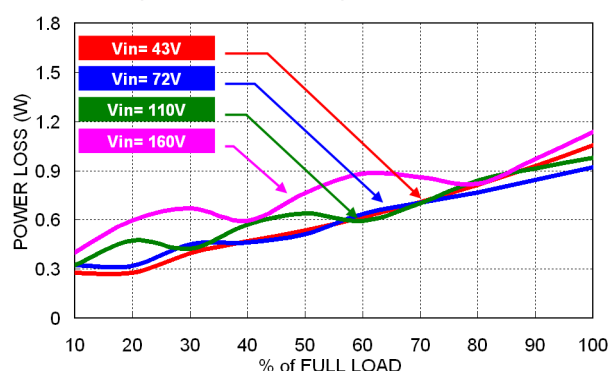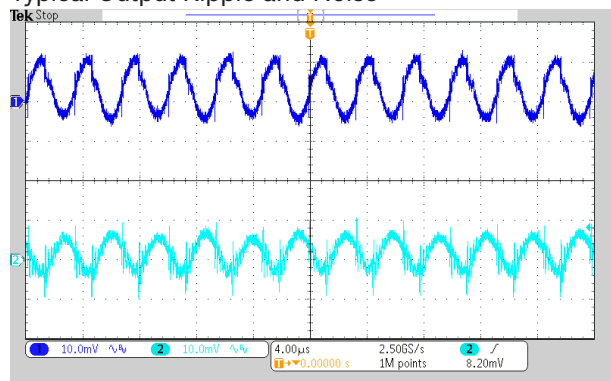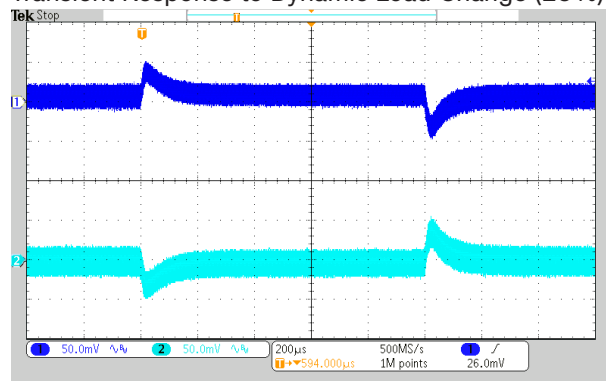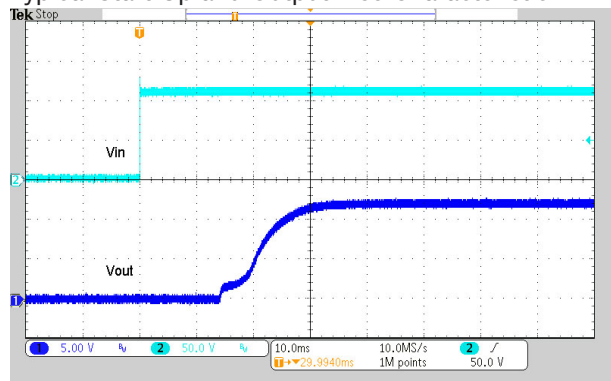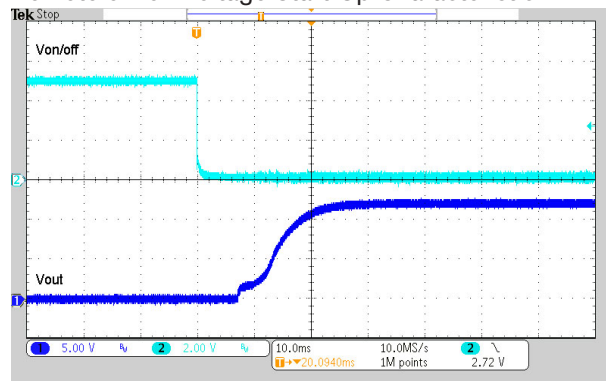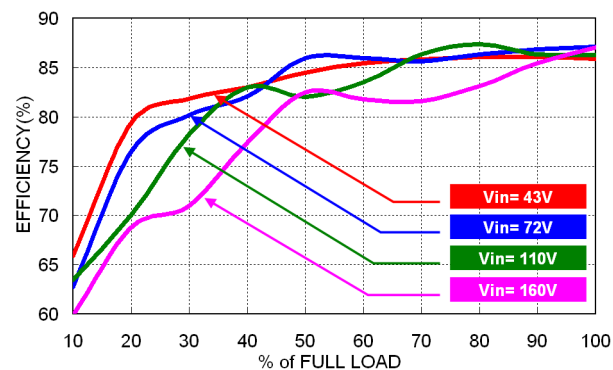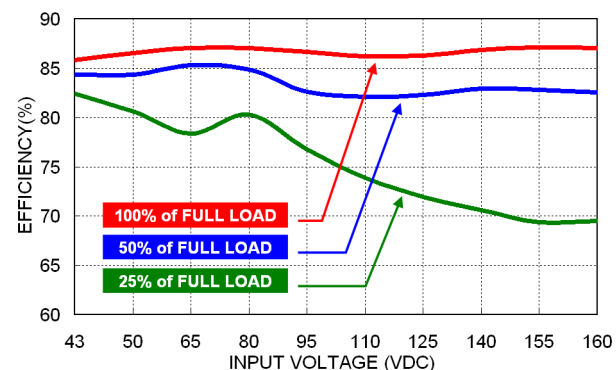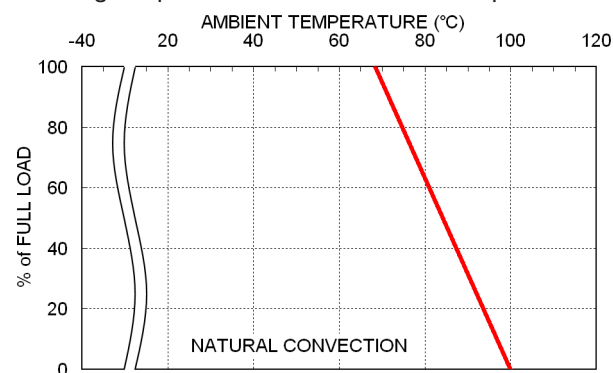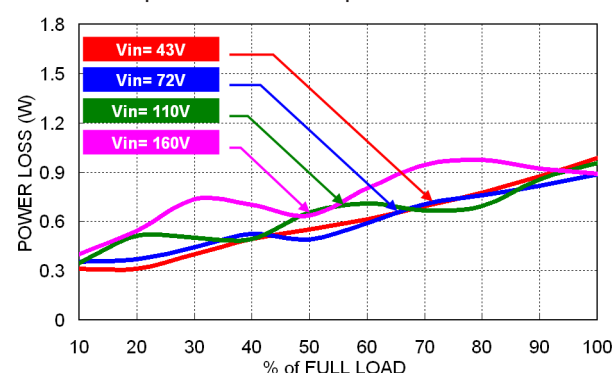
TMR 6-7223WIR

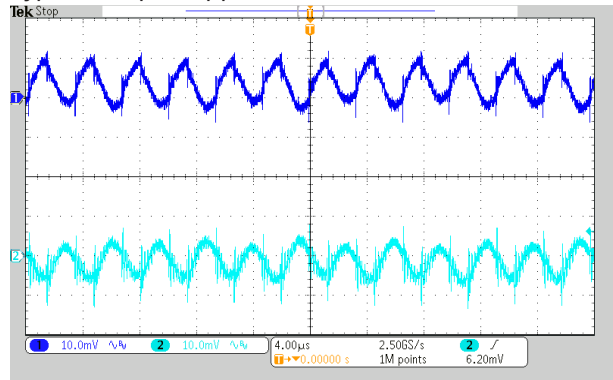### Efficiency versus Output Load

Efficiency versus Input Voltage

Derating Output Load versus Ambient Temperature
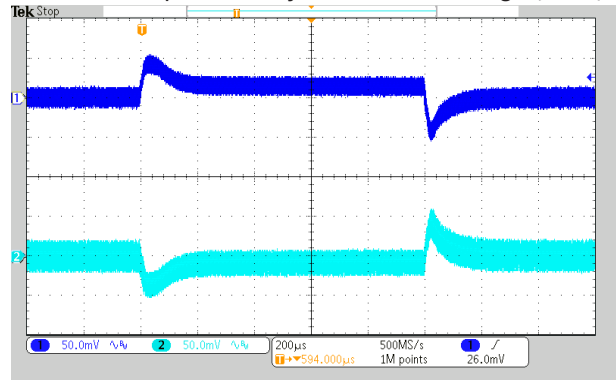

NATURAL CONVECTION
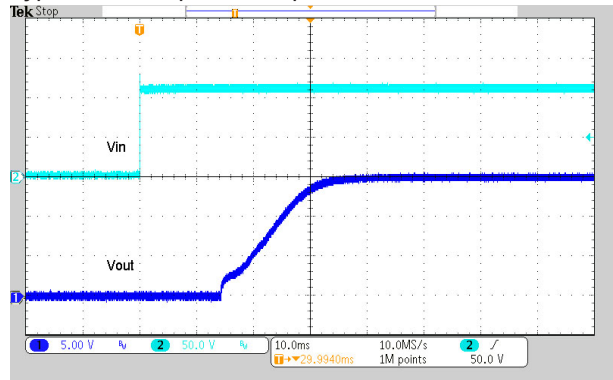
Power Dissipation versus Output Load

Typical Output Ripple and Noise

Transient Response to Dynamic Load Change (25%)

Typical Start-Up and Output Rise Characteristic

Vin

Vout

Remote on/off Voltage Start-Up Characteristic

Von/off

Vout

Specifications can be changed without notice!