

Size:
2.00 x 1.00 x 0.40 inches
50.8 x 25.4 x 10.2 mm

Weight:
1.07oz (30.5g)

FEATURES

- High Efficiency up to 91%
- Remote ON/OFF Control
- 1600VDC I/O Isolation
- Six-Sided Continuous Shielding
- Single, Dual, and Triple Outputs
- 4:1 Ultra Wide Input Voltage Ranges
- No Minimum Load Requirement for Single and Dual Output Models

- Protection: SCP / OVP / OLP / OTP
- Up to 30 Watts Output Power
- Standard 2.00" x 1.00" x 0.40" Package
- Wide Operating Temperature Range: -40°C to +85°C
- RoHS & REACH Compliant
- IEC/UL/EN60950-1, 62368-1 Safety Approvals
- CE Marked

OPTIONS

- Negative Logic
- Remote On/Off Heatsink

DESCRIPTION

The CBW series of DC/DC power converters offers up to 30 Watts of output power in an industry standard 2.00" x 1.00" x 0.40" package. This series has single, dual, and triple output models with 4:1 ultra wide input voltage ranges of 9-36VDC and 18-75VDC. Some features include high efficiency up to 91%, 1600VDC I/O isolation, six-sided shielding, and remote ON/OFF control. These converters are also protected against short circuit, over voltage, over load, and over temperature conditions. All models are RoHS and REACH compliant and have IEC/UL/EN60950-1, 62368-1 safety approvals. This series is best suited for use in wireless networks, telecom/datacom, industry control systems, measurement equipment, and semiconductor equipment.

MODEL SELECTION TABLE

SINGLE OUTPUT MODELS

Model Number	Input Voltage	Output Voltage	Output Current		No Load Input Current	Ripple & Noise	Output Power	Maximum Capacitive Load	Efficiency
			Min. load	Full load					
CBW24S1.5-8500	24 VDC (9 - 36 VDC)	1.5 VDC	0mA	8500mA	70mA	100mVp-p	12.75W	20000µF	80%
CBW24S2.5-8000		2.5 VDC	0mA	8000mA	70mA	100mVp-p	20W	20000µF	83%
CBW24S3.3-7500		3.3 VDC	0mA	7500mA	70mA	100mVp-p	24.75W	20000µF	86%
CBW24S5-6000		5 VDC	0mA	6000mA	105mA	100mVp-p	30W	14400µF	88%
CBW24S5.1-6000		5.1 VDC	0mA	6000mA	105mA	100mVp-p	30.6W	14400µF	88%
CBW24S12-2500		12 VDC	0mA	2500mA	20mA	150mVp-p	30W	3000µF	89%
CBW24S15-2000	48 VDC (18 - 75 VDC)	15 VDC	0mA	2000mA	30mA	150mVp-p	30W	2000µF	89%
CBW48S1.5-8500		1.5 VDC	0mA	8500mA	30mA	100mVp-p	12.75W	20000µF	80%
CBW48S2.5-8000		2.5 VDC	0mA	8000mA	45mA	100mVp-p	20W	20000µF	84%
CBW48S3.3-7500		3.3 VDC	0mA	7500mA	45mA	100mVp-p	24.75W	20000µF	86%
CBW48S5-6000		5 VDC	0mA	6000mA	65mA	100mVp-p	30W	14400µF	88%
CBW48S5.1-6000		5.1 VDC	0mA	6000mA	65mA	100mVp-p	30.6W	14400µF	88%
CBW48S12-2500		12 VDC	0mA	2500mA	60mA	150mVp-p	30W	3000µF	90%
CBW48S15-2000		15 VDC	0mA	2000mA	50mA	150mVp-p	30W	2000µF	91%

DUAL OUTPUT MODELS

Model Number	Input Voltage	Output Voltage	Output Current		No Load Input Current	Ripple & Noise	Output Power	Maximum Capacitive Load	Efficiency
			Min. load	Full load					
CBW24D5-3000	24 VDC	±5 VDC	0mA	±3000mA	90mA	100mVp-p	30W	±3000µF	88%
CBW24D12-1250	9 - 36 VDC	±12 VDC	0mA	±1250mA	25mA	150mVp-p	30W	±2000µF	87%
CBW24D15-1000		±15 VDC	0mA	±1000mA	25mA	150mVp-p	30W	±1300µF	87%
CBW48D5-3000	48 VDC	±5 VDC	0mA	±3000mA	50mA	100mVp-p	30W	±3000µF	88%
CBW48D12-1250	18 - 75 VDC	±12 VDC	0mA	±1250mA	15mA	150mVp-p	30W	±2000µF	88%
CBW48D15-1000		±15 VDC	0mA	±1000mA	15mA	150mVp-p	30W	±1300µF	88%

TRIPLE OUTPUT MODELS

Model Number	Input Voltage	Output Voltage	Output Current		No Load Input Current	Ripple & Noise	Output Power	Maximum Capacitive Load	Efficiency
			Min. load	Full load					
CBW24T3.312-26	24 VDC (9 - 36 VDC)	3.3 / ±12 VDC	500mA / ±42mA	5000mA / ±416mA	105mA	50 / 75 mVp-p	26.5W	15000µF / ±340µF	87%
CBW24T3.315-26		3.3 / ±15 VDC	500mA / ±33mA	5000mA / ±333mA	105mA	50 / 75 mVp-p	26.5W	15000µF / ±220µF	87%
CBW24T512-30		5 / ±12 VDC	400mA / ±42mA	4000mA / ±416mA	105mA	50 / 75 mVp-p	30W	8000µF / ±340µF	88%
CBW24T515-30		5 / ±15 VDC	400mA / ±33mA	4000mA / ±333mA	105mA	50 / 75 mVp-p	30W	8000µF / ±220µF	88%
CBW48T3.312-26	48 VDC (18 - 75 VDC)	3.3 / ±12 VDC	500mA / ±42mA	5000mA / ±416mA	55mA	50 / 75 mVp-p	26.5W	15000µF / ±340µF	87%
CBW48T3.315-26		3.3 / ±15 VDC	500mA / ±33mA	5000mA / ±333mA	55mA	50 / 75 mVp-p	26.5W	15000µF / ±220µF	87%
CBW48T512-30		5 / ±12 VDC	400mA / ±42mA	4000mA / ±416mA	55mA	50 / 75 mVp-p	30W	8000µF / ±340µF	88%
CBW48T515-30		5 / ±15 VDC	400mA / ±33mA	4000mA / ±333mA	55mA	50 / 75 mVp-p	30W	8000µF / ±220µF	88%

SPECIFICATIONS: CBW SERIES

All specifications are typical at 25°C, Nominal Input, and Full Load unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION		TEST CONDITIONS		Min	Typ	Max	Unit
INPUT SPECIFICATIONS							
Input Voltage Range	24VDC nominal input models			9	24	36	VDC
	48VDC nominal input models			18	48	75	
Start-Up Voltage	24VDC nominal input models					9	VDC
	48VDC nominal input models					18	
Shutdown Voltage	24VDC nominal input models			7	8	8.8	VDC
	48VDC nominal input models			15	16	17.5	
Input Surge Voltage (100ms max.)	24VDC nominal input models					50	VDC
	48VDC nominal input models					100	
Input Current	No Load			See Table			
Input Filter				Pi type			
OUTPUT SPECIFICATIONS							
Output Voltage				See Table			
Voltage Accuracy		Single & Dual Output Models		-1.0		+1.0	%
		Triple Output Models	3.3V, 5V 12V, 15V	-1.0 -5.0		+1.0 +5.0	%
Line Regulation	Low line to high line at full load	Single & Dual Output Models	Dual 5V	-0.25		+0.25	%
			Others	-0.2		+0.2	%
		Triple Output Models	3.3V, 5V 12V, 15V	-1.0 -5.0		+1.0 +5.0	%
Load Regulation	No load to full load	Single Output Models		-0.5		+0.5	%
		Dual Output Models		-1.0		+1.0	%
	Min. Load to Full Load	Triple Output Models	3.3V, 5V 12V, 15V	-1.0 -5.0		+1.0 +5.0	%
Cross Regulation (Dual Output Models)	Asymmetrical load 25% / 100% full load			-5.0		+5.0	%
Voltage Adjustability (Single Output Only)	See page 4			-10		+10	%
Output Power				See Table			
Output Current				See Table			
Minimum Load	See Note 3			See Table			
Maximum Capacitive Load	Minimum input and constant resistive load			See Table			
Ripple & Noise	20MHz BW and with a 1µF/50V MLCC		Single Output Models	See Table			
	20MHz BW and with a 1µF/50V MLCC		Dual Output Models	See Table			
	20MHz BW and with a 0.1µF/50V MLCC		Triple Output Models	See Table			
Transient Response Recovery Time	25% load step change				250		µs
Start-Up Time	Constant resistive load		Power Up		30		ms
			Remote On/Off		30		
Temperature Coefficient				-0.02		+0.02	%/°C
REMOTE ON/OFF CONTROL (See Note 2)							
Positive Logic (standard)	Referred to –Vin pin	DC/DC ON		Open or 3~12VDC			
		DC/DC OFF		Short or 0~1.2VDC			
Negative Logic (optional)	Referred to –Vin pin	DC/DC ON		Short or 0~1.2VDC			
		DC/DC OFF		Open or 3~12vdc			
Input Current of Ctrl Pin	Nominal input			-0.5		+0.5	mA
Remote Off Input Current	Nominal input				3		mA
PROTECTION							
Short Circuit Protection				Continuous, automatic recovery			
Over Load Protection	Single and Dual Output Models	% of Iout Rated			150		%
	Triple Output Models	% of Iout Rated, Hiccup Mode				150	
Over Voltage Protection	Zener diode clamp	1.5V output models			2.0		VDC
		2.5V output models			3.3		VDC
		3.3V output models			3.9		VDC
		5V, 5.1V, output models			6.2		VDC
		12V output models			15		VDC
		15V output models			18		VDC
Over Temperature Protection					+115		°C

SPECIFICATIONS: CBW SERIES

All specifications are typical at 25°C, Nominal Input, and Full Load unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
GENERAL SPECIFICATIONS						
Efficiency	Nominal input voltage and full load		See Table			
Switching Frequency	Single & Dual output models		387	430	473	kHz
	Triple output models		360	400	440	
Isolation Voltage	1 minute	Input to Output	1600			VDC
		Input to Case	1600			
		Output to Case	1600			
Isolation Resistance	500VDC		1			GΩ
Isolation Capacitance					1500	pF
ENVIRONMENTAL SPECIFICATIONS						
Operating Ambient Temperature	Without derating		-40		+50	°C
	With derating		+50		+85	
Maximum Case Temperature					+105	°C
Storage Temperature			-55		+125	°C
Thermal Impedance (See Note 1)	Without Heatsink			12		°C/W
	With Heatsink			10		
Relative Humidity			5		95	% RH
Thermal Shock			MIL-STD-810F			
Vibration			MIL-STD-810F			
MTBF	MIL-HDBK-217F, Full Load		1,177,000			hours
PHYSICAL SPECIFICATIONS						
Weight			1.07oz (30.5g)			
Dimensions (L x W x H)			2.00 x 1.00 x 0.40 inch (50.8 x 25.4 x 10.2 mm)			
Case Material			Nickel-coated copper			
Base Material			FR4 PCB			
Potting Material			Epoxy (UL94-V0)			
Shielding			Six-sided			
Case Grounding	Single and Dual Output Models		Connect case to –Vin with decoupling Y Cap			
Pin Material			Copper			
Pin Foundation Plating/Thickness			Nickel/ 2-3μm			
Pin Surface/Thickness			Tin/ 35μm			
Pin Finishing			Matte			
SAFETY & EMC CHARACTERISTICS						
Safety Approvals	IEC/UL/EN60950-1, 62368-1 ⁽⁶⁾		CB: UL (Demko)			
EMI	EN55032 with external components	Single and Dual Output Models	Class A			
		Triple Output Models	Class A, Class B			
ESD	EN61000-4-2	Air ±8kV and Contact ±6kV	Perf. Criteria A			
Radiated Immunity	EN61000-4-3	10 V/m	Perf. Criteria A			
Fast Transient (See Note 4)	EN61000-4-4	±2kV	Perf. Criteria A			
Surge (See Note 4)	EN61000-4-5	±1kV	Perf. Criteria A			
Conducted Immunity	EN61000-4-6	10 Vrms	Perf. Criteria A			
Power Frequency Magnetic Field	EN61000-4-8	100A/m continuous; 1000A/m 1 second	Perf. Criteria A			

NOTES

- Heat sink is optional. To order the module with a heatsink please add the suffix "HS" to the model number (Ex: CBW24S12-2500HS).
- Positive remote on/off control is standard; for negative remote on/off please add the suffix "R" to the model number (Ex: CBW24S12-2500R).
- Triple output models require a minimum loading on the output to maintain all specified regulations. Operation under no-load conditions will not damage these devices; however, they may not meet all listed specifications.
- An external input filter capacitor is required if the module has to meet EN61000-4-4, EN61000-4-5.
 - 24VDC nominal input models: Nippon chemi-con KY series, 330µF/50V
 - 48VDC nominal input models: Nippon chemi-con KY series, 220µF/100V
- This product is Listed to applicable standards and requirements by UL.

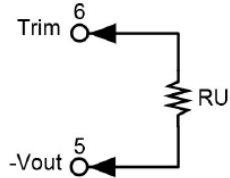
CAUTION: This power converter is not internally fused. An input line fuse must always be used.

Due to advances in technology, specifications subject to change without notice.

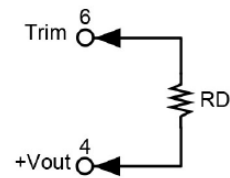
OUTPUT VOLTAGE ADJUSTMENT

Output voltage adjustability is for single output models only. Output voltage set-point adjustment allows the user to increase or decrease the output voltage set-point of a module. This is accomplished by connecting an external resistor between the TRIM pin and either the +Vout or -Vout pins. With an external resistor between the TRIM and -Vout pins, the output voltage set-point increases. With an external resistor between the TRIM and +VOUT pins, the output voltage set-point decreases. The external TRIM resistor needs to be at least 1/16W resistance.

Trim Up



Trim Down



CBWXXS1.5-8500		
Trim	V _{out,up}	R _U
1%	1.515V	4.578kΩ
2%	1.530V	2.065kΩ
3%	1.545V	1.227kΩ
4%	1.560V	0.808kΩ
5%	1.575V	0.557kΩ
6%	1.590V	0.389kΩ
7%	1.605V	0.270kΩ
8%	1.620V	0.180kΩ
9%	1.635V	0.110kΩ
10%	1.650V	0.054kΩ

CBWXXS2.5-8000		
Trim	V _{out,up}	R _U
1%	2.525V	37.076kΩ
2%	2.550V	16.675kΩ
3%	2.575V	9.874kΩ
4%	2.600V	6.474kΩ
5%	2.625V	4.434kΩ
6%	2.650V	3.074kΩ
7%	2.675V	2.102kΩ
8%	2.700V	1.374kΩ
9%	2.725V	0.807kΩ
10%	2.750V	0.354kΩ

CBWXXS1.5-8500		
Trim	V _{out,down}	R _D
1%	1.485V	5.704kΩ
2%	1.470V	2.571kΩ
3%	1.455V	1.527kΩ
4%	1.440V	1.005kΩ
5%	1.425V	0.692kΩ
6%	1.410V	0.483kΩ
7%	1.395V	0.334kΩ
8%	1.380V	0.222kΩ
9%	1.365V	0.135kΩ
10%	1.350V	0.065kΩ

CBWXXS2.5-8000		
Trim	V _{out,down}	R _D
1%	2.475V	49.641kΩ
2%	2.450V	22.481kΩ
3%	2.425V	13.428kΩ
4%	2.400V	8.902kΩ
5%	2.375V	6.186kΩ
6%	2.350V	4.375kΩ
7%	2.325V	3.082kΩ
8%	2.300V	2.112kΩ
9%	2.275V	1.358kΩ
10%	2.250V	0.754kΩ

CBWXXS3.3-7500		
Trim	V _{out,up}	R _U
1%	3.333V	57.930kΩ
2%	3.366V	26.165kΩ
3%	3.399V	15.577kΩ
4%	3.432V	10.283kΩ
5%	3.465V	7.106kΩ
6%	3.498V	4.988kΩ
7%	3.531V	3.476kΩ
8%	3.564V	2.341kΩ
9%	3.597V	1.459kΩ
10%	3.630V	0.753kΩ

CBWXXS5-6000		
Trim	V _{out,up}	R _U
1%	5.050V	36.570kΩ
2%	5.100V	16.580kΩ
3%	5.150V	9.917kΩ
4%	5.200V	6.585kΩ
5%	5.250V	4.586kΩ
6%	5.300V	3.253kΩ
7%	5.350V	2.302kΩ
8%	5.400V	1.588kΩ
9%	5.450V	1.032kΩ
10%	5.500V	0.588kΩ

CBWXXS3.3-7500		
Trim	V _{out,down}	R _D
1%	3.267V	69.470kΩ
2%	3.234V	31.235kΩ
3%	3.201V	18.490kΩ
4%	3.168V	12.117kΩ
5%	3.135V	8.294kΩ
6%	3.102V	5.745kΩ
7%	3.069V	3.924kΩ
8%	3.036V	2.559kΩ
9%	3.003V	1.497kΩ
10%	2.970V	0.647kΩ

CBWXXS5-6000		
Trim	V _{out,down}	R _D
1%	4.950V	45.533kΩ
2%	4.900V	20.612kΩ
3%	4.850V	12.306kΩ
4%	4.800V	8.152kΩ
5%	4.750V	5.660kΩ
6%	4.700V	3.999kΩ
7%	4.650V	2.812kΩ
8%	4.600V	1.922kΩ
9%	4.550V	1.230kΩ
10%	4.500V	0.676kΩ

CBWXXS5.1-6000		
Trim	V _{out,up}	R _U
1%	5.151V	38.135kΩ
2%	5.202V	17.368kΩ
3%	5.253V	10.446kΩ
4%	5.304V	6.985kΩ
5%	5.355V	4.908kΩ
6%	5.406V	3.524kΩ
7%	5.457V	2.535kΩ
8%	5.508V	1.793kΩ
9%	5.559V	1.217kΩ
10%	5.610V	0.755kΩ

CBWXXS12-2500		
Trim	V _{out,up}	R _U
1%	12.120	367.908kΩ
2%	12.240	165.954kΩ
3%	12.360	98.636kΩ
4%	12.480	64.977kΩ
5%	12.600	44.782kΩ
6%	12.720	31.318kΩ
7%	12.840	21.701kΩ
8%	12.960	14.488kΩ
9%	13.080	8.879kΩ
10%	13.200	4.391kΩ

CBWXXS5.1-6000		
Trim	V _{out,down}	R _D
1%	5.049V	47.191kΩ
2%	4.998V	21.431kΩ
3%	4.947V	12.844kΩ
4%	4.896V	8.551kΩ
5%	4.845V	5.975kΩ
6%	4.794V	4.258kΩ
7%	4.743V	3.031kΩ
8%	4.692V	2.111kΩ
9%	4.641V	1.396kΩ
10%	4.590V	0.823kΩ

CBWXXS12-2500		
Trim	V _{out,down}	R _D
1%	11.880V	460.992kΩ
2%	11.760V	207.946kΩ
3%	11.640V	123.597kΩ
4%	11.520V	81.423kΩ
5%	11.400V	56.118kΩ
6%	11.280V	39.249kΩ
7%	11.160V	27.199kΩ
8%	11.040V	18.162kΩ
9%	10.920V	11.132kΩ
10%	10.800V	5.509kΩ

CBWXXS15-2000		
Trim	V _{out,up}	R _U
1%	15.150V	404.184kΩ
2%	15.300V	180.592kΩ
3%	15.450V	106.061kΩ
4%	15.600V	68.796kΩ
5%	15.750V	46.437kΩ
6%	15.900V	31.531kΩ
7%	16.050V	20.883kΩ
8%	16.200V	12.898kΩ
9%	16.350V	6.687kΩ
10%	16.500V	1.718kΩ

CBWXXS15-2000		
Trim	V _{out,down}	R _D
1%	14.850V	499.816kΩ
2%	14.700V	223.408kΩ
3%	14.550V	131.272kΩ
4%	14.400V	85.204kΩ
5%	14.250V	57.563kΩ
6%	14.100V	39.136kΩ
7%	13.950V	25.974kΩ
8%	13.800V	16.102kΩ
9%	13.650V	8.424kΩ
10%	13.500V	2.282kΩ

FUSE CONSIDERATION

This power module is not internally fused. An input line fuse must always be used.

This encapsulated power module can be used in a wide variety of applications, ranging from simple stand-alone operation to an integrated part of sophisticated power architecture.

To maximum flexibility, internal fusing is not included; however, to achieve maximum safety and system protection, always use an input line fuse.

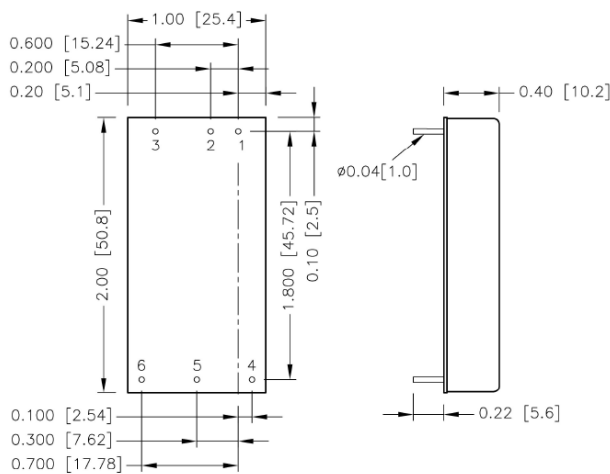
Suggested input line fuse is shown below:

Model	Fuse Rating	Fuse Type
24Vin Models	6.3A	Slow Blow
48Vin Models	3.15A	Slow Blow

The table is based on information provided in this data sheet on inrush energy and maximum DC input current at low Vin.

MECHANICAL DRAWING

Single & Dual Output Models



BOTTOM VIEW

Pin Connection

PIN	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
3	Ctrl	Ctrl
4	+Vout	+Vout
5	-Vout	Common
6	Trim	-Vout

Notes:

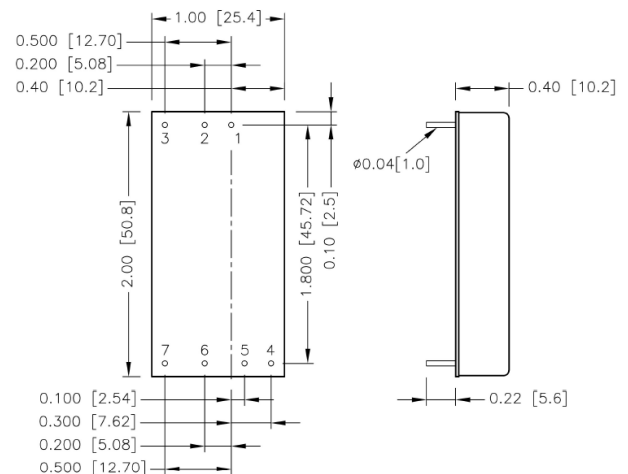
All dimensions in inch [mm]

Tolerance: x.xx±0.02 [x.x±0.5]

x.xxx±0.01 [x.xx±0.025]

Pin dimension tolerance ±0.004 [0.10]

Triple Output Models



BOTTOM VIEW

Pin Connection

PIN	TRIPLE
1	+Vin
2	-Vin
3	Ctrl
4	+Aux
5	-Aux
6	Common
7	+Vout

Notes:

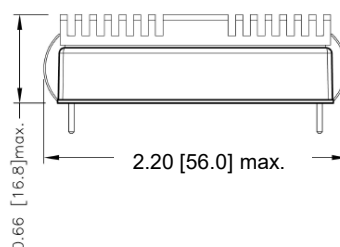
All dimensions in inch [mm]

Tolerance: x.xx±0.02 [x.x±0.5]

x.xxx±0.01 [x.xx±0.025]

Pin dimension tolerance ±0.004 [0.10]

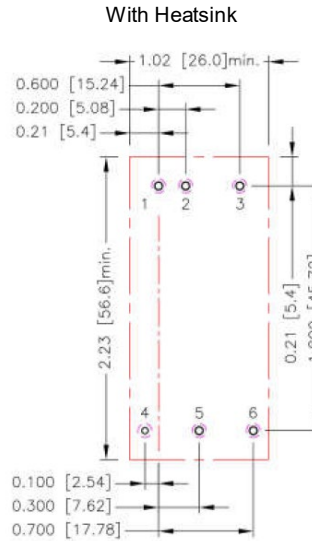
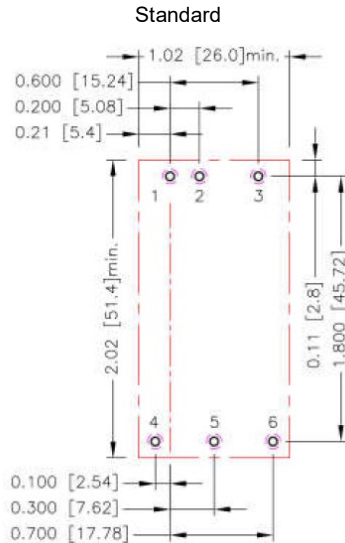
Heatsink Options



Dimensions in inch [mm]

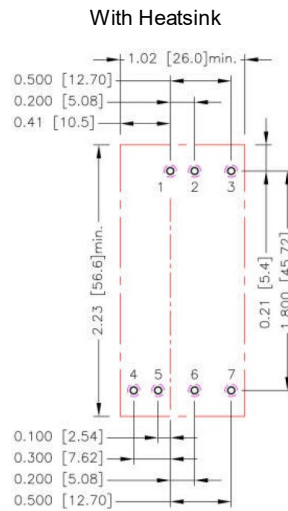
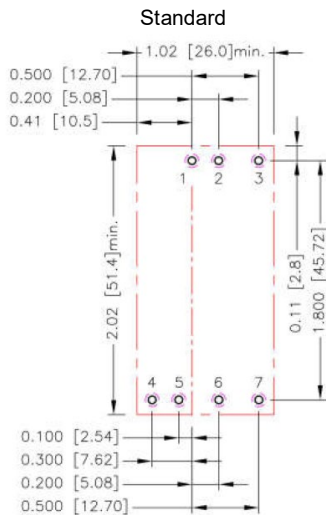
RECOMMENDED PAD LAYOUT

Single and Dual Output Models



All dimensions in inch [mm]
Pad size (lead free recommended)
Through Hole 1.2.3.4.5.6: $\phi 0.051$ [1.30]
Top view pad 1.2.3.4.5.6: $\phi 0.064$ [1.63]
Bottom view pad 1.2.3.4.5.6: $\phi 0.102$ [2.60]

Triple Output Models

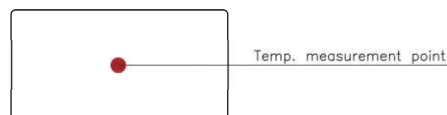


All dimensions in inch [mm]
Pad size (lead free recommended)
Through Hole 1.2.3.4.5.6.7: $\phi 0.051$ [1.30]
Top view pad 1.2.3.4.5.6.7: $\phi 0.064$ [1.63]
Bottom view pad 1.2.3.4.5.6.7: $\phi 0.102$ [2.60]

THERMAL CONSIDERATION

This power module operates in a variety of thermal environments. However, sufficient cooling should be provided to help ensure reliable operation of the unit. Heat is removed by conduction, convection, and radiation to the surrounding environment. Proper cooling can be verified by measuring the point in the figure below. The temperature at this location should not exceed "maximum case temperature." When operating, adequate cooling must be provided to maintain the test point temperature at or below "Maximum case temperature." You can limit this temperature to a lower value for extremely high reliability.

■ Thermal test condition with vertical direction by natural convection (20LFM).

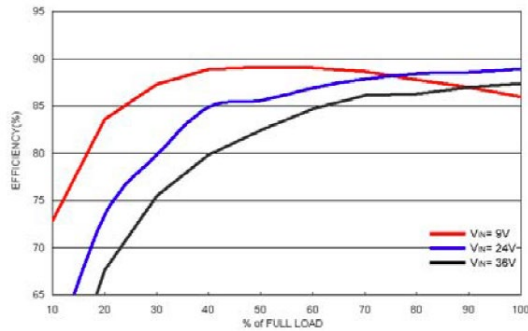


TOP VIEW

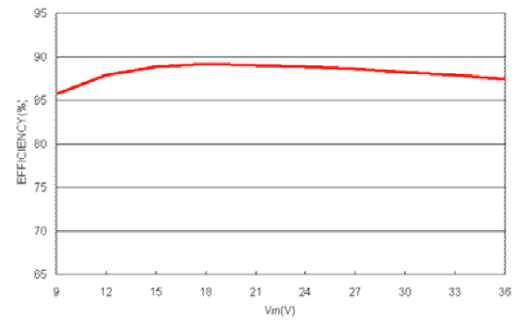
CHARACTERISTIC CURVES

*Curves for CBW24D5-3000. All test conditions are at 25°C.

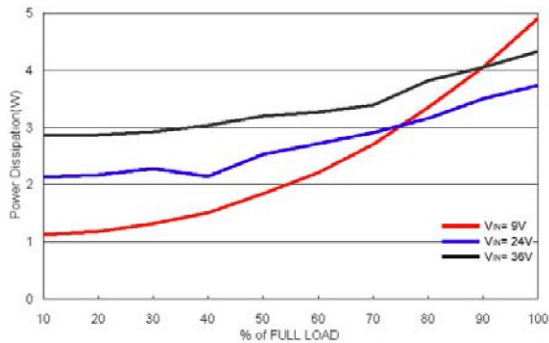
Efficiency vs. Output Load



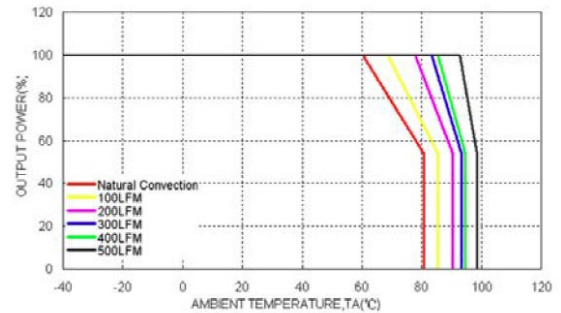
Efficiency vs. Input Voltage, Full Load



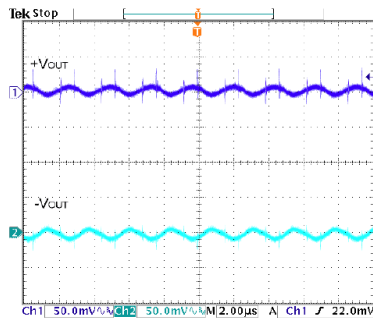
Power Dissipation vs. Output Load



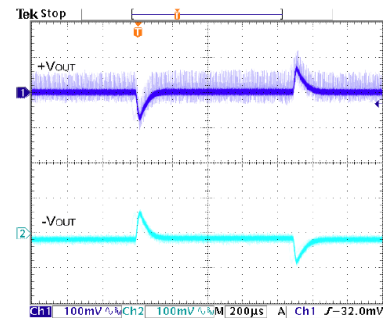
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



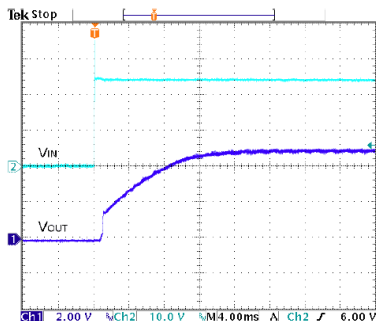
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



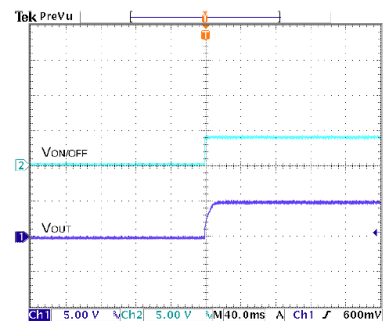
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



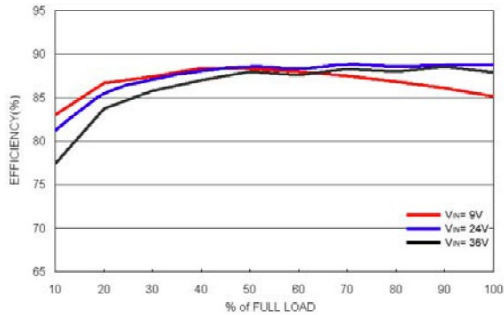
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



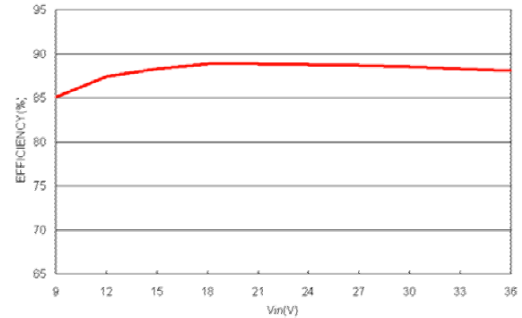
CHARACTERISTIC CURVES

*Curves for CBW24D12-1250. All test conditions are at 25°C.

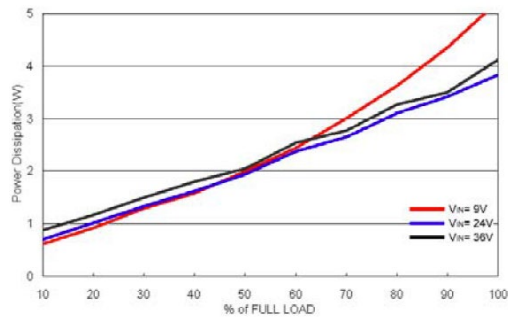
Efficiency vs. Output Load



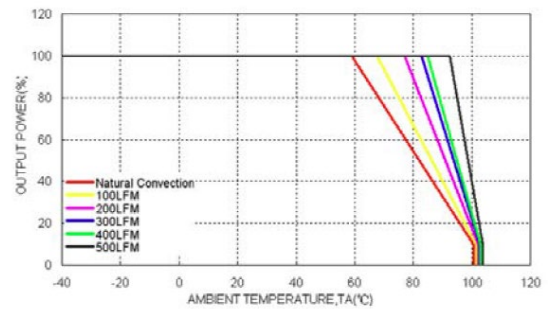
Efficiency vs. Input Voltage, Full Load



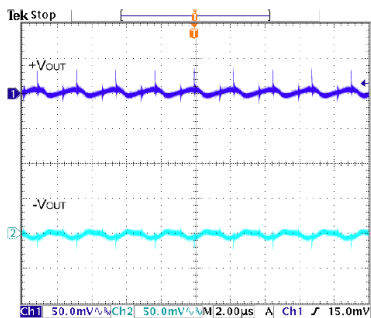
Power Dissipation vs. Output Load



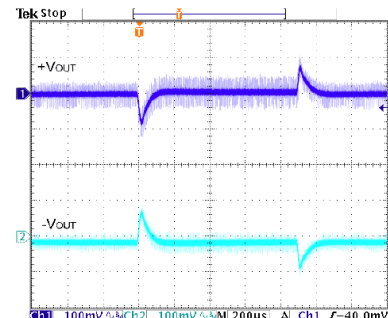
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



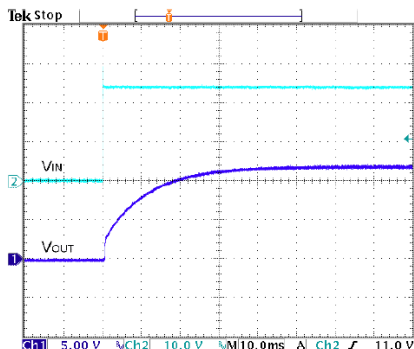
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



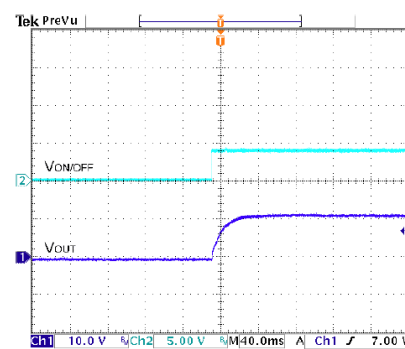
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



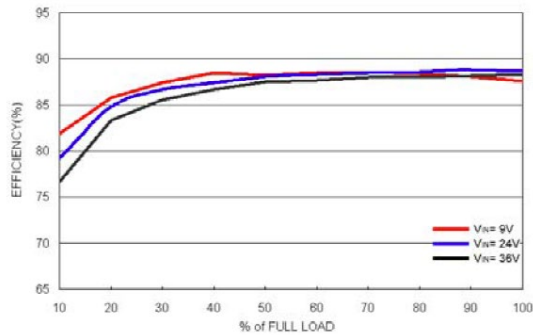
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



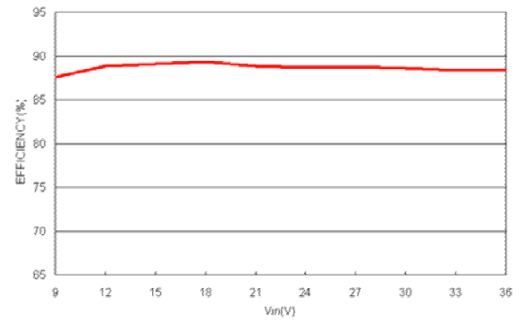
CHARACTERISTIC CURVES

*Curves for CBW24D15-1000. All test conditions are at 25°C.

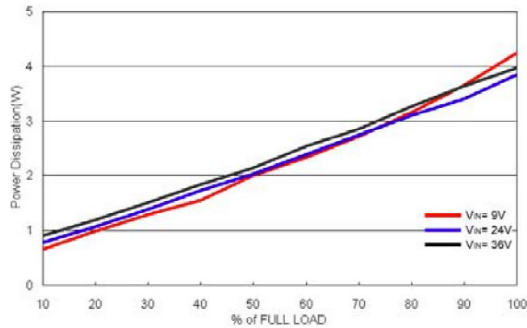
Efficiency vs. Output Load



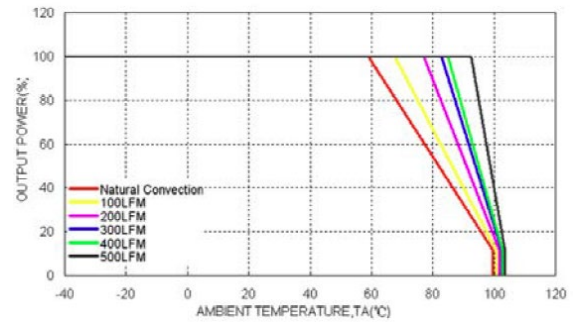
Efficiency vs. Input Voltage, Full Load



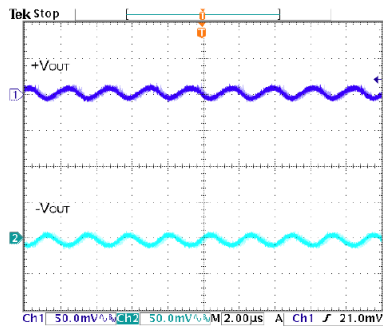
Power Dissipation vs. Output Load



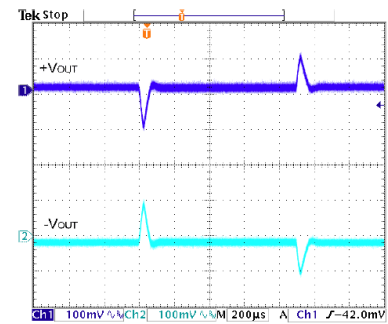
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



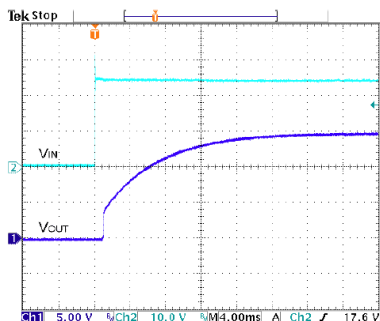
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



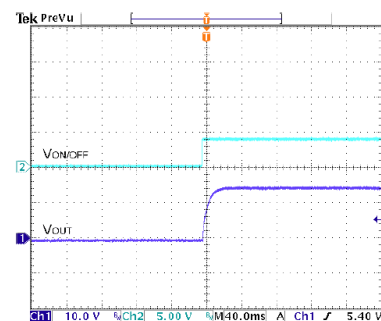
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



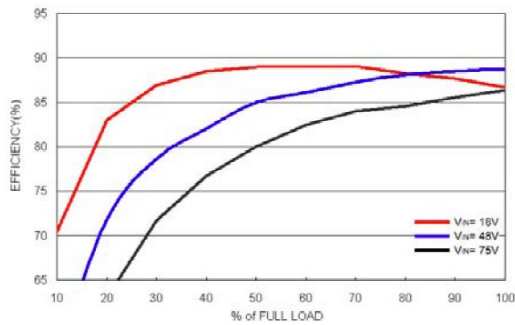
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



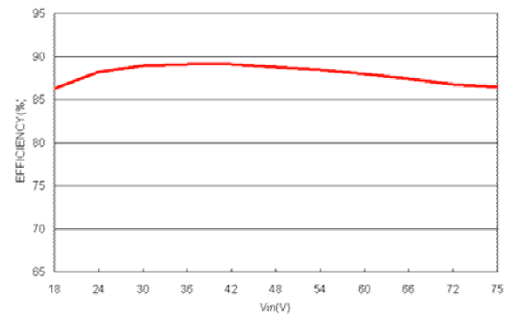
CHARACTERISTIC CURVES

*Curves for CBW48D5-3000. All test conditions are at 25°C.

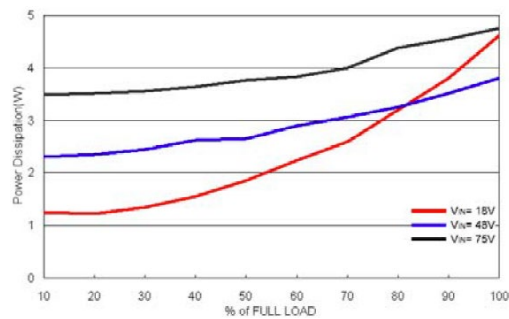
Efficiency vs. Output Load



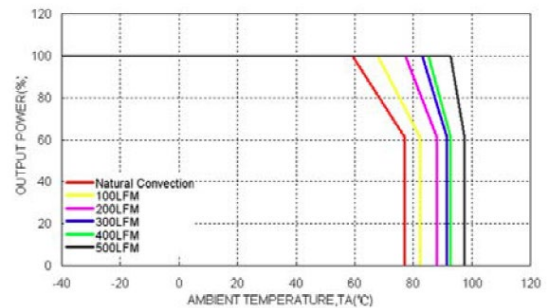
Efficiency vs. Input Voltage, Full Load



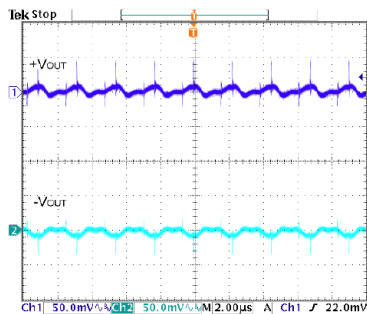
Power Dissipation vs. Output Load



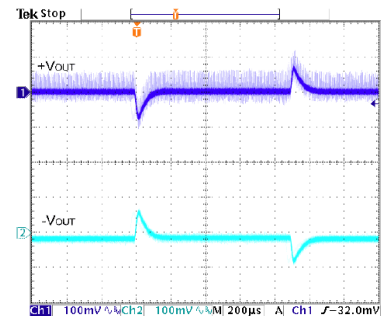
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



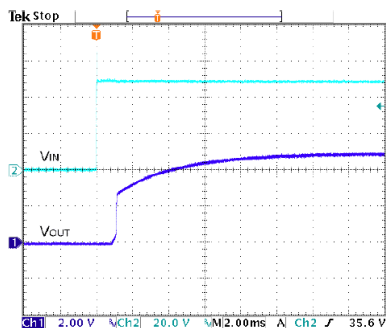
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



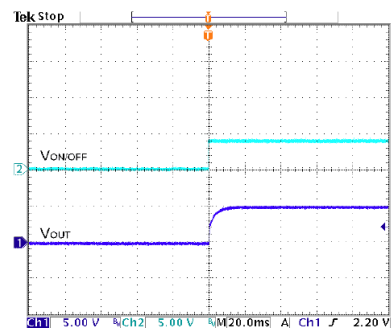
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



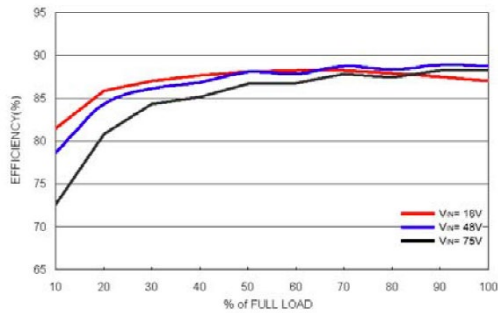
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



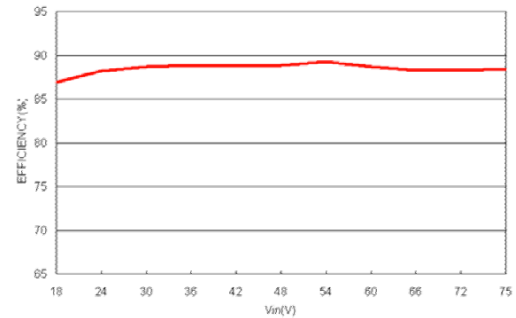
CHARACTERISTIC CURVES

*Curves for CBW48D12-1250. All test conditions are at 25°C.

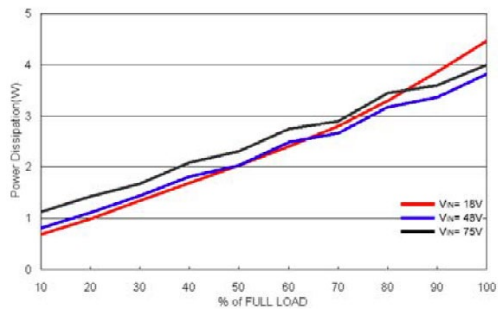
Efficiency vs. Output Load



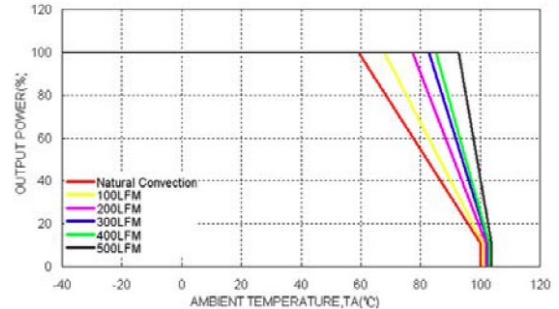
Efficiency vs. Input Voltage, Full Load



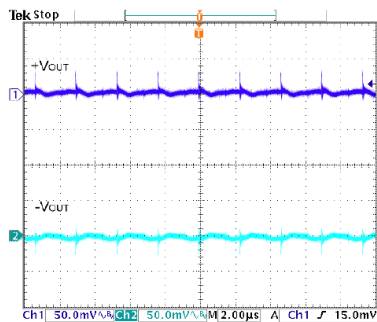
Power Dissipation vs. Output Load



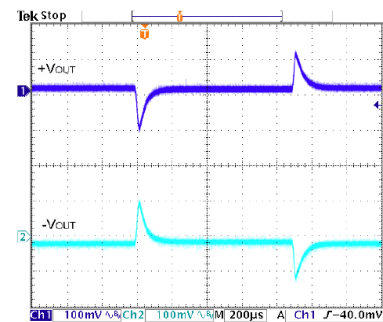
Derating Output Load vs. Ambient Temp. & Airflow $V_{in} = V_{in}(\text{nom})$



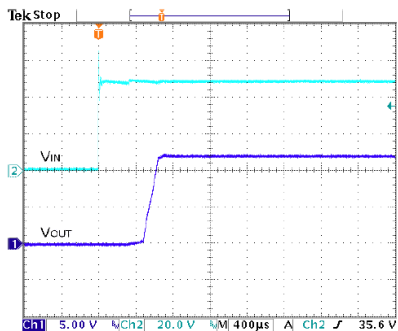
Typ. Output Ripple & Noise, $V_{in} = V_{in}(\text{nom})$, Full Load



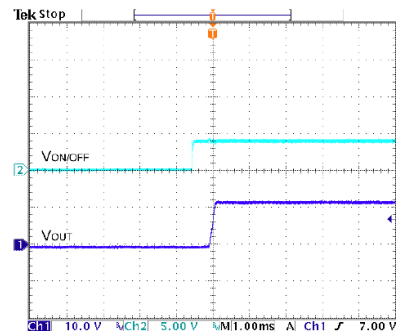
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, $V_{in} = V_{in}(\text{nom})$



Typical Input Start-Up & Output Rise Characteristic $V_{in} = V_{in}(\text{nom})$, Full Load



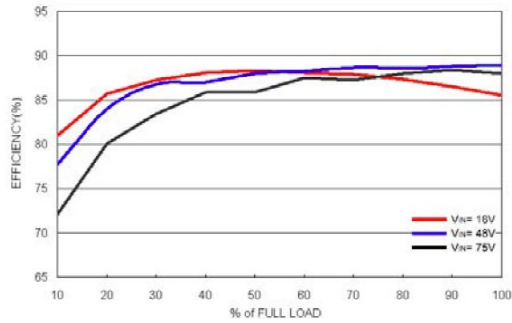
Using ON/OFF Voltage Start-Up and V_{out} Rise Characteristic $V_{in} = V_{in}(\text{nom})$, Full Load



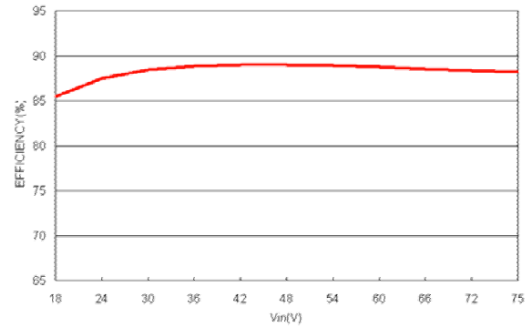
CHARACTERISTIC CURVES

*Curves for CBW48D15-1000. All test conditions are at 25°C.

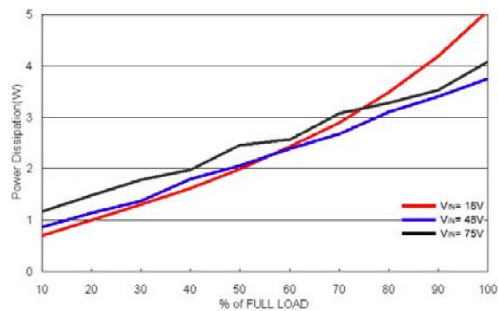
Efficiency vs. Output Load



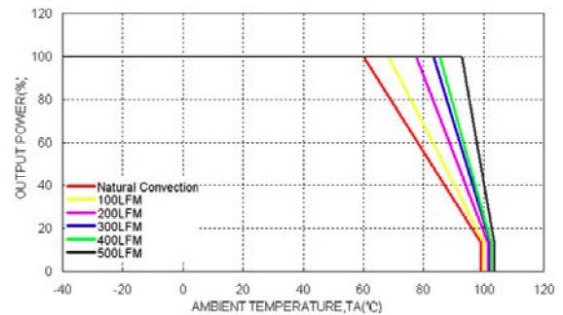
Efficiency vs. Input Voltage, Full Load



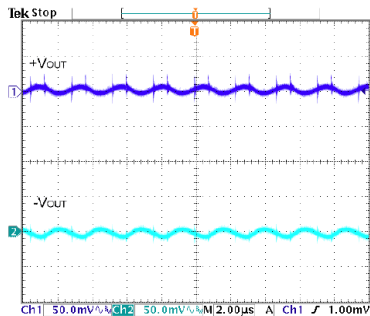
Power Dissipation vs. Output Load



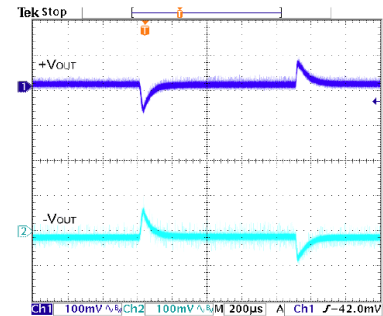
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



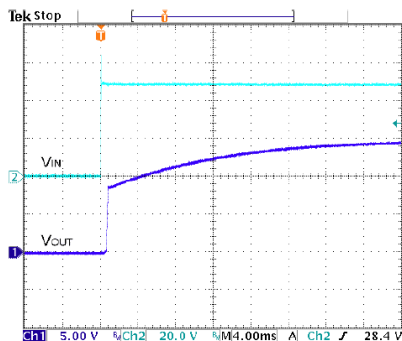
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



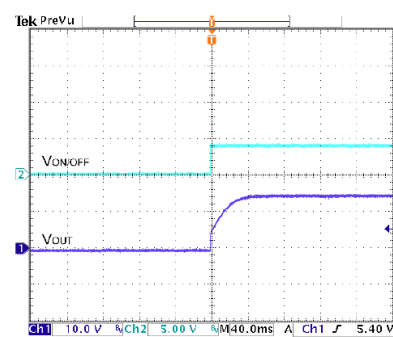
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



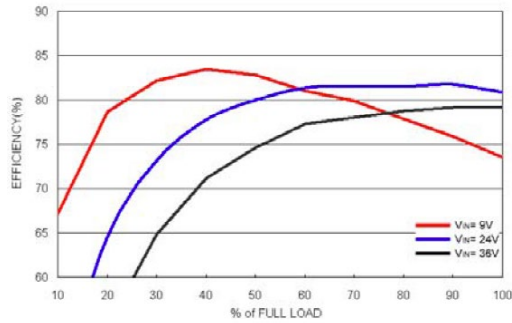
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



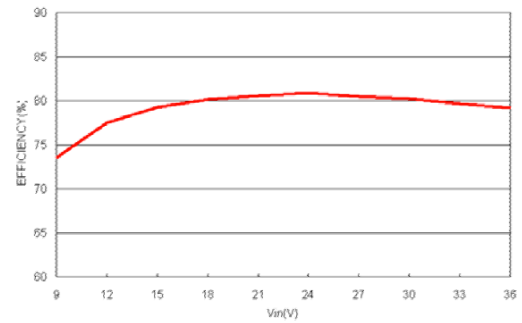
CHARACTERISTIC CURVES

*Curves for CBW24S1.5-8500. All test conditions are at 25°C.

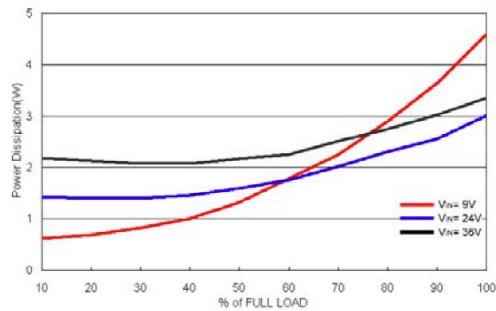
Efficiency vs. Output Load



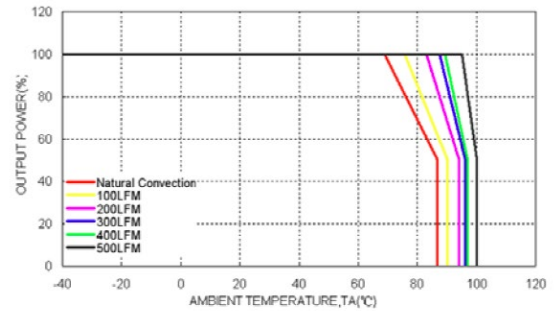
Efficiency vs. Input Voltage, Full Load



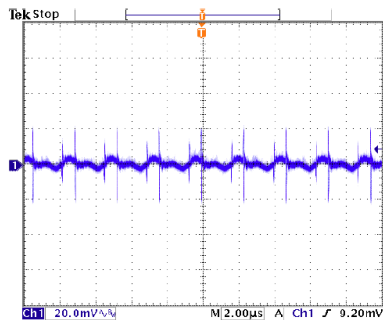
Power Dissipation vs. Output Load



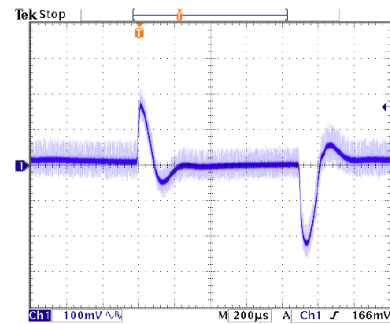
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



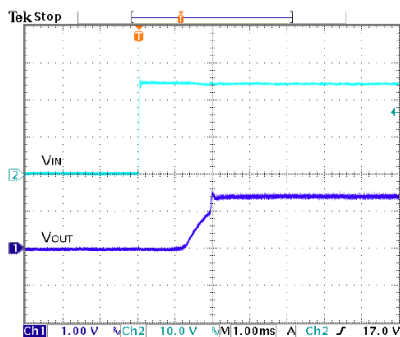
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



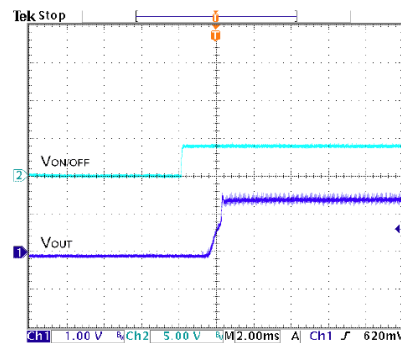
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



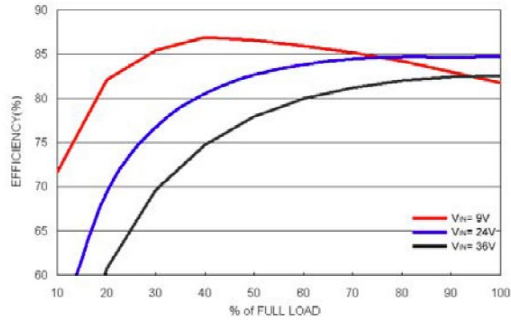
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



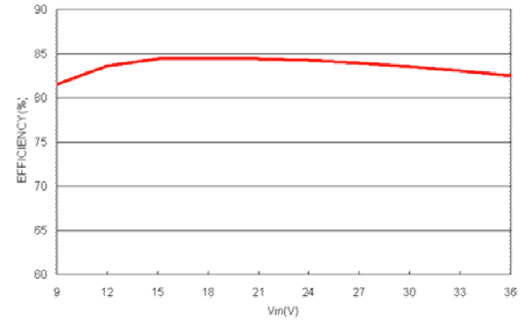
CHARACTERISTIC CURVES

*Curves for CBW24S2.5-8000. All test conditions are at 25°C.

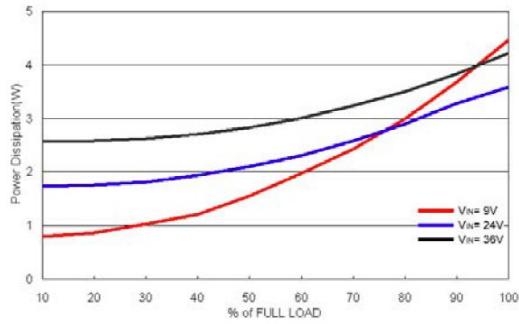
Efficiency vs. Output Load



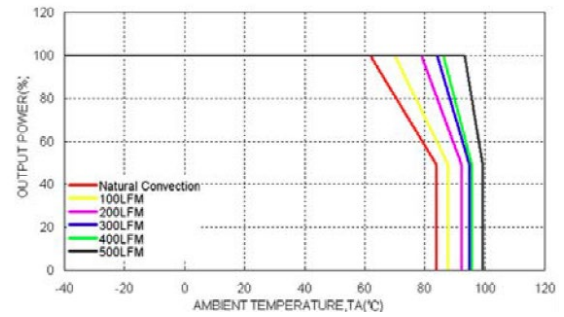
Efficiency vs. Input Voltage, Full Load



Power Dissipation vs. Output Load



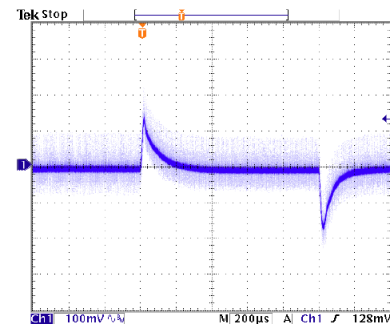
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



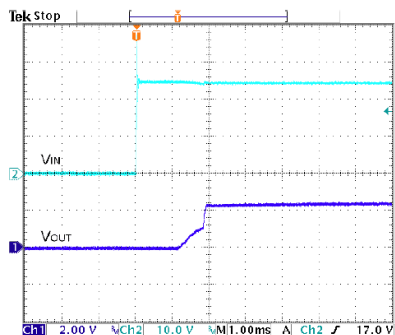
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



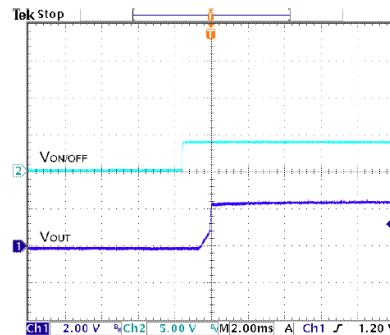
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



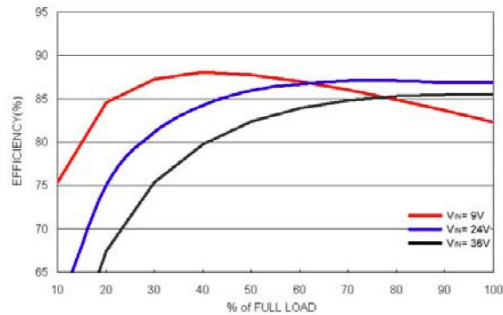
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



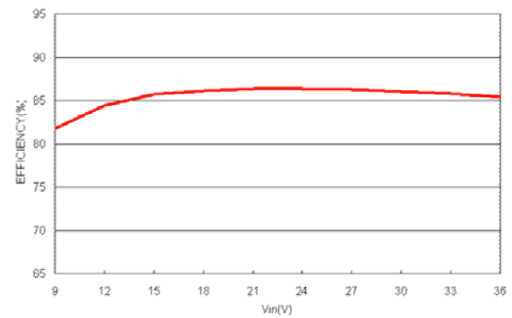
CHARACTERISTIC CURVES

*Curves for CBW24S3.3-7500. All test conditions are at 25°C.

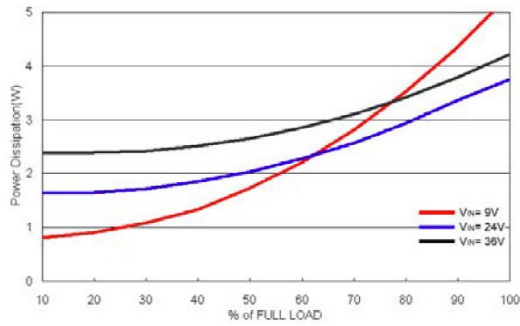
Efficiency vs. Output Load



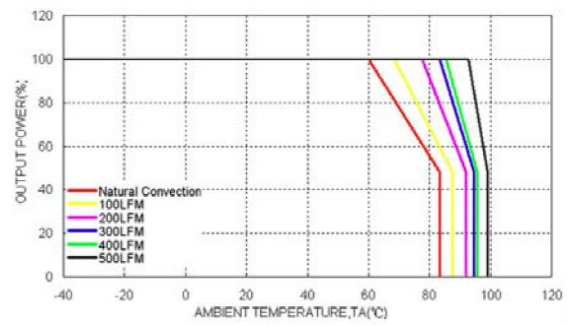
Efficiency vs. Input Voltage, Full Load



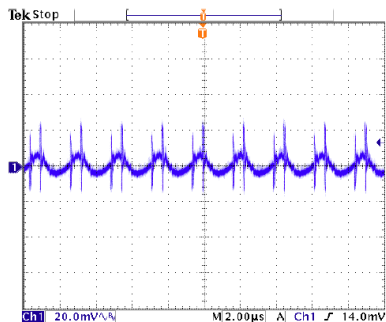
Power Dissipation vs. Output Load



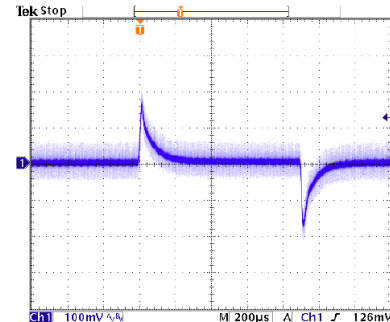
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



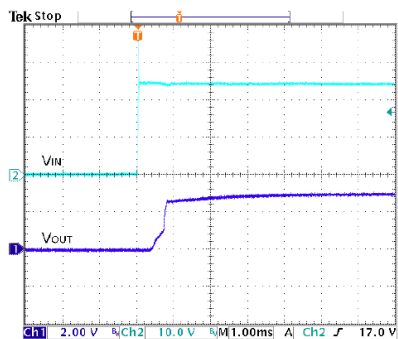
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



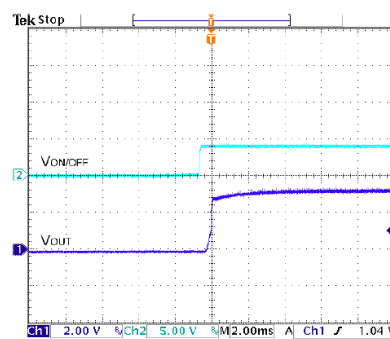
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



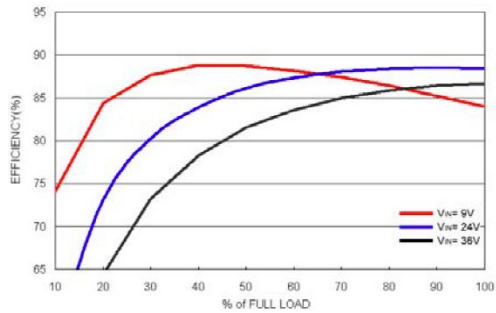
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



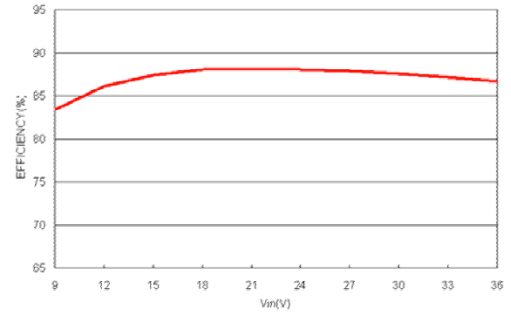
CHARACTERISTIC CURVES

*Curves for CBW24S5-6000. All test conditions are at 25°C.

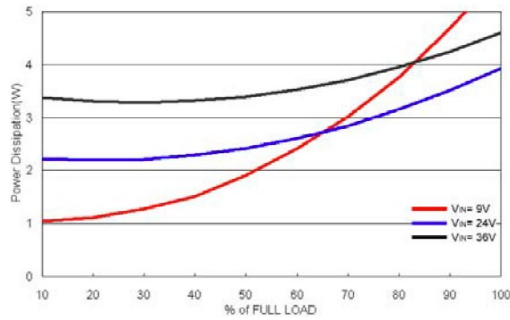
Efficiency vs. Output Load



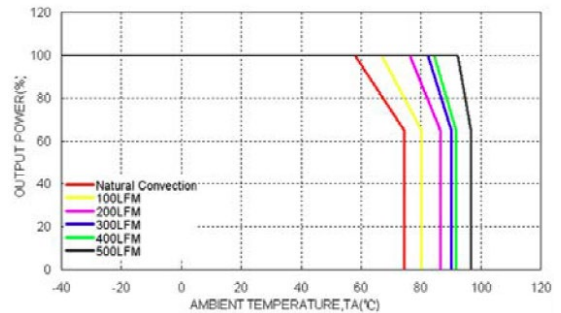
Efficiency vs. Input Voltage, Full Load



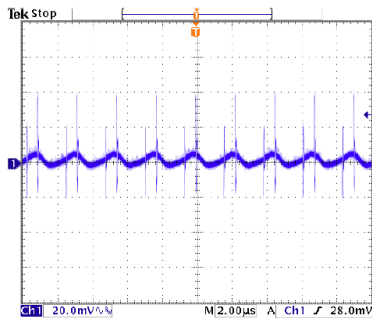
Power Dissipation vs. Output Load



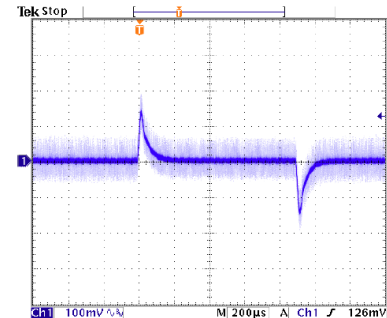
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



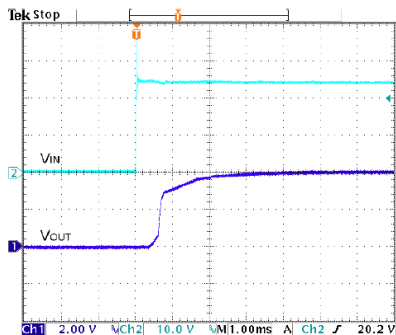
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



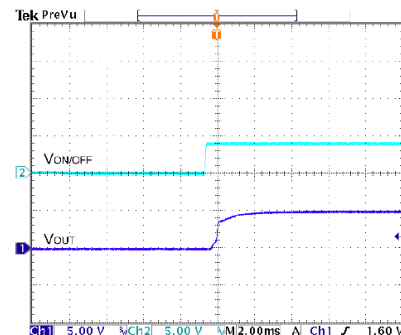
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



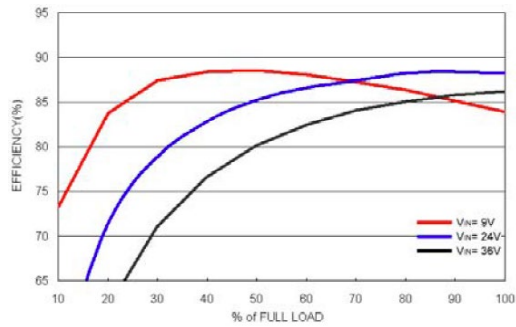
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



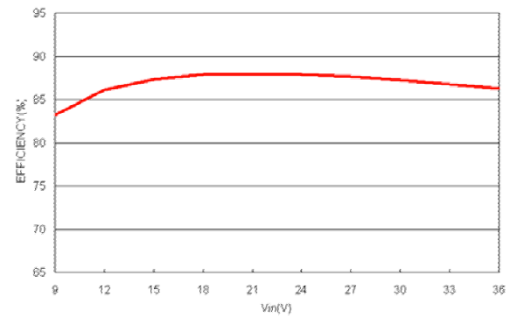
CHARACTERISTIC CURVES

*Curves for CBW24S5.1-6000. All test conditions are at 25°C.

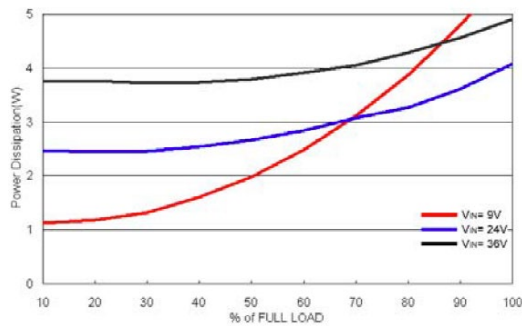
Efficiency vs. Output Load



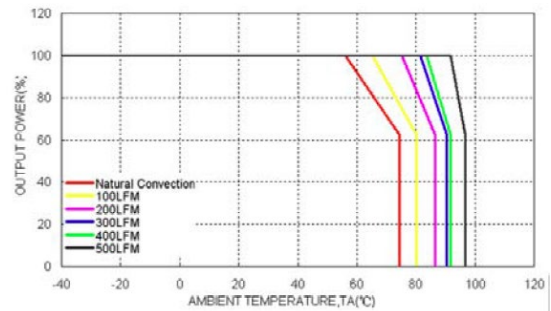
Efficiency vs. Input Voltage, Full Load



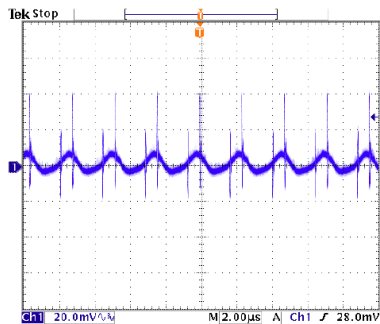
Power Dissipation vs. Output Load



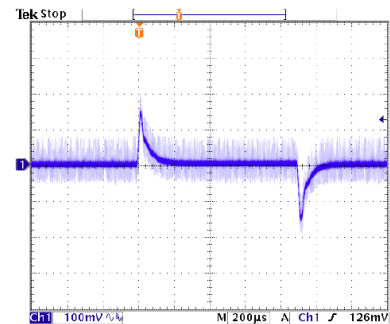
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



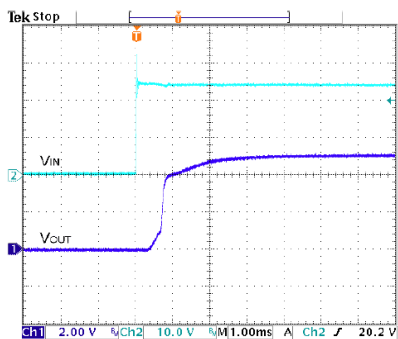
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



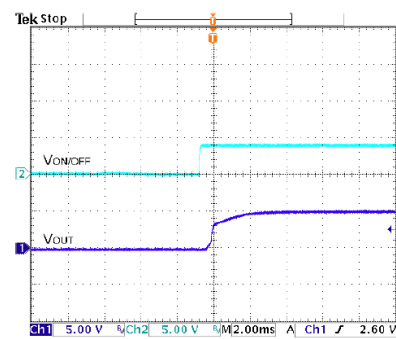
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



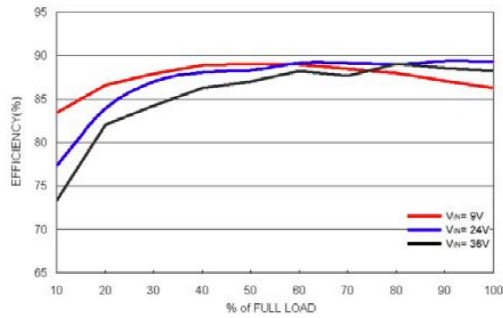
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



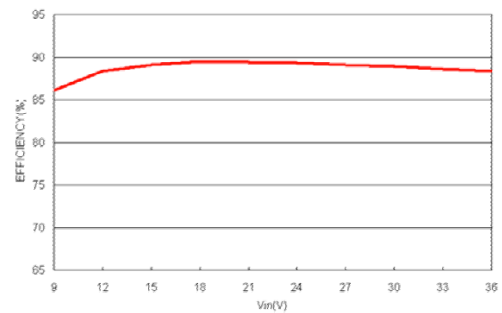
CHARACTERISTIC CURVES

*Curves for CBW24S12-2500. All test conditions are at 25°C.

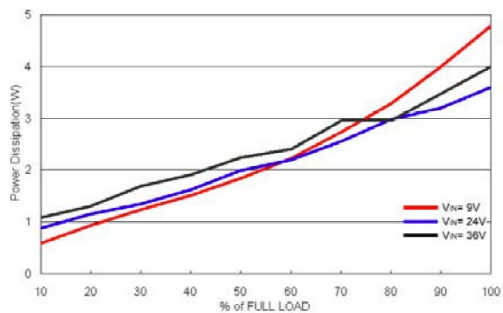
Efficiency vs. Output Load



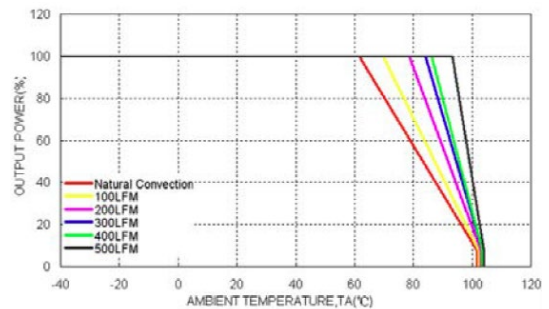
Efficiency vs. Input Voltage, Full Load



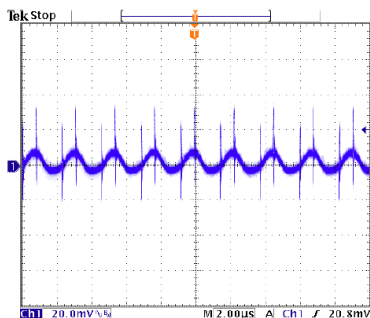
Power Dissipation vs. Output Load



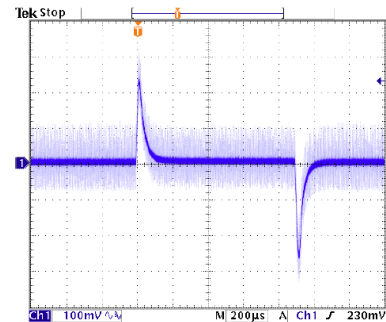
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



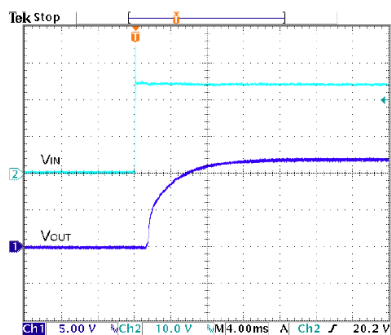
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



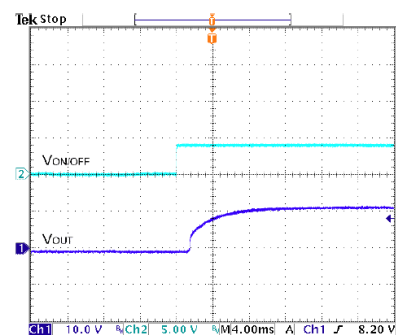
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



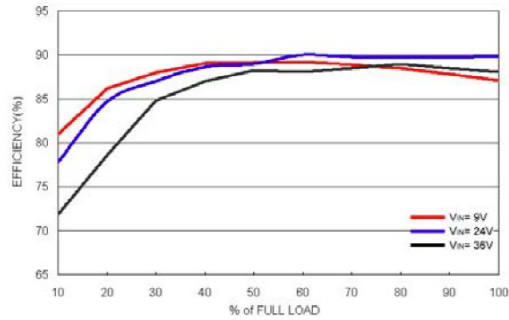
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



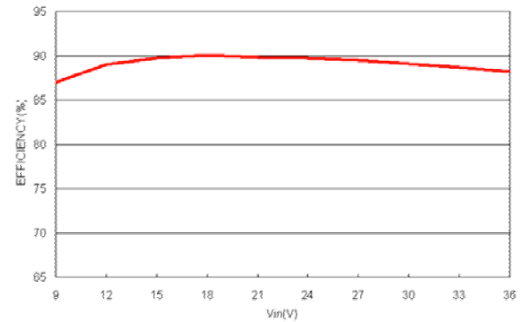
CHARACTERISTIC CURVES

*Curves for CBW24S15-2000. All test conditions are at 25°C.

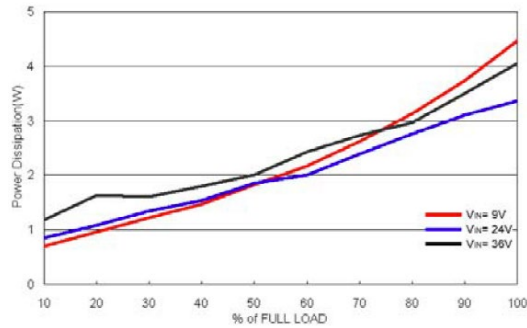
Efficiency vs. Output Load



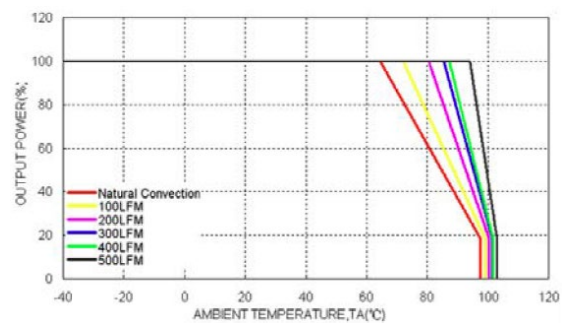
Efficiency vs. Input Voltage, Full Load



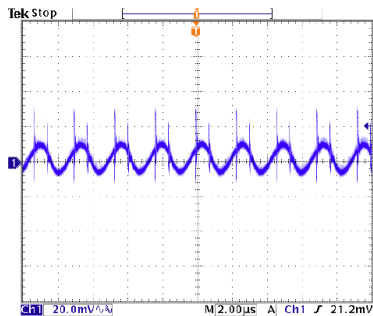
Power Dissipation vs. Output Load



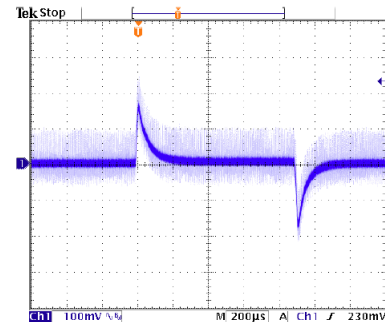
Derating Output Load vs. Ambient Temp. & Airflow $V_{in} = V_{in}(\text{nom})$



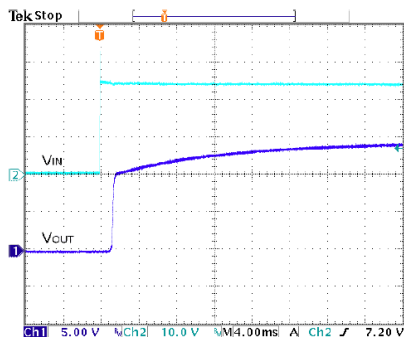
Typ. Output Ripple & Noise, $V_{in} = V_{in}(\text{nom})$, Full Load



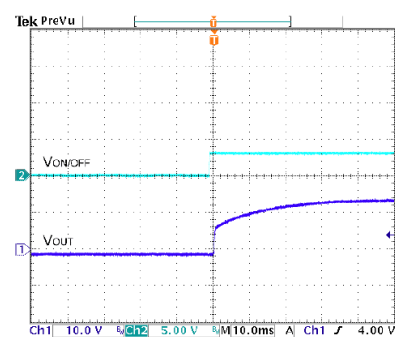
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, $V_{in} = V_{in}(\text{nom})$



Typical Input Start-Up & Output Rise Characteristic $V_{in} = V_{in}(\text{nom})$, Full Load



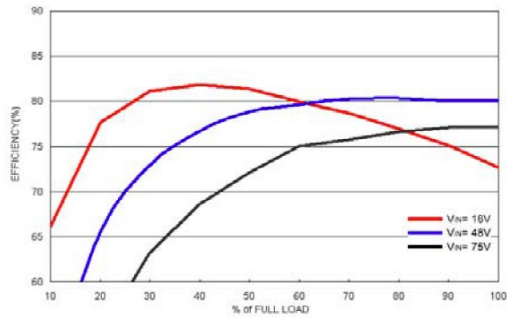
Using ON/OFF Voltage Start-Up and V_{out} Rise Characteristic $V_{in} = V_{in}(\text{nom})$, Full Load



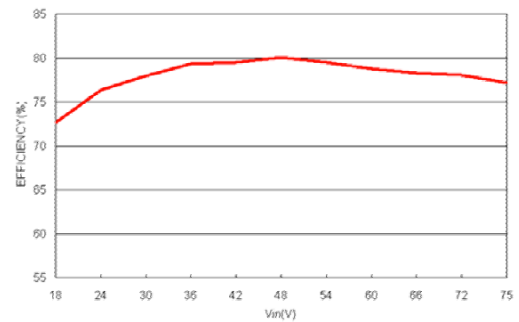
CHARACTERISTIC CURVES

*Curves for CBW48S1.5-8500. All test conditions are at 25°C.

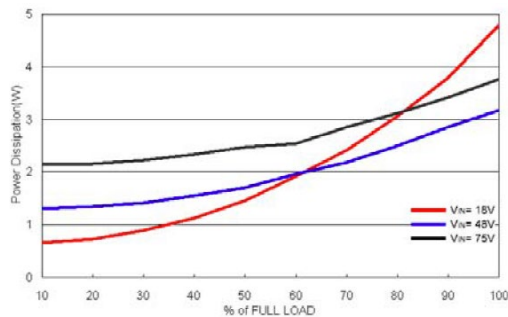
Efficiency vs. Output Load



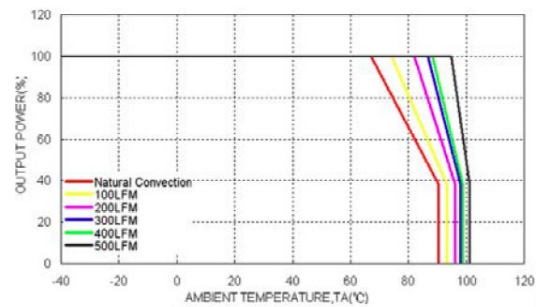
Efficiency vs. Input Voltage, Full Load



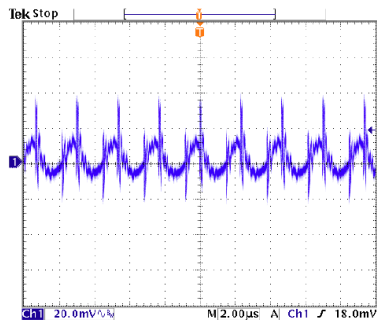
Power Dissipation vs. Output Load



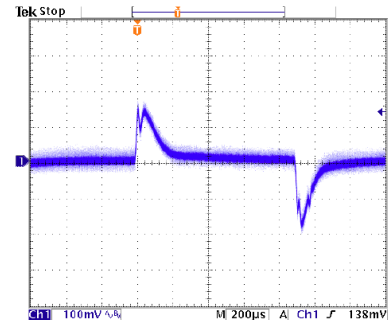
Derating Output Load vs. Ambient Temp. & Airflow $V_{in}=V_{in(nom)}$



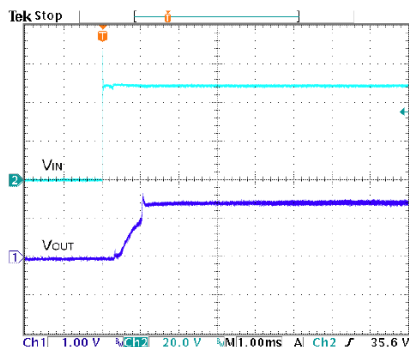
Typ. Output Ripple & Noise, $V_{in}=V_{in(nom)}$, Full Load



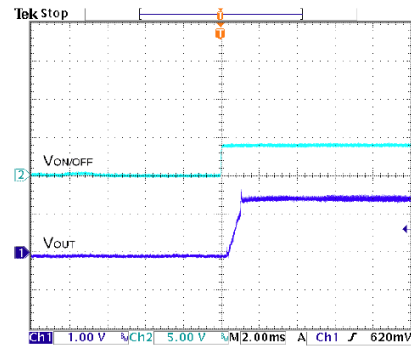
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, $V_{in}=V_{in(nom)}$



Typical Input Start-Up & Output Rise Characteristic $V_{in}=V_{in(nom)}$, Full Load



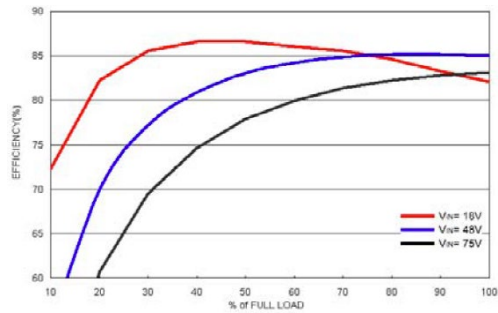
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic $V_{in}=V_{in(nom)}$, Full Load



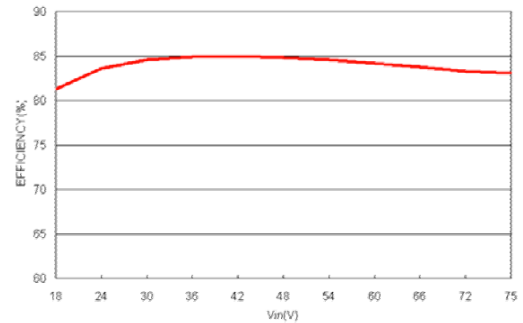
CHARACTERISTIC CURVES

*Curves for CBW48S2.5-8000. All test conditions are at 25°C.

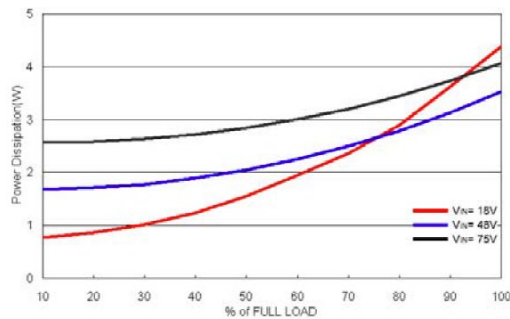
Efficiency vs. Output Load



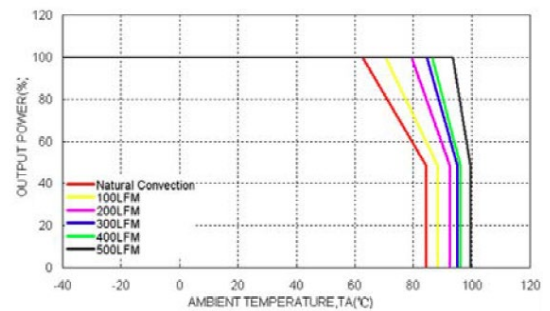
Efficiency vs. Input Voltage, Full Load



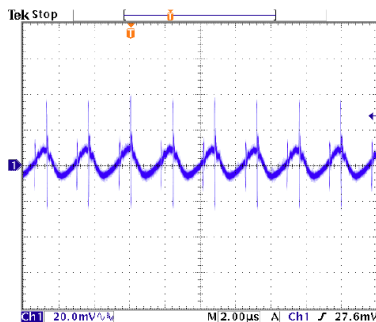
Power Dissipation vs. Output Load



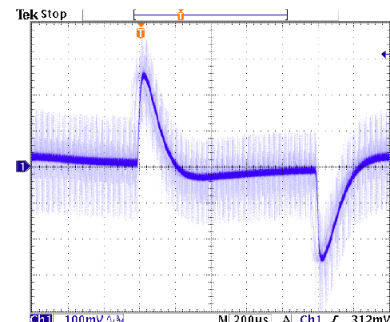
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



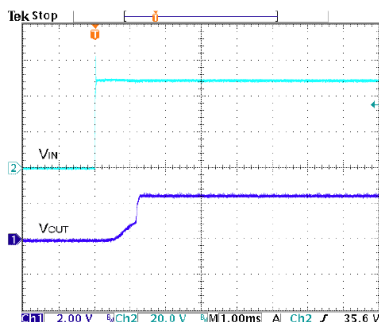
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



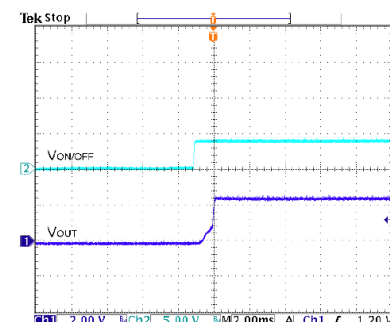
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



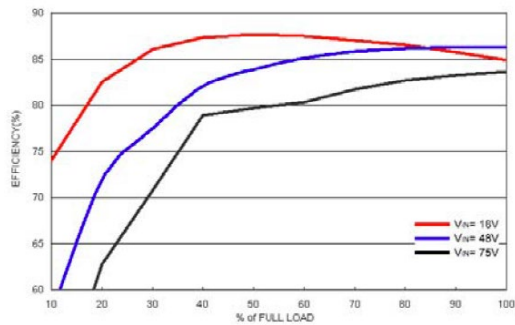
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



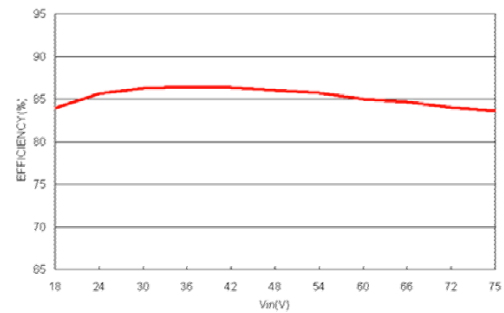
CHARACTERISTIC CURVES

*Curves for CBW48S3.3-7500. All test conditions are at 25°C.

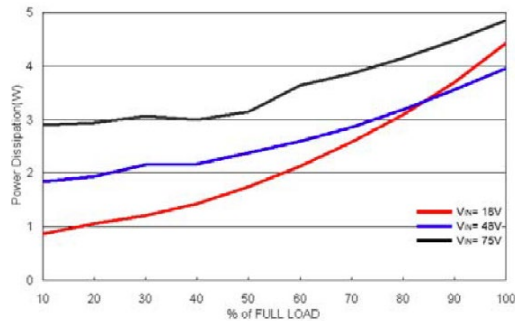
Efficiency vs. Output Load



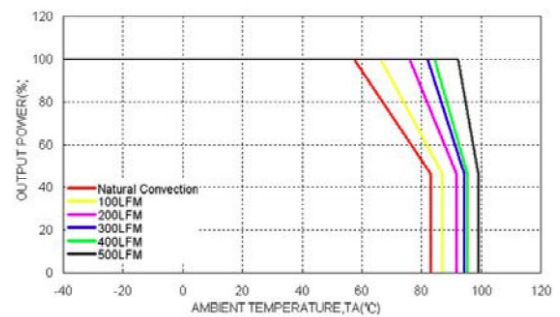
Efficiency vs. Input Voltage, Full Load



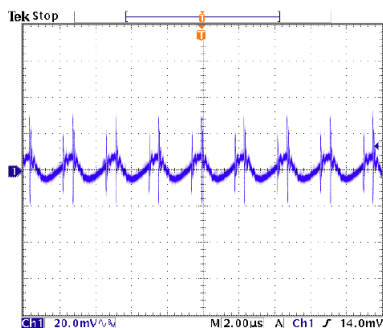
Power Dissipation vs. Output Load



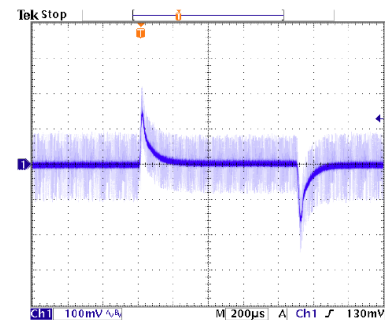
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



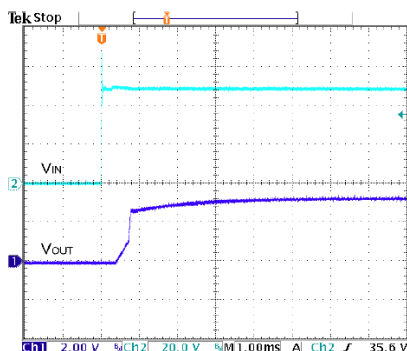
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



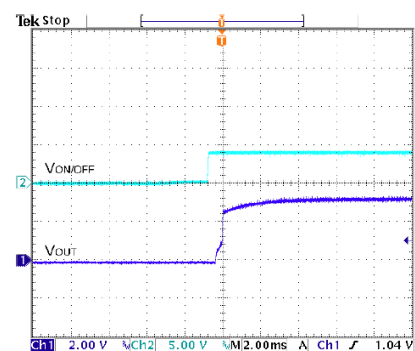
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



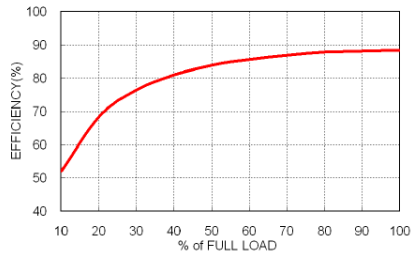
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



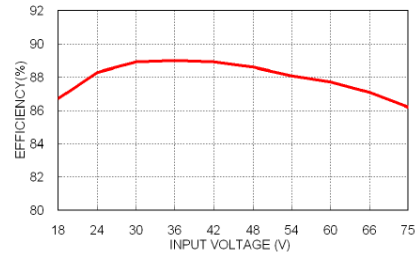
CHARACTERISTIC CURVES

*Curves for CBW48S05-6000. All test conditions are at 25°C.

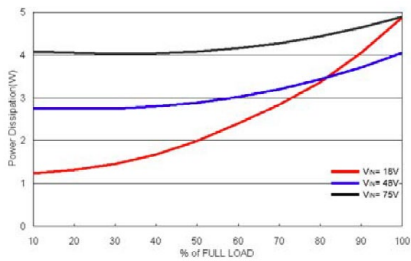
Efficiency vs. Output Load



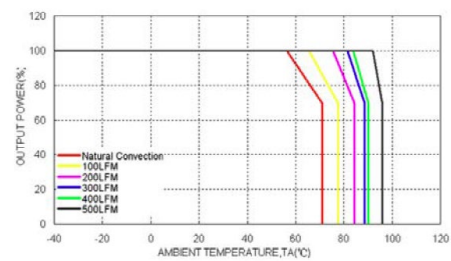
Efficiency vs. Input Voltage



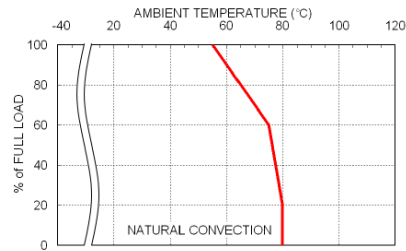
Power Dissipation vs. Output Load



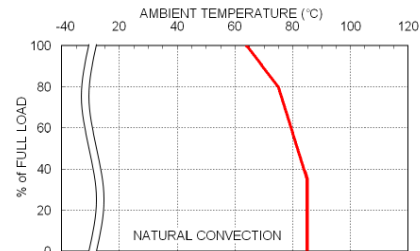
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



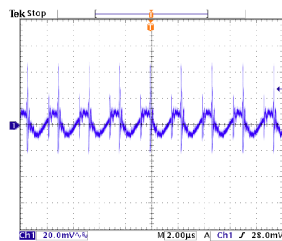
Derating Curve



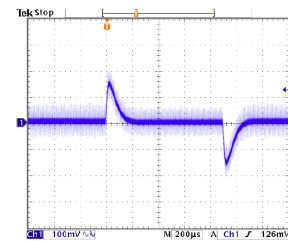
Derating Curve with Heatsink



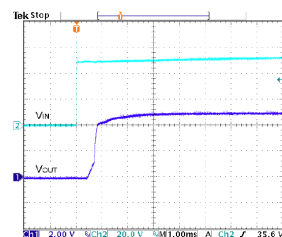
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



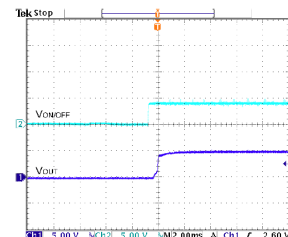
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



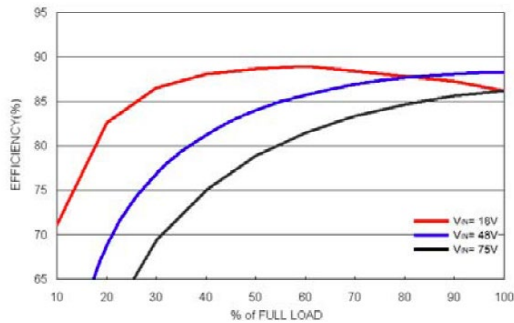
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



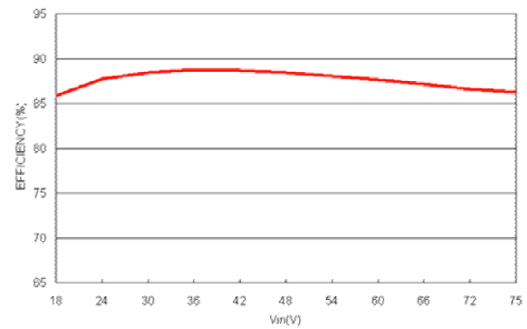
CHARACTERISTIC CURVES

*Curves for CBW48S5.1-6000. All test conditions are at 25°C.

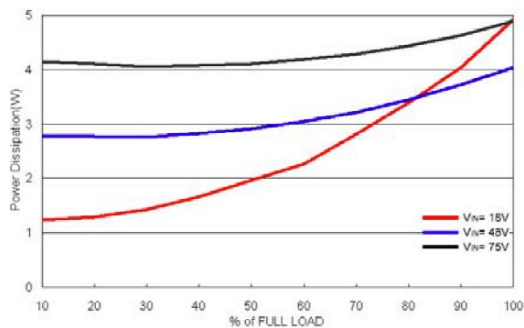
Efficiency vs. Output Load



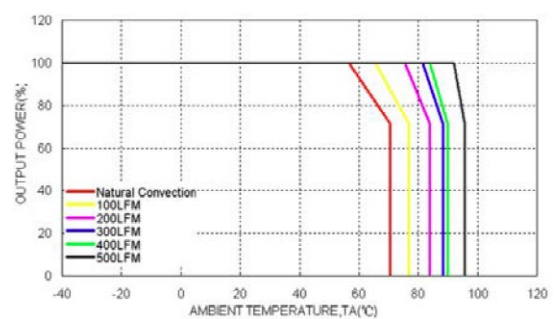
Efficiency vs. Input Voltage, Full Load



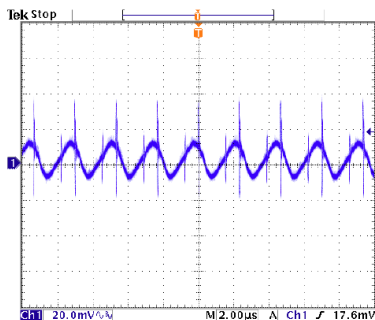
Power Dissipation vs. Output Load



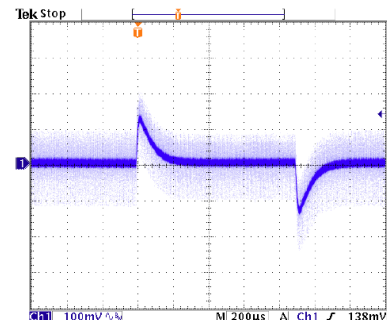
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



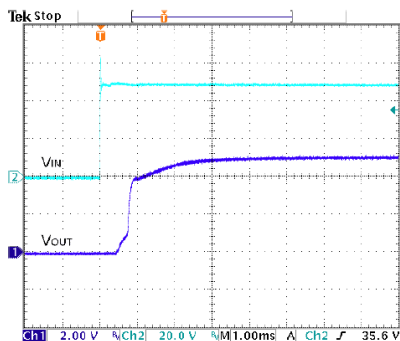
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



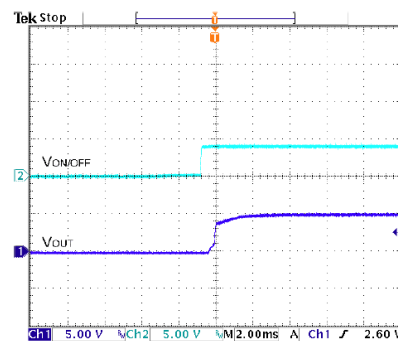
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



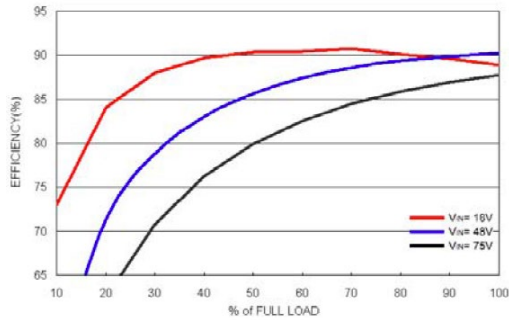
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



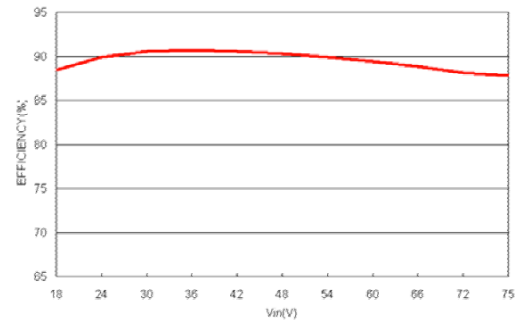
CHARACTERISTIC CURVES

*Curves for CBW48S12-2500. All test conditions are at 25°C.

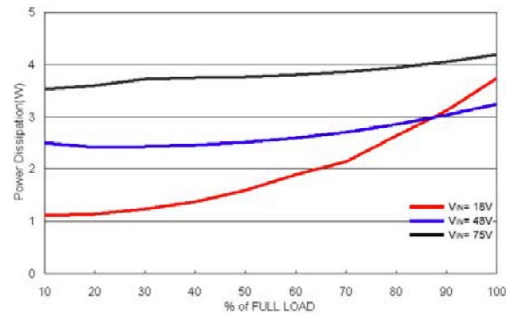
Efficiency vs. Output Load



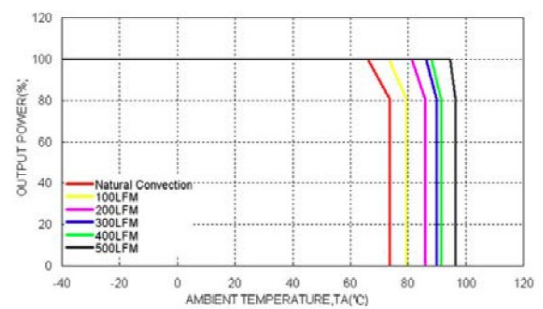
Efficiency vs. Input Voltage, Full Load



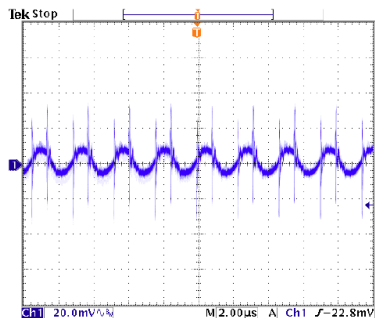
Power Dissipation vs. Output Load



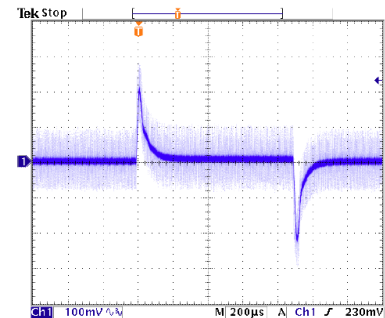
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



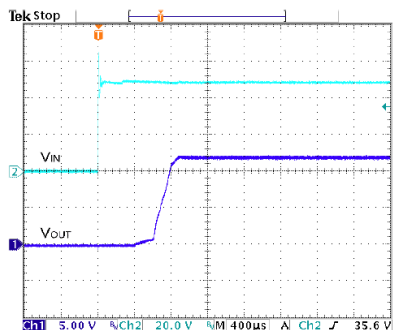
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



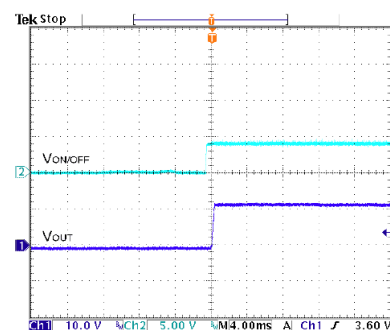
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



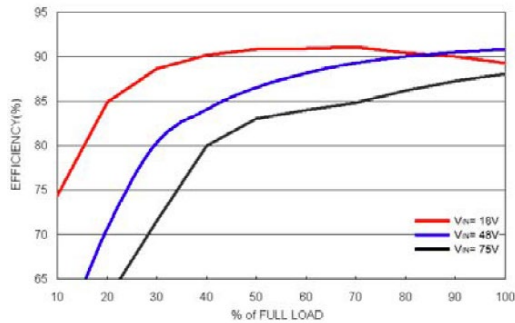
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



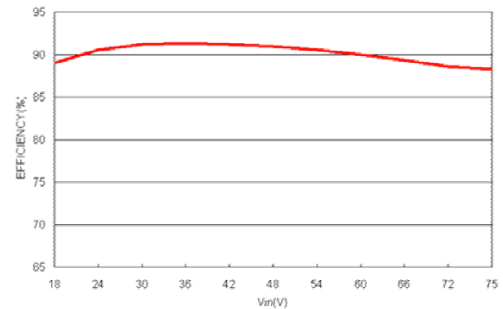
CHARACTERISTIC CURVES

*Curves for CBW48S15-2000. All test conditions are at 25°C.

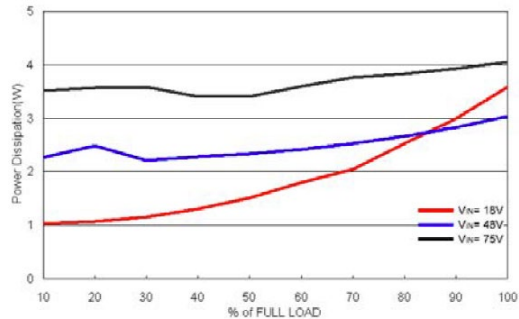
Efficiency vs. Output Load



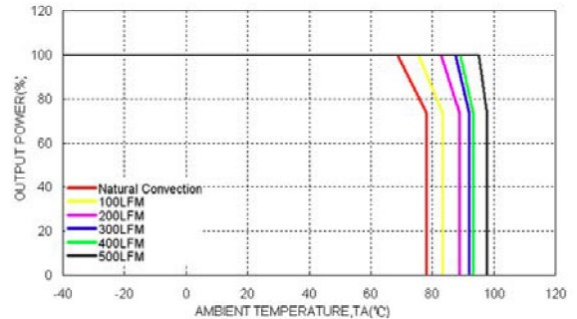
Efficiency vs. Input Voltage, Full Load



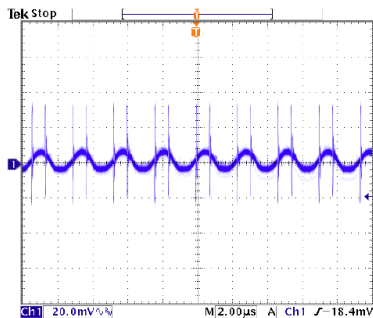
Power Dissipation vs. Output Load



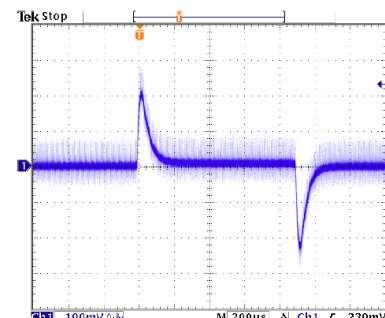
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



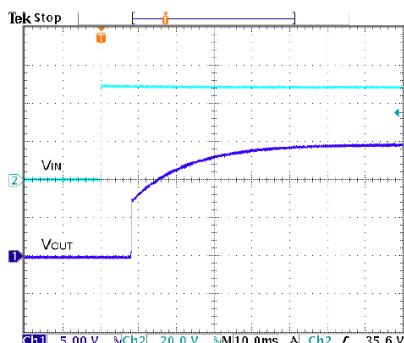
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



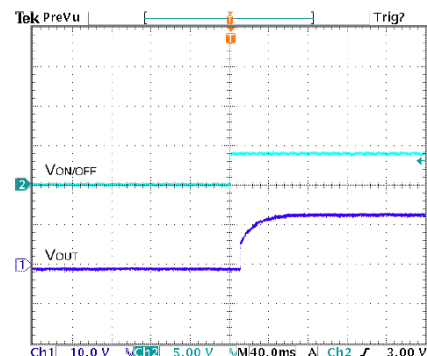
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic Vin=Vin(nom), Full Load



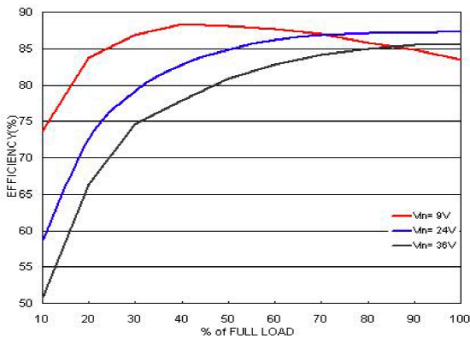
Using ON/OFF Voltage Start-Up and Vout Rise Characteristic Vin=Vin(nom), Full Load



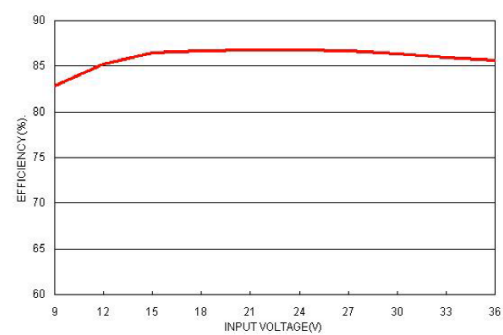
CHARACTERISTIC CURVES

*Curves for CBW24T3.312-26. All test conditions are at 25°C.

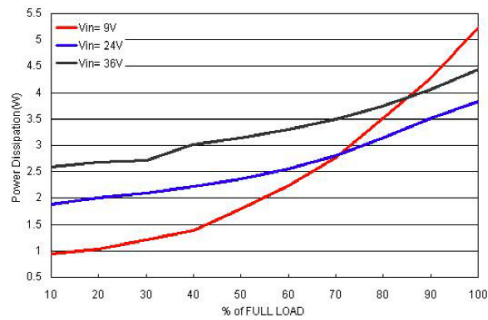
Efficiency vs. Output Load



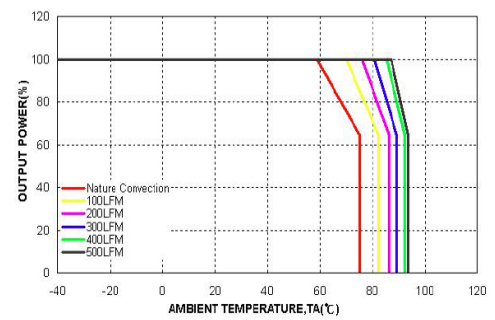
Efficiency vs. Input Voltage, Full Load



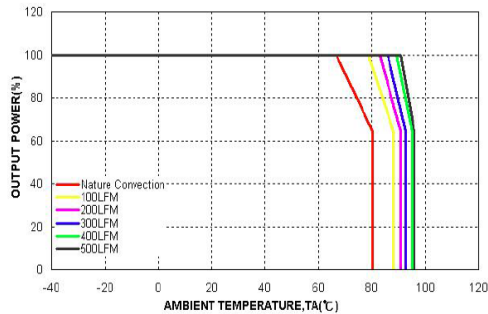
Power Dissipation vs. Output Load



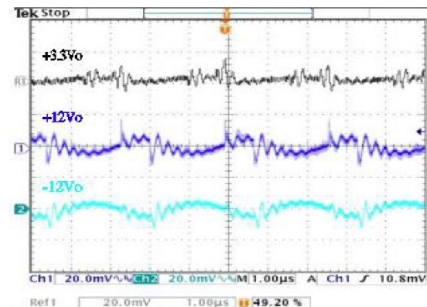
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



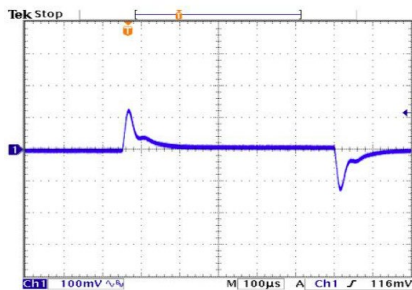
Derating Output Load vs. Ambient Temperature with Heatsink & Airflow, Vin=Vin(nom)



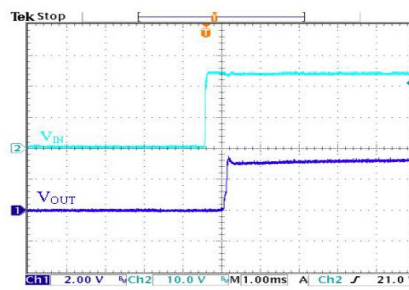
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



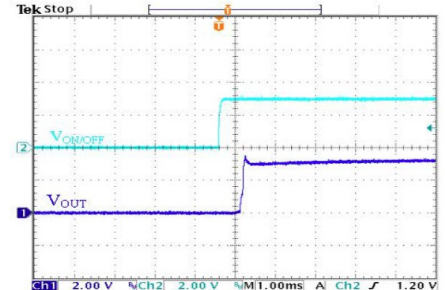
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic, Vin=Vin(nom), Full Load



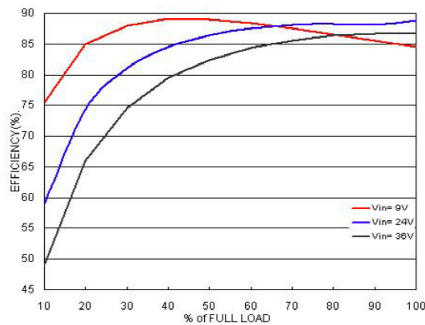
Using ON/OFF Voltage Start-Up and Vo Rise Characteristic, Vin=Vin(nom), Full Load



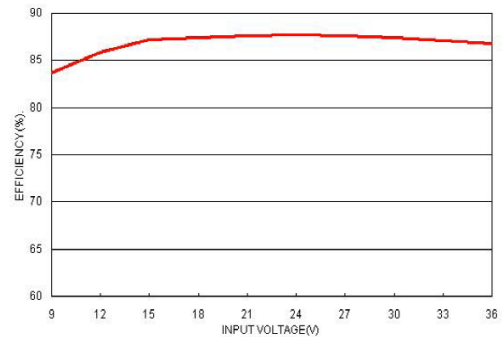
CHARACTERISTIC CURVES

*Curves for CBW24T3.315-26. All test conditions are at 25°C.

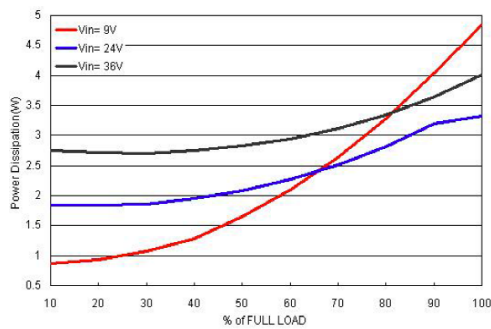
Efficiency vs. Output Load



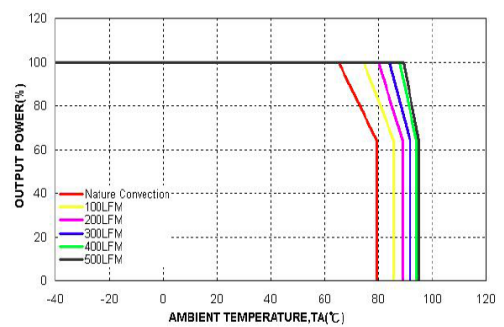
Efficiency vs. Input Voltage, Full Load



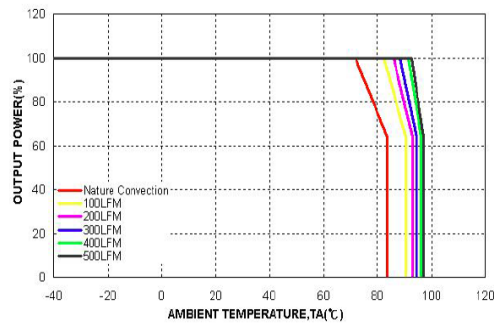
Power Dissipation vs. Output Load



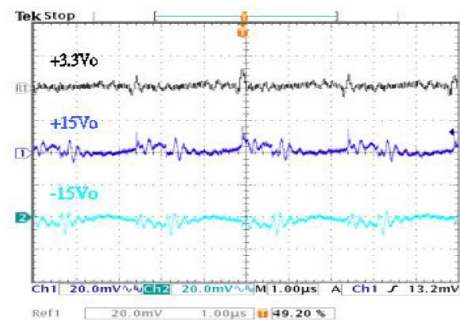
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



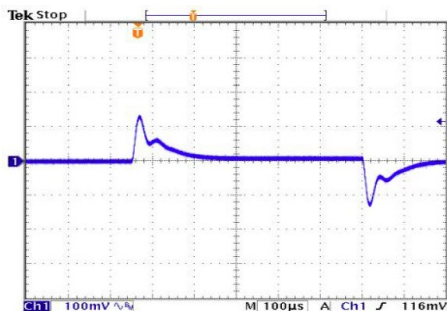
Derating Output Load vs. Ambient Temperature with Heatsink & Airflow, Vin=Vin(nom)



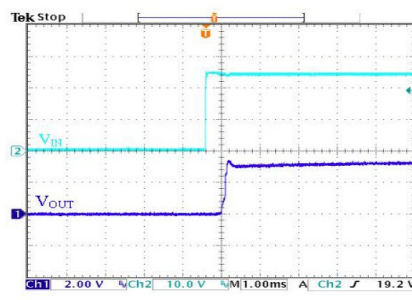
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



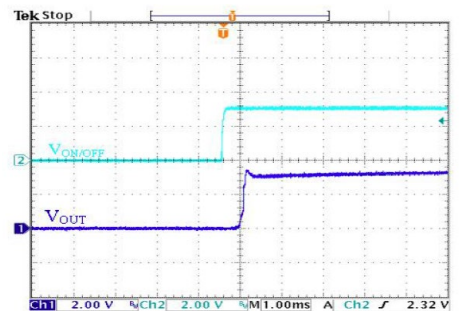
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic, Vin=Vin(nom), Full Load



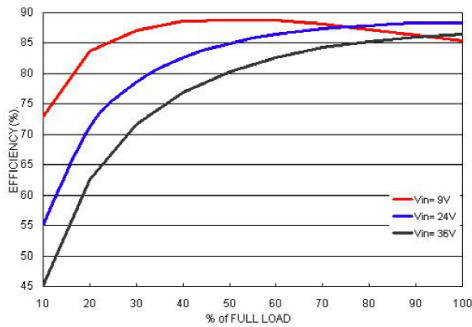
Using ON/OFF Voltage Start-Up and Vo Rise Characteristic, Vin=Vin(nom), Full Load



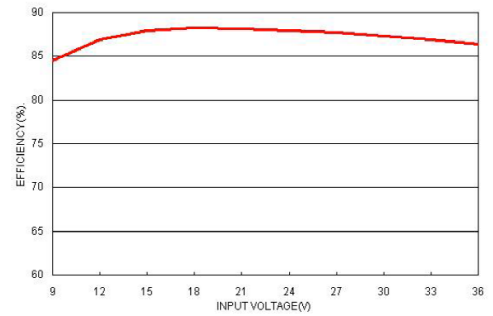
CHARACTERISTIC CURVES

*Curves for CBW24T512-30. All test conditions are at 25°C.

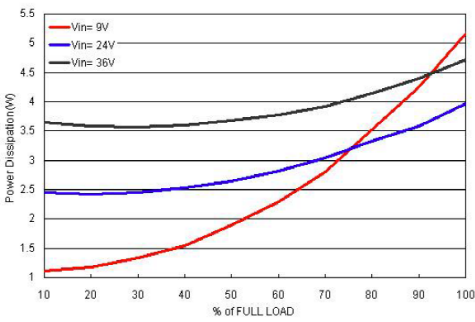
Efficiency vs. Output Load



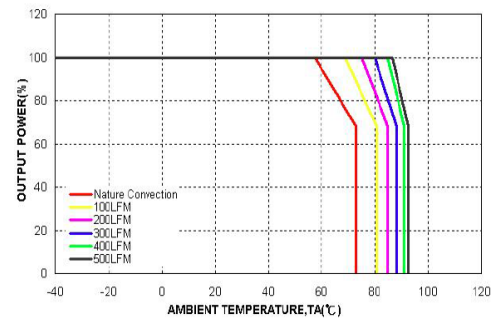
Efficiency vs. Input Voltage, Full Load



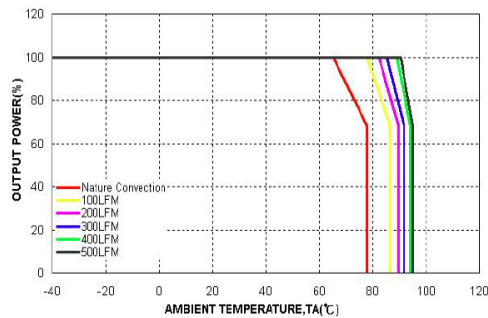
Power Dissipation vs. Output Load



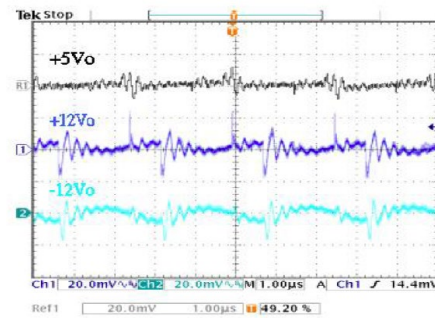
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



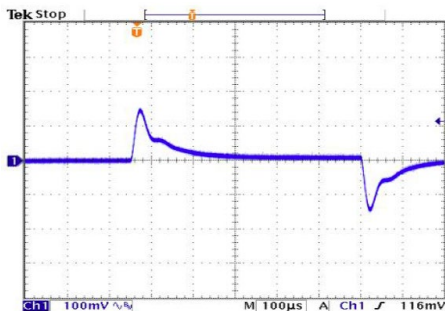
Derating Output Load vs. Ambient Temperature with Heatsink & Airflow, Vin=Vin(nom)



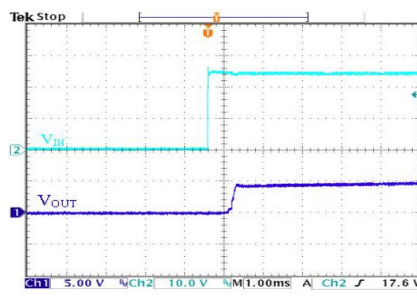
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



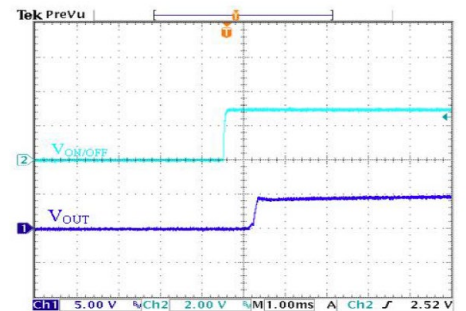
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic, Vin=Vin(nom), Full Load



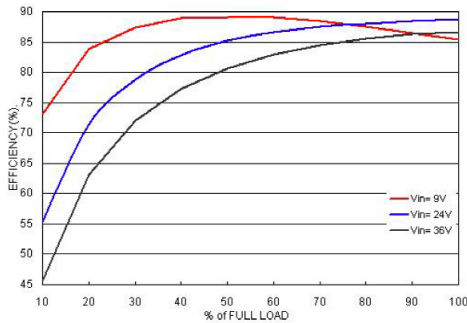
Using ON/OFF Voltage Start-Up and Vo Rise Characteristic, Vin=Vin(nom), Full Load



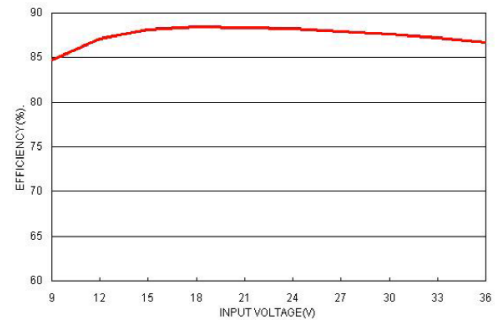
CHARACTERISTIC CURVES

*Curves for CBW24T515-30. All test conditions are at 25°C.

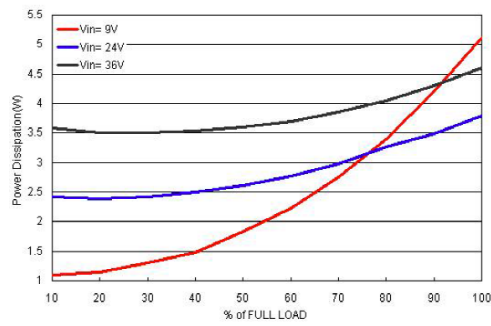
Efficiency vs. Output Load



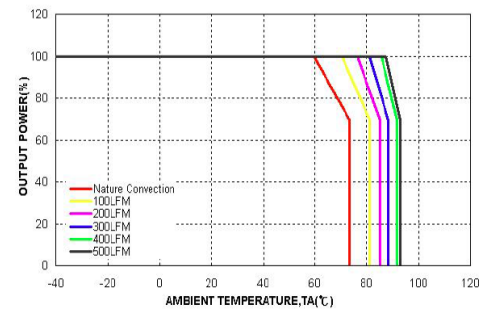
Efficiency vs. Input Voltage, Full Load



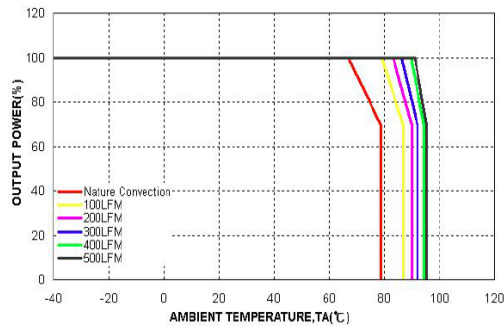
Power Dissipation vs. Output Load



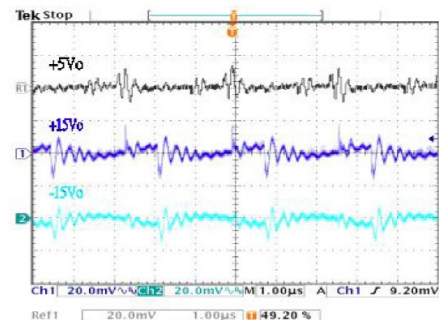
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



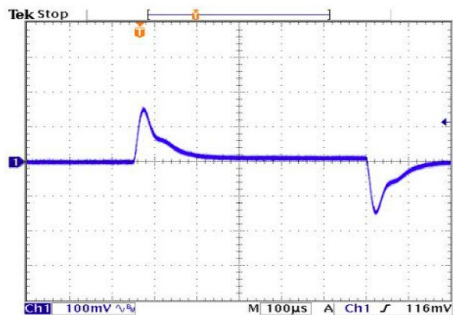
Derating Output Load vs. Ambient Temperature with Heatsink & Airflow, Vin=Vin(nom)



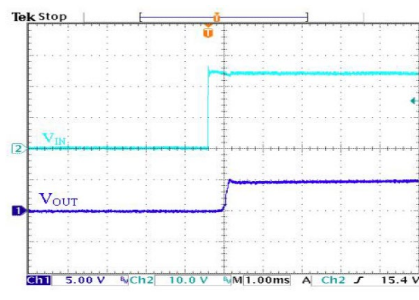
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



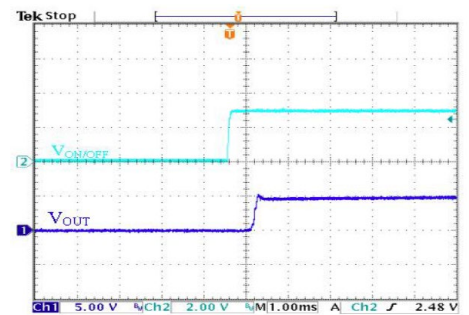
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic, Vin=Vin(nom), Full Load



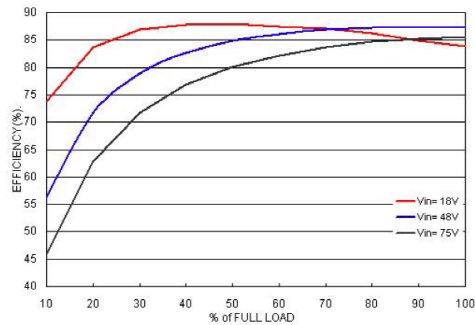
Using ON/OFF Voltage Start-Up and Vo Rise Characteristic, Vin=Vin(nom), Full Load



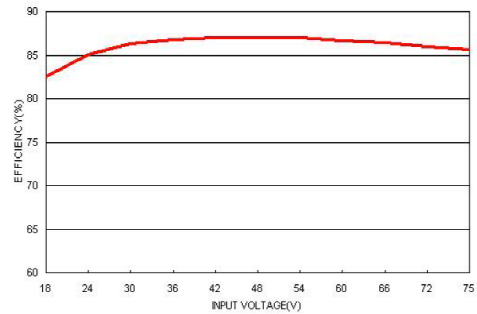
CHARACTERISTIC CURVES

*Curves for CBW48T3.312-26. All test conditions are at 25°C.

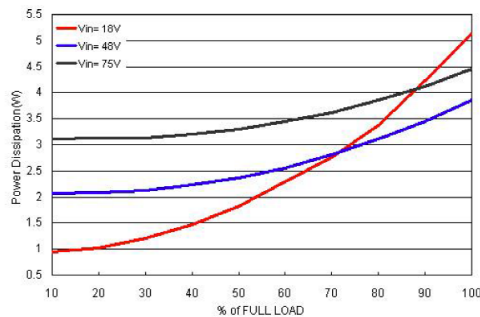
Efficiency vs. Output Load



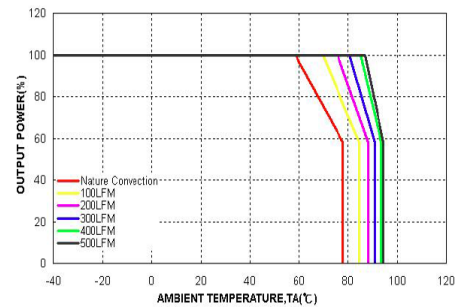
Efficiency vs. Input Voltage, Full Load



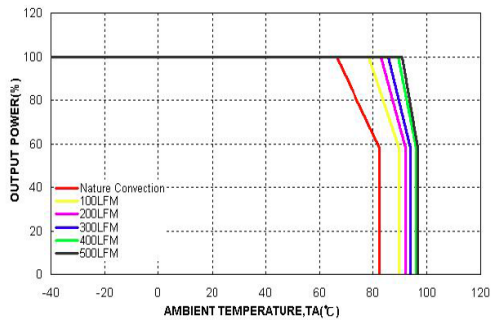
Power Dissipation vs. Output Load



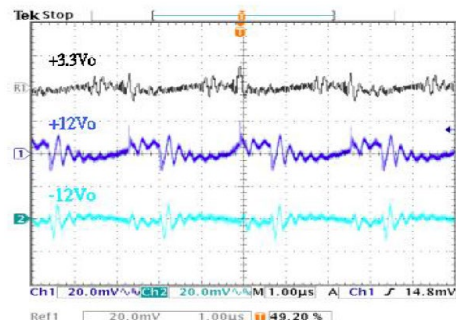
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



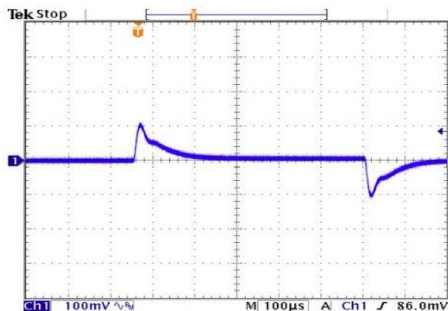
Derating Output Load vs. Ambient Temperature with Heatsink & Airflow, Vin=Vin(nom)



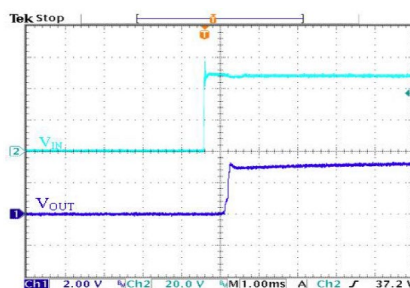
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



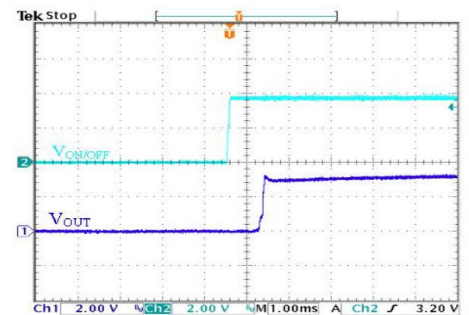
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic, Vin=Vin(nom), Full Load



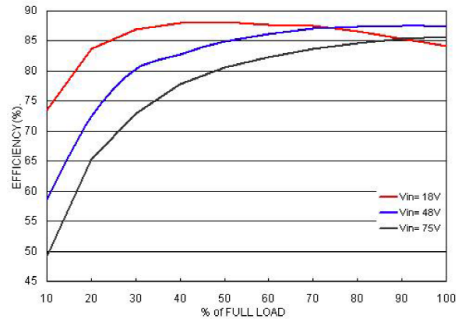
Using ON/OFF Voltage Start-Up and Vo Rise Characteristic, Vin=Vin(nom), Full Load



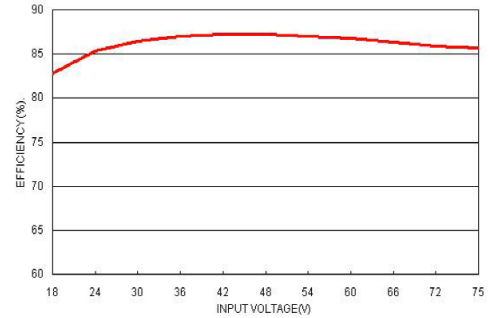
CHARACTERISTIC CURVES

*Curves for CBW48T3.315-26. All test conditions are at 25°C.

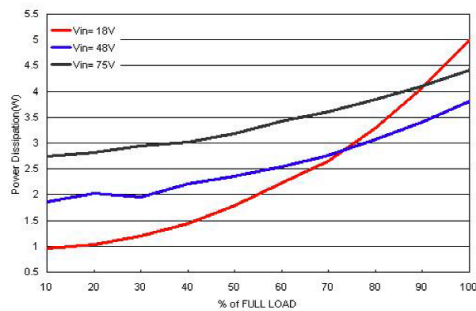
Efficiency vs. Output Load



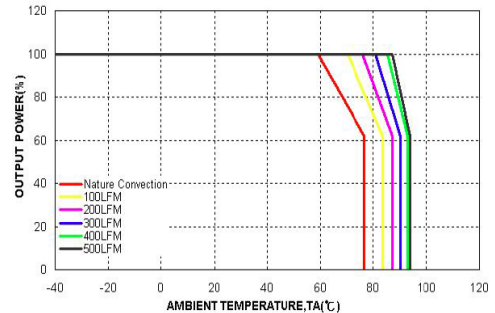
Efficiency vs. Input Voltage, Full Load



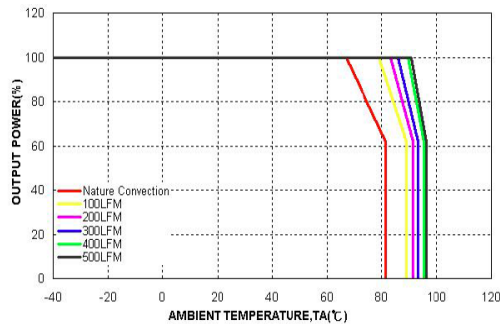
Power Dissipation vs. Output Load



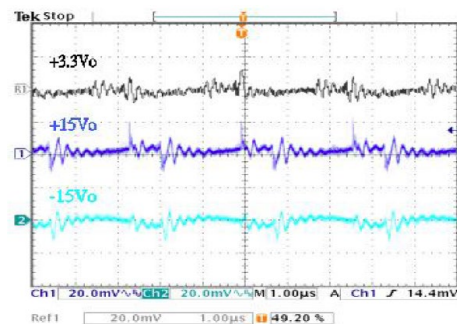
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



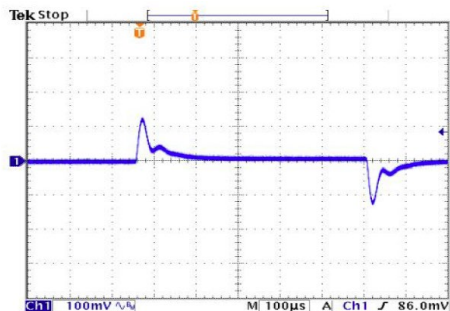
Derating Output Load vs. Ambient Temperature with Heatsink & Airflow, Vin=Vin(nom)



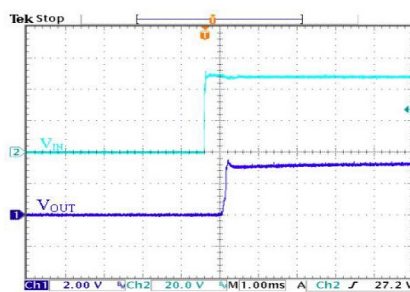
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



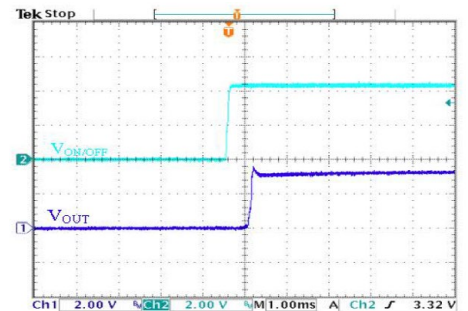
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic, Vin=Vin(nom), Full Load



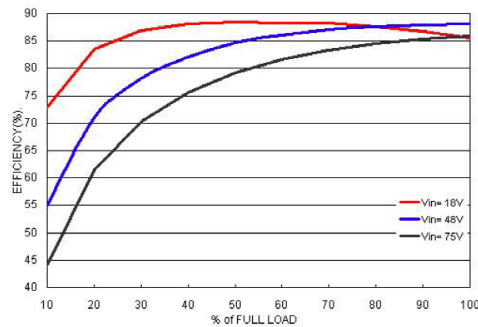
Using ON/OFF Voltage Start-Up and Vo Rise Characteristic, Vin=Vin(nom), Full Load



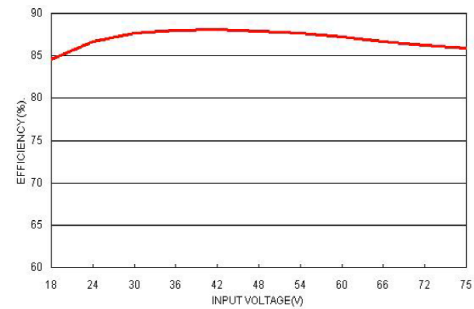
CHARACTERISTIC CURVES

*Curves for CBW48T512-30. All test conditions are at 25°C.

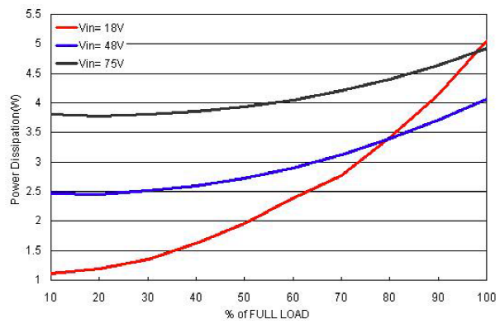
Efficiency vs. Output Load



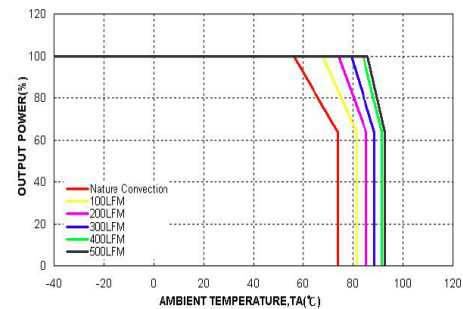
Efficiency vs. Input Voltage, Full Load



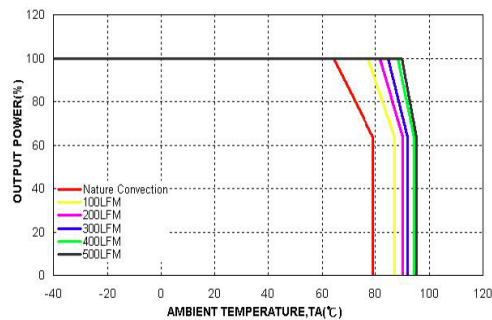
Power Dissipation vs. Output Load



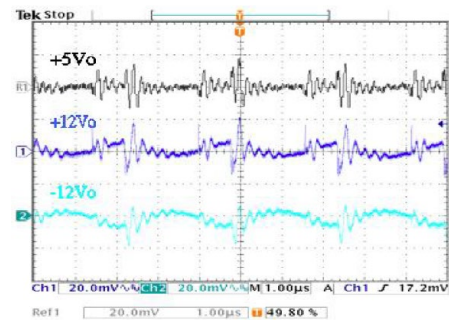
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



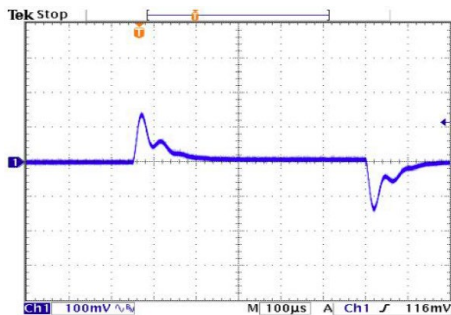
Derating Output Load vs. Ambient Temperature with Heatsink & Airflow, Vin=Vin(nom)



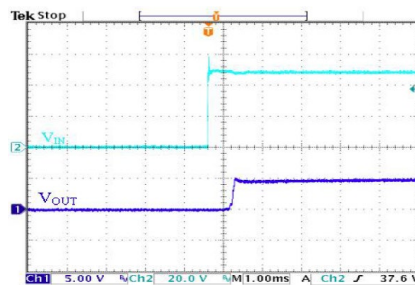
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



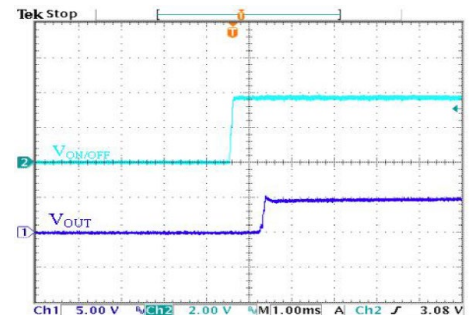
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, Vin=Vin(nom)



Typical Input Start-Up & Output Rise Characteristic, Vin=Vin(nom), Full Load



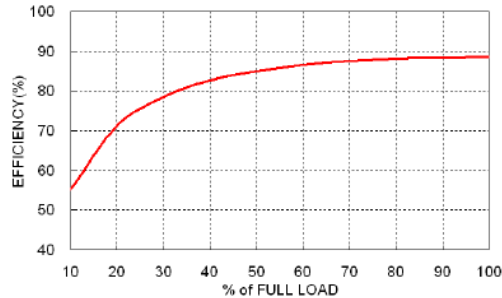
Using ON/OFF Voltage Start-Up and Vo Rise Characteristic, Vin=Vin(nom), Full Load



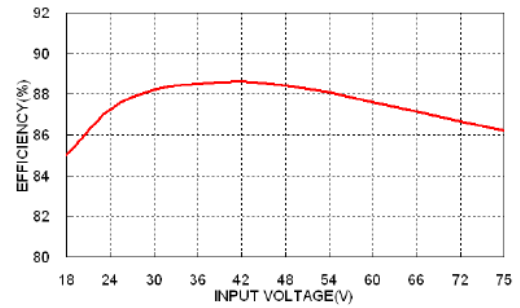
CHARACTERISTIC CURVES

*Curves for CBW48T515-30. All test conditions are at 25°C.

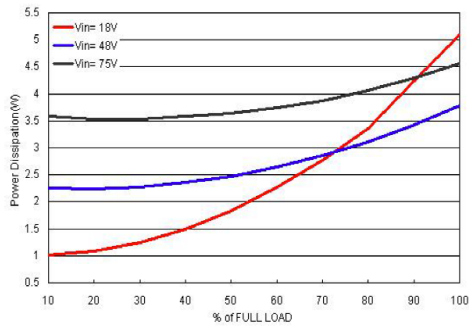
Efficiency vs. Output Load



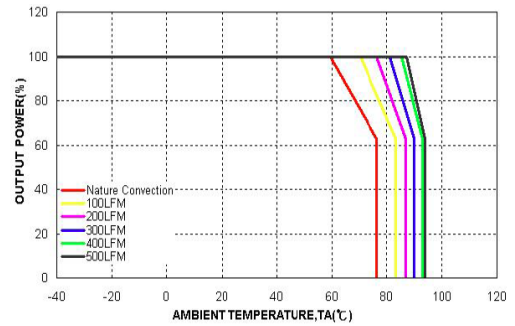
Efficiency vs. Input Voltage



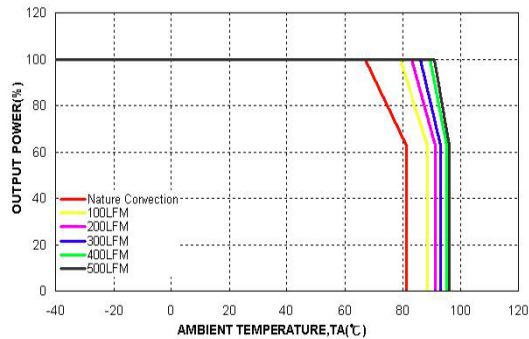
Power Dissipation vs. Output Load



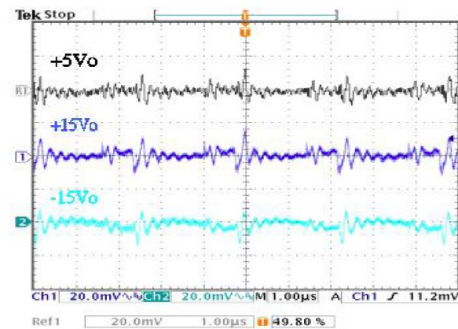
Derating Output Load vs. Ambient Temp. & Airflow Vin=Vin(nom)



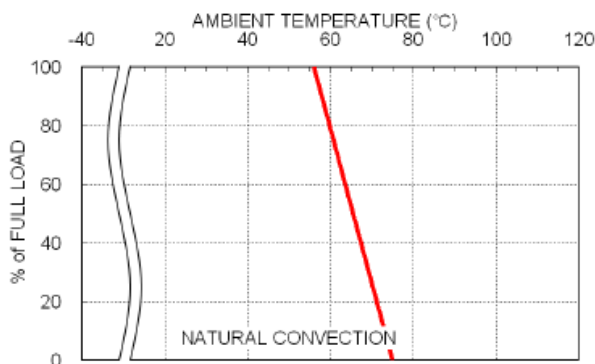
Derating Output Load vs. Ambient Temperature with Heatsink & Airflow, Vin=Vin(nom)



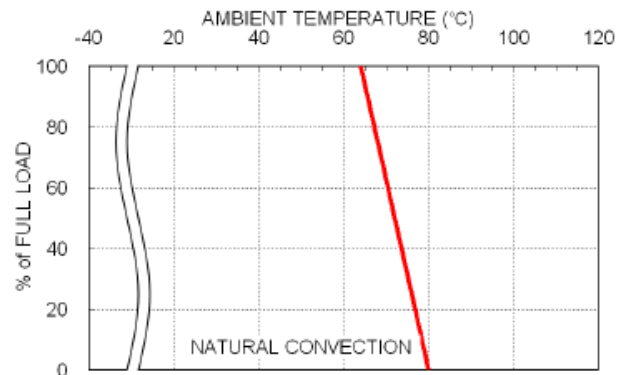
Typ. Output Ripple & Noise, Vin=Vin(nom), Full Load



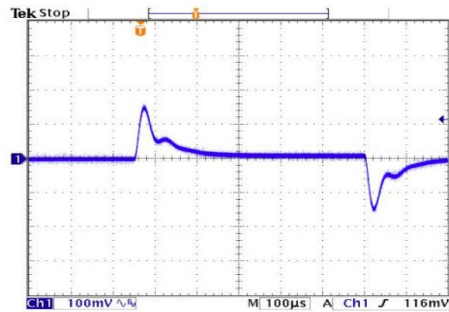
Derating Curve



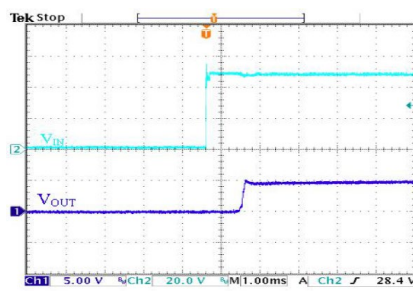
Derating Curve with Heatsink



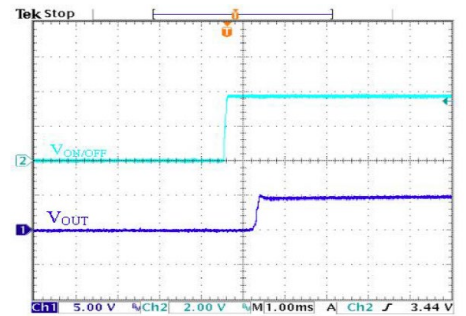
Transient Response to Dynamic Load Change from 100% to 75% to 100% of Full Load, $V_{in}=V_{in(nom)}$



Typical Input Start-Up & Output Rise Characteristic, $V_{in}=V_{in(nom)}$, Full Load



Using ON/OFF Voltage Start-Up and V_o Rise Characteristic, $V_{in}=V_{in(nom)}$, Full Load



MODEL NUMBER SETUP

Single Output Models

CBW	24	S	12	-	2500	R	HS
Series Name	Input Voltage	Output Quantity	Output Voltage		Output Current	Remote On/Off	Heatsink
	24: 9 - 36 VDC 48: 18 - 75 VDC	S: Single Output	1.5 1.5V 2.5 2.5V 3.3: 3.3V 5: 5V 5.1 5.1V 12: 12V 15: 15V		2000: 2000mA 2500: 2500mA 6000: 6000mA 7500: 7500mA 8000: 8000mA 8500: 8500mA	None: positive Logic R: negative Logic	None: No Heatsink HS: With Heatsink

Dual Output Models

CBW	24	D	12	-	1250	R	HS
Series Name	Input Voltage	Output Quantity	Output Voltage		Output Current	Remote On/Off	Heatsink
	24: 9 - 36 VDC 48: 18 - 75 VDC	D: Dual Output	5: ±5V 12: ±12V 15: ±15V		1000: ±1000mA 1250: ±1250mA 3000: ±3000mA	None: positive Logic R: negative Logic	None: No Heatsink HS: With Heatsink

Triple Output Models

CBW	24	T	512	-	30	R	HS
Series Name	Input Voltage	Output Quantity	Output Voltage		Output Power	Remote On/Off	Heatsink
	24: 9 - 36 VDC 48: 18 - 75 VDC	T: Triple Output	3.312: 3.3V / ±12V 3.315: 3.3V / ±15V 512: 5V / ±12V 515: 5V / ±15V		26: 26.5 Watts 30: 30 Watts	None: positive Logic R: negative Logic	None: No Heatsink HS: With Heatsink

COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

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