

The **CTH** series is designed for high temperature high slew rate step load applications using a 24V or 48V (36~75V) input bus to provide two isolated converters with up to 250 watts power or 25A+25A current with industry standard compatible pin assignments. It provides the best flexibility to reduce the complexity of the system design.

- High efficiency 90%@5.0V25A / 3.3V25A
- 88%@3.3V25A / 1.8V25A
- High useable current3.3V25A / 1.8V25A at 71°C 200LFM
-3.3V25A / 1.5V25A at 71°C 200LFM
- High power density 125W/in³
- Low profile 0.36"(9.1mm)
- Operation temperature -40°C~105°C
- Module thermal resistance 2.31°C/W@200LFM
- Separated regulation and isolation at both outputs
- Open frame with Sink-Plate package



Part Number *	Max. Input	Max. Output	Efficiency	Part Number *	Max. Input	Max. Output	Efficiency		
CTH48V1V2ABCD-EFGH	36V~75V	278W	25A/25A 250W	90%	CTH24V1V2ABCD-EFGH	18V~36V	278W	25A/25A 250W	90%

* Options for **CTH Series** are as follows:

- V1** (Output voltage): **A5, A2, 50, 33, 25, 18 and 15** for 15V, 12V, 5.0V, 3.3V, 2.5V, 1.8V and 1.5V
- V2** (Output voltage): **A5, A2, 50, 33, 25, 18 and 15** for 15V, 12V, 5.0V, 3.3V, 2.5V, 1.8V and 1.5V
- A** (Enable Logic): **P**: Positive **N**: Negative
- B** (Pin Length): **0**: 0.12" **1**: 0.16" **2**: 0.20" **3**: 0.24"
- C** (Standoff Height): **0**: 0.02" **1**: 0.08" **2**: 0.16"
- D** (Base Plate/Module Thickness): **M**: 1.0mm Metal Plate/0.34" **A**: 3.0mm Sink-Plate/0.42" **B**: 5.0mm Sink-Plate/0.50"
- EF** (V1 current): "00~99 for Output Current Rating
- GH** (V2 current): "00~99 for Output Current Rating



Example: **CTH485033N20A-2525** is a 48V to 5.0V25A / 3.3V25A dual output dc/dc converter with negative control logic 0.20" pin length, 0.02" standoff height and 3.0mm Sink-Plate. The total height of this module is 0.02"+0.42"=0.44"

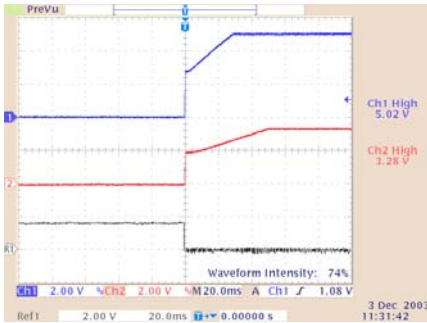
ABSOLUTE MAXIMUM RATINGS		
Temperature	Operation	-40°C to +105°C
	Storage	-55°C to +125°C
Input Voltage Range	Operation:	
	24V Models	-0.5V to +40Vdc
	48V Models	-0.5V to +80Vdc
Isolation Voltage	Transient (100mS):	
	24V Models	50V Maximum
	48V Models	100V Maximum
Remote Control Voltage	Input to Output	2.0KV Minimum
	Input to Case	1.0KV Minimum
	Output to Case	1.0KV Minimum

INPUT SPECIFICATIONS		
Operation Voltage Range	24V Models	+18V to +36Vdc
	48V Models	+36V to +75Vdc
Reflected Ripple Current	$L_{EXT} = 10\mu H$	20mA Max
Power ON Voltage Ranges	24V Models	+17.5V to +17.9Vdc
	48V Models	+35.0V to +35.8Vdc
Power OFF Voltage Ranges	24V Models	+16.1V to +16.5Vdc
	48V Models	+32.2V to +33.0Vdc
Off State Input Current	V_{NOM}	6mA Max
Latch-State Input Current	V_{NOM}	8mA Max
Input Capacitance	24V Models	33.0uF Max
	48V Models	6.8uF Max

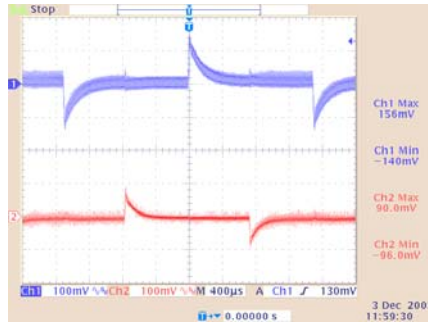
GENERAL SPECIFICATIONS		
Conversion Efficiency	Typical	See table
Switching Frequency	Typical	330KHz
MTBF	Bellcore	3.45×10^6 hrs @40°C-GB.
OTP	Internal	115°C
Weight		1.9 oz
Size		2.30"x2.40"x0.36"

OUTPUT SPECIFICATIONS		
Voltage Accuracy	Typical	±1%
Line Regulation	Full Input Range	±0.2%
Load Regulation	10%~100%	±0.2%
Temperature Drift	-40°C ~100°C	±0.02%/°C
Output Tolerance Band	All Conditions	±3%
Ripple & Noise (20MHz)	Peak-Peak (RMS)	3% (1%) V_o
Over Voltage Protection	V_{NOM} , 10% Load	115~130 % V_o
Output Current Limits	V_{NOM}	110%~140%
Voltage Trim	V_{NOM} , 10% Load	+10%/-20%
Input Ripple Rejection (<1KHz)	V_{NOM} , Full Load	-50dB
Step Load (2.5A/uS)	50%~75% Load	300mV/500uS
Start-Up Delay Time	V_{NOM} , Full Load	20mS/250mS

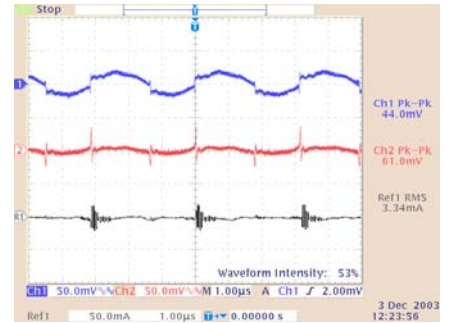
CONTROL FUNCTIONS		
Remote Control	Logic High	+3.0V to +6.5V
	Logic Low	0V to +1.0V
Input Current of Remote Control Pin		-0.5mA ~ +1.5mA



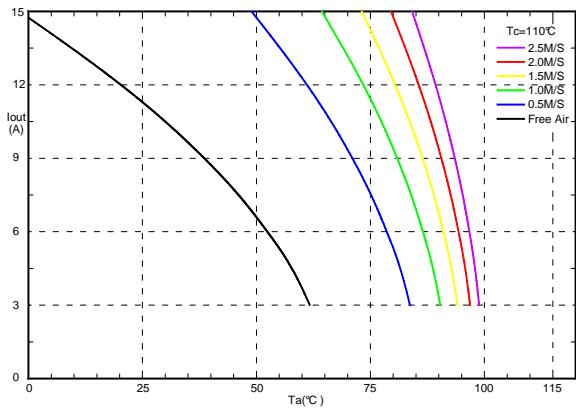
Simultaneously Start-Up for Both Outputs



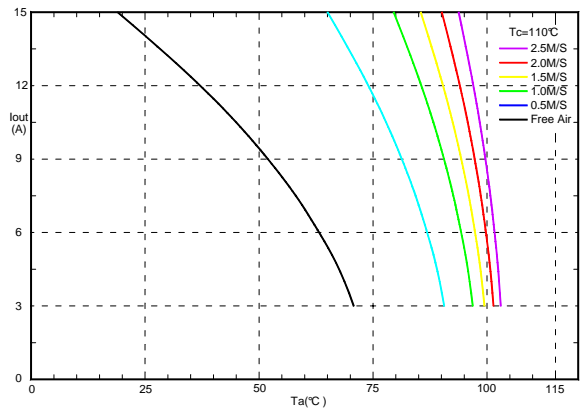
No Mutual-Interference Output Transients



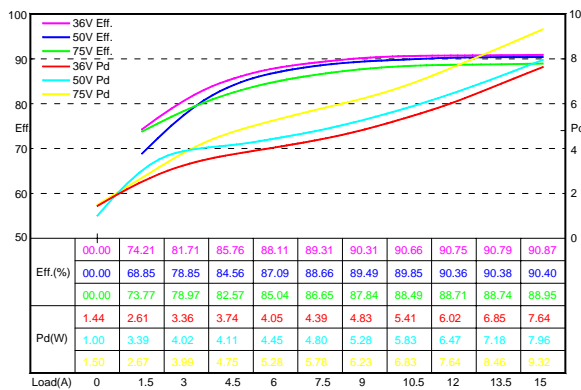
Synchronous Ripple/Noise for Input and Outputs



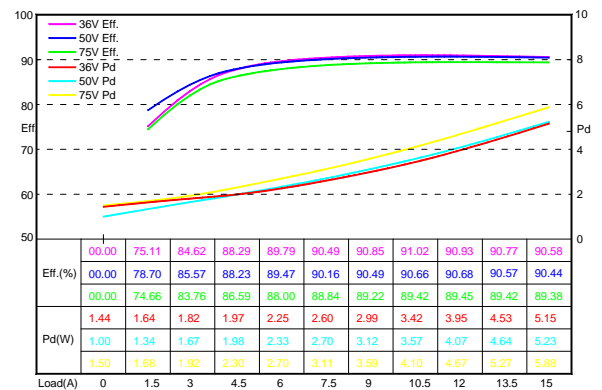
Balance Load Derating Plot of 5V/3.3V With 1.0mm Metal Plate
(The cooling effect of test PCB was canceled)



Balance Load Derating Plot of 5V/3.3V With 3mm Sink-Plate
(The cooling effect of test PCB was canceled)



Efficiency and Power Loss of 5V Output



Efficiency and Power Loss of 3.3V Output

NOTE

- 20MHz bandwidth current probe measured without an external filter.
- Output ripple and noise is measured by using the proposed test method of Glary Power Technology Co. Ltd.
- Input fusing is required and recommended to base on surge current and maximum input current.
- Case and base-plate should be connected to AC ground to maintain good EMC performance.
- Case and base-plate should be inaccessible to prevent the damage from highly operating temperature.
- Contact Glary Power Technology for non-standard inquiry.