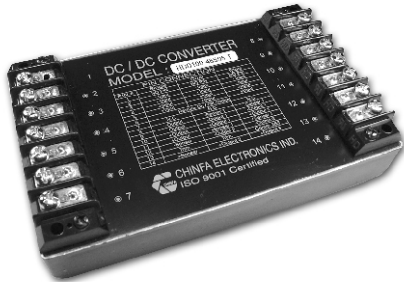


# HDD 100 SERIES



DC - DC CONVERTER  
100W SINGLE OUTPUT

## FEATURES

- 100W DC / DC CONVERTER
- 2:1 INPUT RANGE, Pi INPUT FILTER
- ISOLATION INPUT AND OUTPUT
- HIGH PERFORMANCE UP TO 86%
- SHORT CIRCUIT PROTECTION
- 2 YEARS WARRANTY

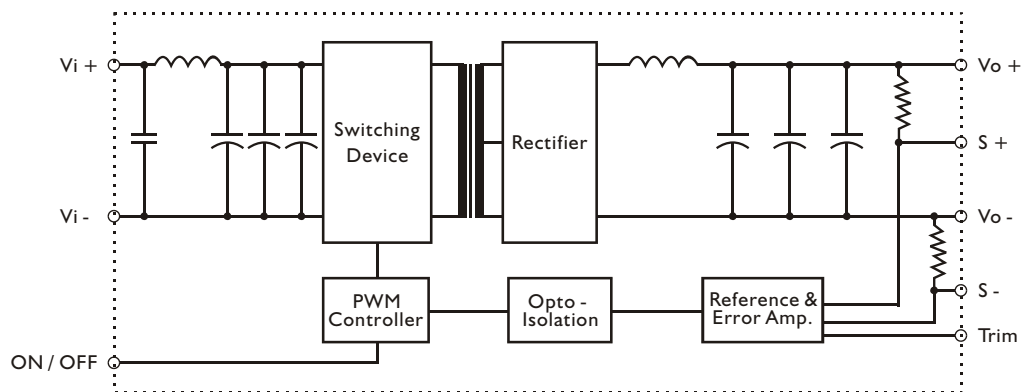
## MODEL LIST

MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (min.)
<b>Single Output Models</b>					
HDD100 - 24S05-X	18~36 VDC	100 WATTS	+ 5 VDC	20000 mA	80%
HDD100 - 24S12-X	18~36 VDC	100 WATTS	+ 12 VDC	8300 mA	84%
HDD100 - 24S15-X	18~36 VDC	100 WATTS	+ 15 VDC	6600 mA	84%
HDD100 - 24S24-X	18~36 VDC	100 WATTS	+ 24 VDC	4000 mA	85%
HDD100 - 48S05-X	36~72 VDC	100 WATTS	+ 5 VDC	20000 mA	83%
HDD100 - 48S12-X	36~72 VDC	100 WATTS	+ 12 VDC	8300 mA	85%
HDD100 - 48S15-X	36~72 VDC	100 WATTS	+ 15 VDC	6600 mA	85%
HDD100 - 48S24-X	36~72 VDC	100 WATTS	+ 24 VDC	4000 mA	86%

- SUFFIX "X=P" : PCB MOUNTING TYPE, HEAT SINK WILL BE ADDED ON MODULE.
- SUFFIX "X=T" : CHASSIS MOUNTING TYPE:(TERMINAL BLOCK), NO HEAT SINK.  
USE CHASSIS AS HEAT SINK OR FAN FORCE COOLING.  
INDICATE SUFFIX WHEN ORDER.

## CIRCUIT SCHEMATIC

• Block diagram for HDD 100 series with single output



### SPECIFICATION

All Specifications Typical At Nominal Line, Full Load, 25°C Unless Otherwise Noticed

#### GENERAL

Characteristics	Conditions	min.	typ.	max.	unit
Switching frequency	Vi nom, lo nom		80		KHz
Isolation voltage	Input / Output	1,500			VDC
Isolation resistance	Input / Output, @ 500VDC	1G			Ω
Ambient temperature	Operating at Vi nom, lo nom	-25		+ 71	°C
Case temperature	Operating at Vi nom, lo nom			+ 100	°C
Derating	Vi nom	See derating curve			% / °C
Storage temperature	Non operational	-25		+ 100	°C
M.T.B.F.	According to MIL-HDBK-217F, GF40		100,000		Hrs
Dimension	L88.9 x W139.7 x H42.4 for "P" type				mm
	L88.9 x W139.7 x H32.9 for "T" type				mm
Cooling	Free air convection				
Case material	Metal				

#### INPUT SPECIFICATIONS

Characteristics	Conditions	min.	typ.	max.	unit
Input voltage range	Ta min ... Ta max, lo nom	18	24	36	VDC
		36	48	72	VDC
No load input current	Vi = nom, lo=0	24V models		20	mA
		48V models		15	mA
Input voltage w/o damage	lo nom	24V models		40	VDC
		48V models		75	VDC
Input filter	Pi type				

#### OUTPUT SPECIFICATIONS

Characteristics	Conditions	min.	typ.	max.	unit
Output voltage accuracy	Vi nom, lo nom			± 1	%
Minimum load	Vi nom	0			%
Line regulation	lo nom, Vi min ...Vi max			± 1	%
Load regulation	Vi nom, lo min ...lo nom			± 2	%
Transient recovery time	25% load, step changed		500		μS
Temperature coefficient	Vi nom, lo nom			± 0.02	% / °C
Ripple & noise	Vi nom, lo nom, BW = 20MHz			Vout x ± 1%	mV
Voltage trim range	Vi nom		± 10		%
Efficiency	Vi nom, lo nom, Po / Pi	Up to 86%, See model list			

#### CONTROL AND PROTECTION

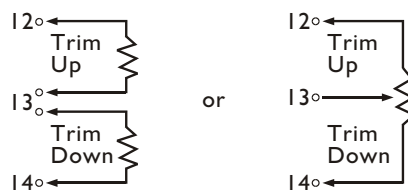
Remote ON / OFF	ON: opened or +5.5VDC applied, reference to input GND
	OFF: -1.8VDC applied, reference to input GND
Input reversed	Shunt diode built in, external fuse recommended
Output short circuit	Continuous

### MECHANISM & PIN CONFIGURATION

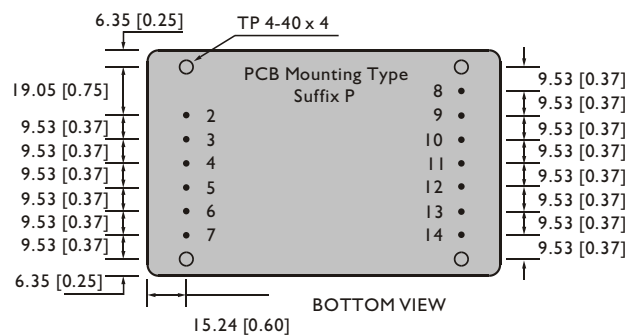
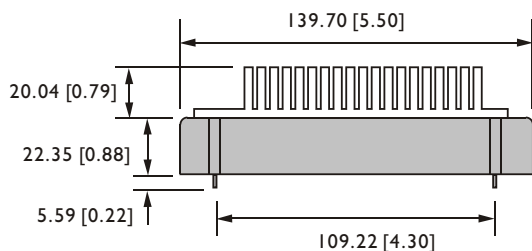
#### REMOTE ON / OFF CONTROL

TERMINAL 6 CONTROL  
 LOGIC COMPATIBILITY : .....OPEN COLLECTOR TTL  
 CONTROL VOLTAGE. ON +5.5V MIN. OR OPEN CIRCUIT.  
 OFF ..... +1.8V MAX.  
 CONVERTER SHUTDOWN IDLE CURRENT ..... 10 mA  
 CONTROL COMMON .....INPUT TERMINAL 2

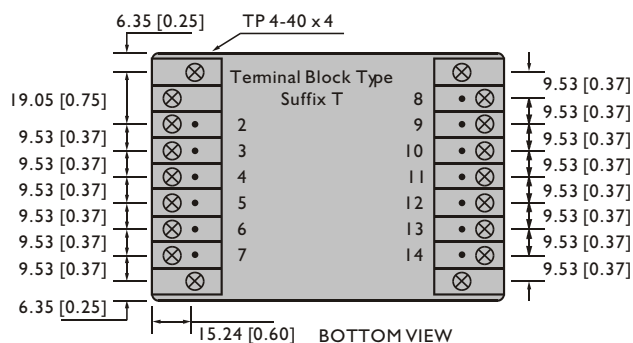
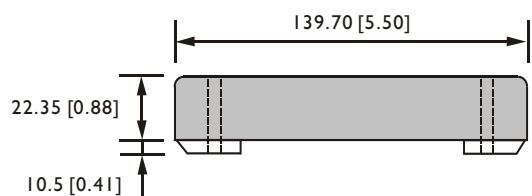
#### EXTERNAL OUTPUT TRIMMING



CASE : HH- P- 100



CASE : HH- T



### PHYSICAL CHARACTERISTICS

CASE SIZE	88.9 x 139.7 x 42.4 mm 3.5 x 5.5 x 1.67 inches for "P" type 88.9 x 139.7 x 32.9 mm 3.5 x 5.5 x 1.29 inches for "T" type
CASE MATERIAL	Metal
WEIGHT	710 g for "P" type / 570 g for "T" type

### PIN ASSIGNMENT

### DERATING

#### GENERAL

PIN NO.	SINGLE
1	NO PIN
2 & 3	Vi -
4 & 5	Vi +
6	REMOTE ON/OFF CONTROL
7	N. C.
8	Vo -
9	Vo -
10	Vo +
11	Vo +
12	SENSOR -
13	Trim
14	SENSOR +

