

HNH200W-110S Series

ISOLATED 200W REGULATED SINGLE OUTPUT DC/DC CONVERTERS

FEATURES

- High power density
- High efficiency up to 89%
- Industry-Standard Half-brick pinout
- Cost efficient design
- Adjustable output voltage ($\pm 5\%$)
- Input undervoltage lockout
- Output over voltage and over current protection
- Over temperature protection
- Remote On/Off negative logic and positive logic
- Remote Sense
- Monotonic startup
- RoHS compliance
- Basic Insulation
- Meets the conducted emission limits of EN55022 Class B
- UL60950 recognized in US and Canada
- All materials meet UL94 V-0 flammability rating



Order Code	Input Voltage(Vdc)	Output Voltage(Vdc)	Input Current(A)		Output Current(A)		%Eff. (Typ)	Cap. Load max.(uF)
			NO Load	FULL Load	MIN.	MAX.		
HNH200W-110S33	66-160	3.3	0.08	1.36	0	40	88	10000
HNH200W-110S05	66-160	5	0.08	2.04	0	40	89	10000
HNH200W-110S12	66-160	12	0.06	2.06	0	16.7	88	4700
HNH200W-110S15	66-160	15	0.06	2.06	0	13.3	88	2200
HNH200W-110S24	66-160	24	0.06	2.06	0	8.3	88	2200
HNH200W-110S28	66-160	28	0.06	2.04	0	7.14	89	2200
HNH200W-110S48	66-160	48	0.05	2.08	0	4.2	87	2200

NOTE:1.Nominal Input Voltage 110 VDC

NOTE:2.No 'W' Mean as the 2:1 Input Voltage

NOTE:3.The Output Terminal of 48Vout Models Required a Minimum Capacitor 47uF to Maintain Specified Regulation

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INPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage range	110V input types(3:1)	66	110	160	Vdc
Under voltage lock out	Turn on threshold 9V minimum input types		64		Vdc
	Turn off threshold 9V minimum input types		62		
Input Surge Voltage(100ms max)	160V maximum input types			180	Vdc
Input Filter					LC Type
Positive Logic Remote on/off					See Note

OUTPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Rated Power	3.3V output types			132	W
	All other output types			200	
Voltage Accuracy				±1.5	%
Line Regulation	Low line to high line			±0.5	%
Load Regulation	10% total load to 100% total load			±1	%
Temperature				±0.03	%
Start-up Time			50		mS
Output Current Limit				110%~140% Nominal Output	
Short Circuit Protection				Continuous	
Over Voltage Protection				115%~140% Nominal Output	
External Trim Adj.Range	Single output models only			±10	%
Ripple and Noise	20MHz BW	3.3V&5V		75	mVp-p
		All other output types		1%	Vo,nom
Transient Response	25% Step Load Change	Error band		±5%	Vo,nom
		Recovery Time		500	uS

GENERAL CHARACTERISTICS

Isolation Voltage	1500VDC min.
Isolation Resistance (500VDC)	10 ⁸ Ohms min.
Isolation Capacitance	1000pF typ.
Switching frequency	300KHz
Operation Ambient Temperature Range	-40°C ~100°C
Derating	See Derating Curve
Case Temperature	105°C max
Storage Temperature Range	-55°C to +125°C
Humidity	95%RH max. Non condensing
MTBF	MIL-STD-217F,GB,25°C,Full Load 600Khrs typ.
Dimensions	2.28x2.40.0.52inches (57.9x61.0x13.2mm)
Case Material	Aluminum Baseplate with Plastic Case
Weight	115g

MECHANICAL DIMENSIONS & PIN CONNECTION

All Dimensions In Inches(mm)

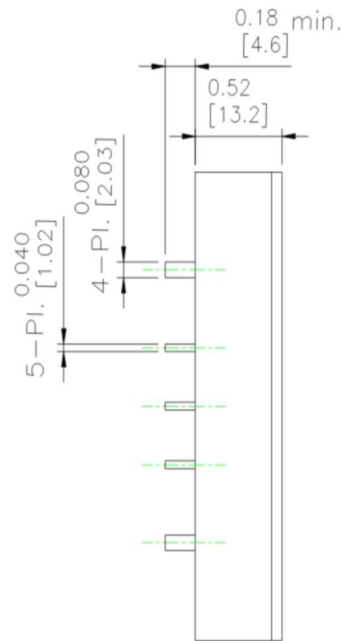
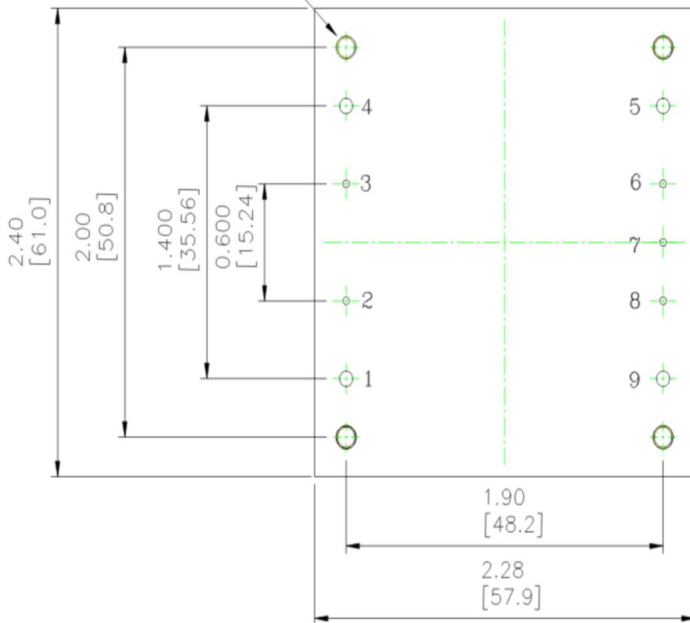
Tolerances Inches: X.XX= ±0.02 , X.XXX= ±0.010

Millimeters: X.X= ±0.5 , X.XX=±0.25

Mounting Inserts

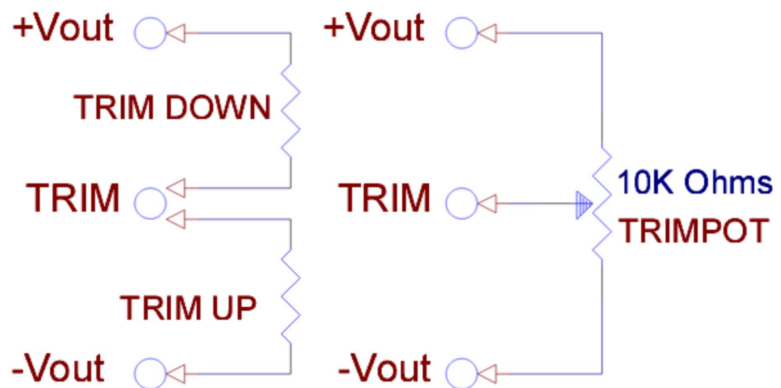
M3*0.5 Through 4pl.

BOTTOM VIEW

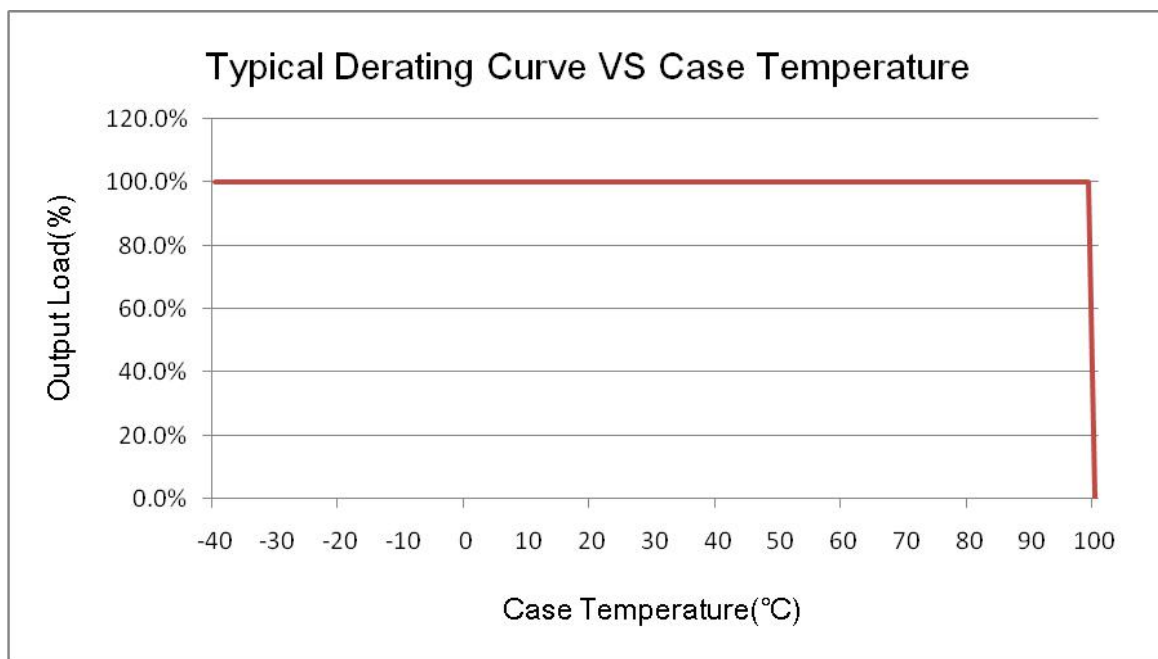


Pin	Function
1	+Vin
2	ON/OFF
3	CASE
4	-Vin
5	-Vout
6	-Sense
7	Trim
8	+Sense
9	+Vout

EXTERNAL OUTPUT TRIM



Derating Curve



NOTE

1. Measured From High Line to Low Line.
2. Measured From Full Load to min. Load.
3. Maximum case temperature under any operating condition should Not be exceeded 105°C.
4. The output ripple and noise is measured with 10uF tantalum and 1uF Ceramic capacitor across output.
5. All Specifications Typical at Nominal Line, Full Load, and 25°C Unless Otherwise Noted.
6. Positive Logic Remote on/off Control :
 - Logic Compatibility CMOS or Open Collector TTL
 - Module ON>+3.5V to $V_{i,max}$ VDC or Open Circuit
 - Module OFF<1.2VDC
7. External Output Trim