

FEATURES

- High power density
- High efficiency up to 92%
- 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 NO Load (A)	Output Current(A)		%Eff. (Typ)	Cap. Load max.(uF)
				MIN.	MAX.		
HNH400-24S33	18-36	3.3	0.20	0	80	87	10000
HNH400-24S05	18-36	5	0.20	0	80	88.5	10000
HNH400-24S12	18-36	12	0.20	0	33.3	91	4700
HNH400-24S15	18-36	15	0.25	0	26.6	91	2200
HNH400-24S24	18-36	24	0.08	0	16.7	88	2200
HNH400-24S28	18-36	28	0.08	0	14.3	88.5	2200
HNH400-24S48	18-36	48	0.10	0	8.3	88	2200
HNH400-48S33	36-75	3.3	0.10	0	80	88	10000
HNH400-48S05	36-75	5	0.10	0	80	90	10000
HNH400-48S12	36-75	12	0.10	0	33.3	92	4700
HNH400-48S15	36-75	15	0.13	0	26.6	92	2200
HNH400-48S24	36-75	24	0.06	0	16.7	89	2200
HNH400-48S28	36-75	28	0.06	0	14.3	89.5	2200
HNH400-48S48	36-75	48	0.08	0	8.3	89	2200
HNH400W-48S33	18-75	3.3	0.10	0	80	88	10000
HNH400W-48S05	18-75	5	0.10	0	80	90	10000
HNH400W-48S12	18-75	12	0.10	0	33.3	92	4700
HNH400W-48S15	18-75	15	0.13	0	26.6	92	2200
HNH400W-48S24	18-75	24	0.06	0	16.7	89	2200
HNH400W-48S28	18-75	28	0.06	0	14.3	89.5	2200
HNH400W-48S48	18-75	48	0.08	0	8.3	89	2200

NOTE:1.Nominal Input Voltage 24 or 48 VDC

ISOLATED400W REGULATED SINGLE OUTPUT DC/DC CONVERTERS

INPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage range	24V input types(4:1)	9	24	36	Vdc
	48V input types(4:1)	18	48	75	
Under voltage lock out	Turn on threshold 9V minimum input types		8.8		Vdc
	Turn off threshold 9V minimum input types		8		
	Turn on threshold 18V minimum input types		17		
	Turn off threshold 18V minimum input types		16		
Input Surge Voltage(100ms max)	36V maximum input types			50	Vdc
	75V maximum input types			100	
Input Filter					LC Type
Positive Logic Remote on/off					See Note

OUTPUT CHARACTERISTICS

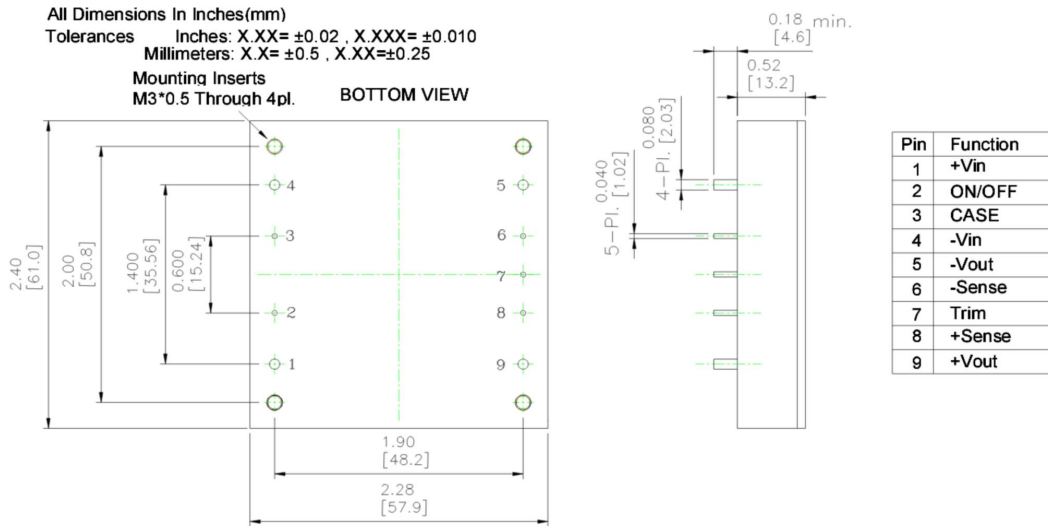
Parameter	Conditions	Min.	Typ.	Max.	Units
Rated Power	3.3V output types			264	W
	All other output types			400	
Voltage Accuracy				±1.5	%
Line Regulation	Low line to high line			±0.5	%
Load Regulation	10% total load to 100% total load			±1	%
Temperature				±0.03	%
Start-up Time			50		mS
Output Current 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

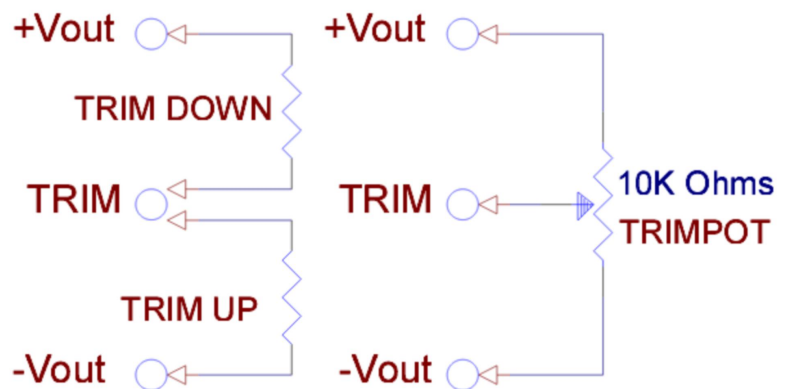
Isolation Voltage	1500VDC min.
Isolation Resistance (500VDC)	10 ⁸ Ohms min.
Isolation Capacitance	1000pF typ.
Switching frequency	300KHz
Operation Ambient Temperature Range	-40°C ~100°C
Derating	See Derating Curve
Case Temperature	105°C max
Storage Temperature Range	-55°C to +125°C
Humidity	95%RH max. Non condensing
MTBF	MIL-STD-217F,GB,25°C,Full Load 600Khrs typ.
Dimensions	2.28x2.40x0.52inches (57.9x61.0x13.2mm)

Case Material	Aluminum Baseplate with Plastic Case
Weight	115g

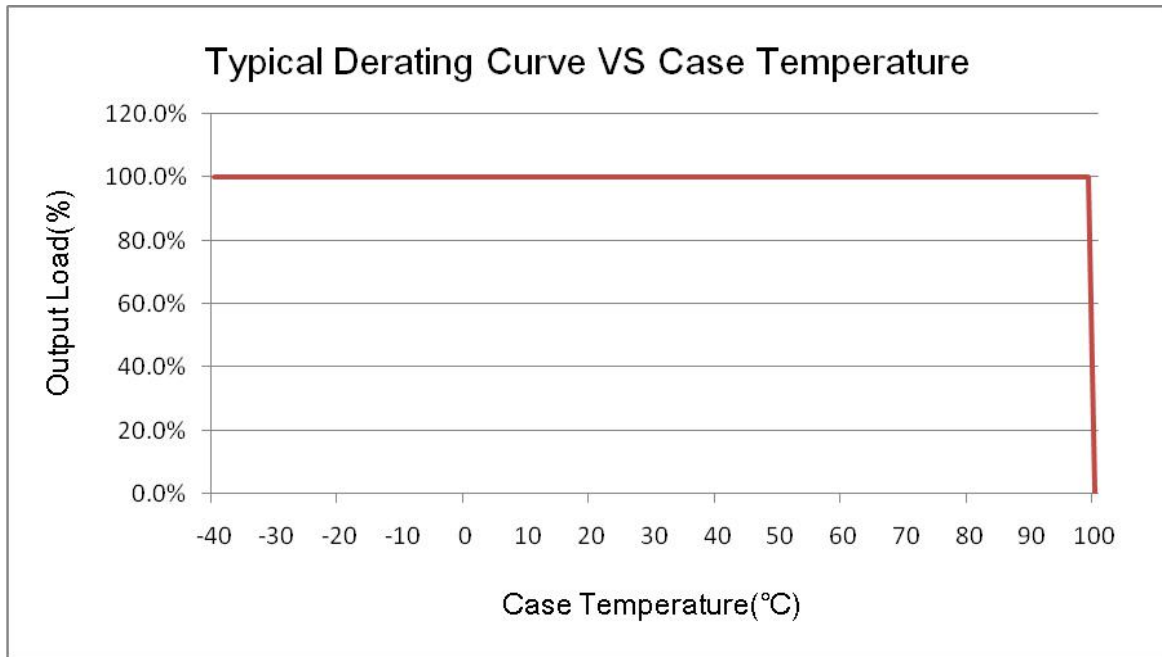
MECHANICAL DIMENSIONS & PIN CONNECTION



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 Vi,max VDC or Open Circuit

Module OFF<1.2VDC
- 7.External Output Trim