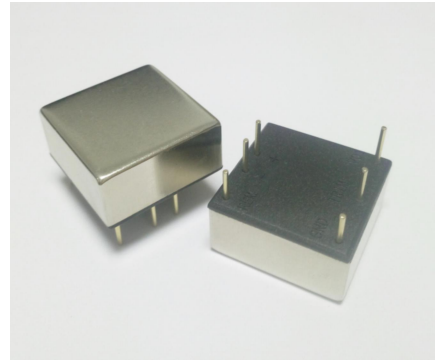


### FEATURES

- 1"x1"x0.4" Shielded Metal Case
- Efficiency to 95%
- 4:1 Input Range
- Regulated Outputs
- Fixed Switching Frequency
- Input Under Voltage Protection
- Over Current Protection
- Remote On/Off
- Continuous Short Circuit Protection
- Safety Meets UL60950-1, EN60950-1, and IEC60950-1



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.		
HNM50W-24S33-N	9-36	3.3	0.61	2.32	0	12	90	10000
HNM50W-24S05-N	9-36	5	0.40	2.27	0	10	92	10000
HNM50W-24S12-N	9-36	12	0.17	2.24	0	4.16	93	4700
HNM50W-24S15-N	9-36	15	0.14	2.20	0	3.33	95	4700

### INPUT CHARACTERISTICS

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

### OUTPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Rated Power	3.3V output types			40	W
	All other output types			50	
Voltage Accuracy				±1	%

## HNM50W Series

### Non-ISOLATED 50W REGULATED SINGLE OUTPUT DC/DC CONVERTERS

Line Regulation	Low line to high line			±0.5	%
Load Regulation	10% total load to 100% total load			±0.5	%
Temperature Coefficient				±0.03	%
Start-up Time			20		mS
Output Current Limit				110%~160% Nominal Output	
Short Circuit Protection				Continuous	
External Trim Adj.Range	Single output models only			±10	%
Ripple and Noise	20MHz BW	3.3V&5V		50	mVp-p
		12V&15V		100	
Transient Response	25% Step Load Change	Error band		±10%	Vo,nom
		Recovery Time		1000	uS

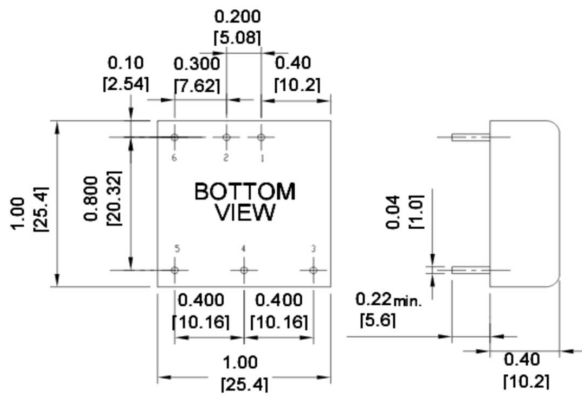
### GENERAL CHARACTERISTICS

Switching frequency	300KHz
Operation Ambient Temperature Range	-40°C ~85°C
Derating	Above55°C,Linearly to Zero Power at +105°C
Case Temperature	105°C max
Cooling	Natural Convection
Storage Temperature Range	-55°C to +125°C
Humidity	95%RH max. Non condensing
MTBF	MIL-STD-217F,GB,25°C,Full Load 1000Khrs typ
Dimensions	25.4x25.4x10.2mm (1.00x1.00x0.40 inches)
Case Material	Five-Sided shield metal case
Weight	30g

## Non-ISOLATED 50W REGULATED SINGLE OUTPUT DC/DC CONVERTERS

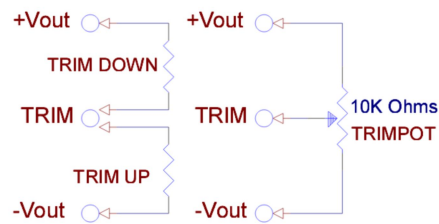
### MECHANICAL DIMENSIONS & PIN CONNECTION

NOTE: Pin Size is 0.04±0.004 Inch (1.0±0.1 mm)DIA  
 All Dimensions In Inches (mm)  
 Tolerances Inches: X.XX= ±0.02 , X.XXX= ±0.010  
 Millimeters: X.X= ±0.5 , X.XX=±0.25

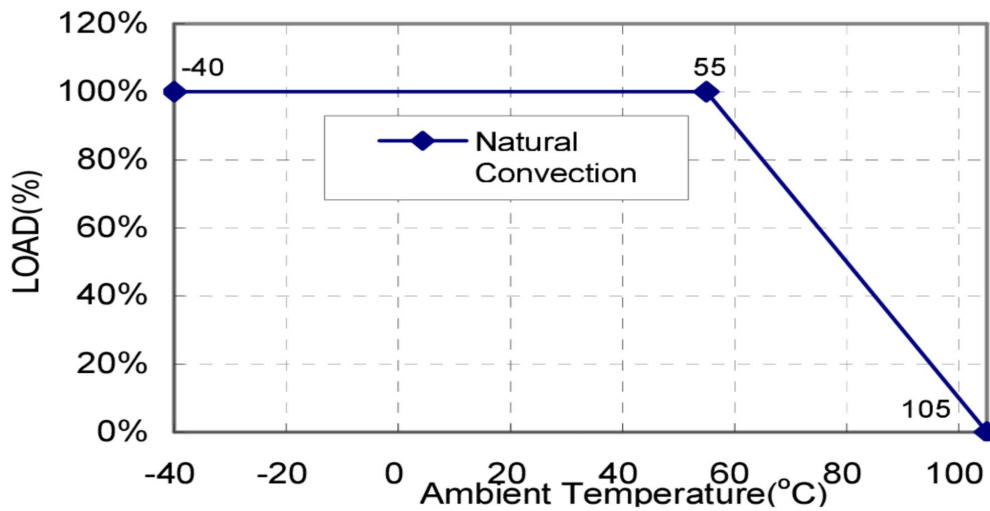


PIN CONNECTION		
Pin	DIP Function	
	Single	Dual
1	+Input	+Input
2	-Input	-Input
3	+V Output	+V Output
4	Trim	Common
5	-V Output	-V Output
6	Remote	Remote

### EXTERNAL OUTPUT TRIM



Derating Curve



NOTE

1. Maximum case temperature under any operating condition should Not be exceeded 105°C.
2. The output ripple and noise is measured with 10uF tantalum and 1uF Ceramic capacitor across output.
3. All Specifications Typical at Nominal Line, Full Load, and 25°C Unless Otherwise Noted.
4. 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

5.External Output Trim