

# 4A

## 5-6 WATT WIDE INPUT DC-DC CONVERTERS

### Features:

- 5-6 W Isolated Output
- 24-Pin DIP Package
- Efficiency to 82%
- 2:1 Input Range
- Regulated Outputs
- Pi Input Filter
- Continuous Short Circuit Protection

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF.	CASE
				NO LOAD	FULL LOAD		
4A01		5 VDC	1000 mA	7.5 mA	545 mA	76	
4A02		12 VDC	470 mA	7.5 mA	585 mA	80	
4A03		15 VDC	400 mA	7.5 mA	625 mA	80	
4A04	9-18 VDC	±12 VDC	±230 mA	12 mA	575 mA	80	A
4A05		±15 VDC	±190 mA	12 mA	590 mA	80	
4A06		±5 VDC	±500 mA	12 mA	545 mA	76	
4A07		3.3 VDC	1000 mA	7.5 mA	405 mA	68	
4A11		5 VDC	1000 mA	5 mA	265 mA	78	
4A12		12 VDC	470 mA	5 mA	285 mA	82	
4A13		15 VDC	400 mA	5 mA	305 mA	82	
4A14	18-36 VDC	±12 VDC	±230 mA	7.5 mA	285 mA	81	A
4A15		±15 VDC	±190 mA	7.5 mA	295 mA	81	
4A16		±5 VDC	±500 mA	7.5 mA	265 mA	78	
4A17		3.3 VDC	1000 mA	5 mA	195 mA	70	
4A21		5 VDC	1000 mA	2 mA	133 mA	78	
4A22		12 VDC	470 mA	2 mA	145 mA	81	
4A23		15 VDC	400 mA	2 mA	154 mA	81	
4A24	36-72 VDC	±12 VDC	±230 mA	3 mA	142 mA	81	A
4A25		±15 VDC	±190 mA	3 mA	147 mA	81	
4A26		±5 VDC	±500 mA	3 mA	265 mA	78	
4A27		3.3 VDC	1000 mA	2 mA	98 mA	70	

NOTE: 1. Nominal Input Voltage 12.24 or 48 VDC



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### INPUT SPECIFICATIONS:

Input Voltage Range.....	12V.....	9-18V
	24V.....	18-36V
	48V.....	36-72V
Input Filter.....		Pi Type

### OUTPUT SPECIFICATIONS:

Voltage Accuracy.....		±2.0% max.
Voltage Balance (Dual).....		±1.0% max.
Temperature Coefficient.....		±0.05%/°C
Ripple and Noise, 20MHz BW.....	3.3V/5V.....	100mV p-p max.
	12V/15V.....	1% p-p max.
Short Circuit Protection.....		Continuous
Line Regulation, Single/Dual <sup>1</sup> .....		± 0.5%
Load Regulation, Single <sup>2</sup> .....		± 0.5%
	Dual <sup>3</sup> .....	± 1.0%

### GENERAL SPECIFICATIONS:

Efficiency.....		See Table
Isolation Resistance.....		10 <sup>9</sup> ohms
Switching Frequency.....		100KHz, min
Operating Temperature Range.....		-25°C to + 71°C
Case Temperature (Plastic case).....		95°C max.
	(Copper case).....	100°C max.
Cooling.....		Free-Air Convection
Storage Temperature Range.....		-40°C to + 100°C
Dimensions.....		1.25 x 0.8 x 0.4 inches (31.8 x 20.3 x 10.2mm)

### ISOLATION VOLTAGE:

500 VDC min.....		Standard Models
3K VDC min.....		Suffix "H" Models

### CASE MATERIAL:

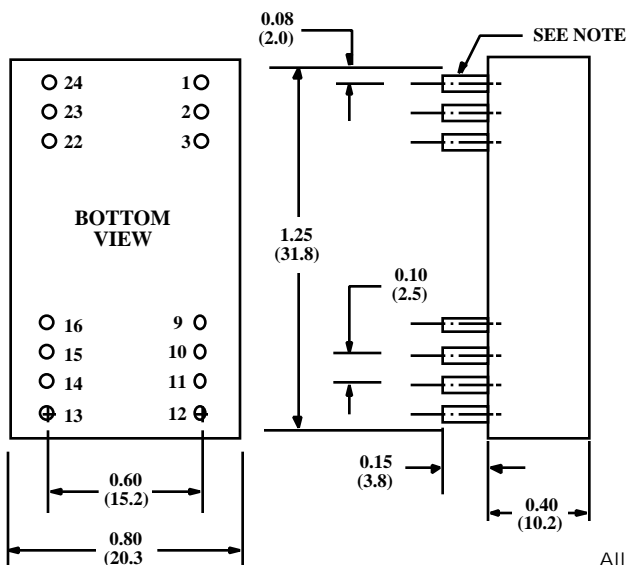
Standard Models <sup>4</sup> .....		Non-Conductive Black Plastic
Suffix "M" Models <sup>5</sup> .....		Black Coated Copper with Non-Conductive Base

### NOTE:

1. Measured From High Line to Low Line
2. Measured From Full Load to 10% Load
3. Measured From Full Load to 1/4 Load
4. Non-Conductive Black Plastic Only
5. Suffix "HM" 1.5K VDC Instead of 3K VDC Isolation

## CASE A

NOTE: Pin Size is 0.02" Inch (0.5m/m) DIA or .020 x .014 Inch  
All Dimensions in Inches(mm)



PIN CONNECTION					
Pin	500 VDC		Pin	(1.5K & 3K) VDC	
	Single Output	Dual Output		Single Output	Dual Output

1	+V Input	+V Input	1	NP	NP
2	NC	-V Output	2	-V Input	-V Input
3	NC	Common	3	-V Input	-V Input
9	NP	NP	9	NC	Common
10	-V Output	Common	10	NC	NC
11	+V Output	+V Output	11	NC	-V Output
12	-V Input	-V Input	12	NP	NP
13	-V Input	-V Input	13	NP	NP
14	+V Output	+V Output	14	+V Output	+V Output
15	-V Output	Common	15	NC	NC
16	NP	NP	16	-V Output	Common
22	NC	Common	22	+V Input	+V Input
23	NC	-V Output	23	+V Input	+V Input
24	+V Input	+V Input	24	NP	NP

\*NP-NO PIN  
\*NC-NO CONNECTION WITH PIN  
\*TP-TEST POINT  
\*GO-GROUND

All Specifications Typical At Nominal Line, Full Load and 25 °C  
Unless Otherwise Noted.