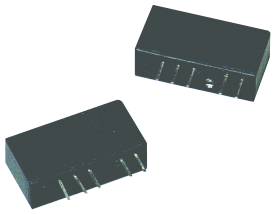
ASTRODYNE

Isolated and Unregulated 1 WATT Modular DC/DC Converters

DU1P0 series



Unit measures 0.24"W x 0.77"L x 0.4"H

- Low Cost
- 1 Watt in SIP Package
- Unregulated Outputs
- Input/Output Isolation up to 3KVDC
- UL 94-V0 Non-Conductive Case
- Internal Input & Output Filters

Model Number	Output Voltage	Output Amps	Input Range	Efficiency	Max I.P. Current	Max Load Capacitance
SINGLE OUTPUT						
DU1P0-05S05(N)	5 VDC	200	4.5-5.5 VDC	77%	274mA	6.2uF
DU1P0-12S05(N)		200	10.8-13.2 VDC	77%	114mA	6.2uF
DU1P0-15S05(N)		200	13.5-16.5 VDC	73%	97mA	6.2uF
DU1P0-24S05(N)		200	21.6-26.4 VDC	72%	61mA	6.2uF
DU1P0-05S12(N)	12 VDC	83	4.5-5.5 VDC	82%	255mA	6.2uF
DU1P0-12S12(N)		83	10.8-13.2 VDC	82%	106mA	6.2uF
DU1P0-15S12(N)		83	13.5-16.5 VDC	79%	89mA	6.2uF
DU1P0-24S12(N)		83	21.6-26.4 VDC	78%	56mA	6.2uF
DU1P0-05S15(N)	15 VDC	67	4.5-5.5 VDC	81%	261mA	6.2uF
DU1P0-12S15(N)		67	10.8-13.2 VDC	79%	112mA	6.2uF
DU1P0-15S15(N)		67	13.5-16.5 VDC	80%	88mA	6.2uF
DU1P0-24S15(N)		67	21.6-26.4 VDC	78%	57mA	6.2uF
DUAL OUTPUT						
DU1P0-05D05(N)	+/-5 VDC	+/-100	4.5-5.5 VDC	78%	270mA	3.0uF
DU1P0-12D05(N)		+/-100	10.8-13.2 VDC	77%	114mA	3.0uF
DU1P0-15D05(N)		+/-100	13.5-16.5 VDC	75%	94mA	3.0uF
DU1P0-24D05(N)		+/-100	21.6-26.4 VDC	75%	59mA	3.0uF
DU1P0-05D12(N)	+/-12 VDC	+/-42	4.5-5.5 VDC	82%	258mA	3.0uF
DU1P0-12D12(N)		+/-42	10.8-13.2 VDC	81%	109mA	3.0uF
DU1P0-15D12(N)		+/-42	13.5-16.5 VDC	80%	88mA	3.0uF
DU1P0-24D12(N)		+/-42	21.6-26.4 VDC	78%	57mA	3.0uF
DU1P0-05D15(N)	+/-15 VDC	+/-33	4.5-5.5 VDC	81%	257mA	3.0uF
DU1P0-12D15(N)		+/-33	10.8-13.2 VDC	82%	106mA	3.0uF
DU1P0-15D15(N)		+/-33	13.5-16.5 VDC	80%	87mA	3.0uF
DU1P0-24D15(N)		+/-33	21.6-26.4 VDC	79%	55mA	3.0uF

Note - (N) Denotes that there is an optional 3000VDC Input to Output Isolation version available for the DU1P0 family of products. To order a DU1P0 product with the optional 3000VDC Isolation, simply add an "N" to the end of the standard Part Number. For example DU1P0-05S05N.

300 Myles Standish Blvd., Taunton, MA 02780
Ph: 1-800-823-8082 Fax: 508-823-8181

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Isolated and Unregulated 1 WATT Modular DC/DC Converters **DU1P0 series**

INPUT SPECIFICATIONS

Input Voltage Ranges:	5 VDC Nominal	4.5-5.5 VDC
	12 VDC Nominal	10.8-13.2 VDC
	15 VDC Nominal	13.5-16.5 VDC
	24 VDC Nominal	21.6-26.4 VDC
Input Current	(Nom Vin, Full Load)	
	See Selection Chart	
Input Filter	Capacitor	

OUTPUT SPECIFICATIONS

Voltage and Current	See Selection Chart
Load Regulation (Note 1)	+/- 10% on 5V output
20% - FL	+/- 8% on all others
Line Regulation (HL-LL)	+/- 1.3%/1% of Vin
Temperature Coefficient	+/-0.1%/°C max.
Ripple/Noise(Single/Dual)	100mV Pk-Pk, typ
Voltage Accuracy	+/-5%, max
Short Circuit Protection	1 Second max
Minimum Load (Note 1)	10% of FL
Max. Load Capacitance	Min Vin & Resitive Load
	See Selection Chart

GENERAL SPECIFICATIONS

Input-Out Isolation	1000VDC; (3000VDC suffix-N)
Efficiency (Nom I/P & FL)	See Selection Chart
Switching Frequency	60Khz
Isolation Resistance	10000 M Ohms
Isolation Capacitance	30pF, max.
Safety	UL, TUV, CB, CE

ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature	-25 to +85°C(See Derate Curve)
Storage Temperature	-55 to +105°C *
Relative Humidity	5% to 95% RH *
MTBF (Note 2)	1.471 MHrs
Thermal Shock	MIL-STD-810D
Vibration	10-55Hz, 10G, 30 Minutes
	along X, Y, and Z

PHYSICAL SPECIFICATIONS

Dimensions	0.77 x 0.24 x 0.40"
Case Material	UL 94-V0 Non-Conductive
	Black Plastic
Construction	Fully Encapsulated (UL94-V0)
Weight	2g (0.071oz)

NOTES

1) A Minimum 10% Load is required to maintain regulation
2) BELLCORE TR-NWT-000332. Case 1: 50% Stress, Temperature at 40°C. (Ground fixed and controlled environment)

All specifications are typical at nominal input, full load, and 25DegC unless otherwise noted

* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Proper operation under conditions other than the standard operating conditions is neither warranteed nor implied.

Astrodyne products are not authorized or warranteed for use as critical components in life support systems, equipment used in hazardous environments, nuclear controls systems, or other mission-critical applications.

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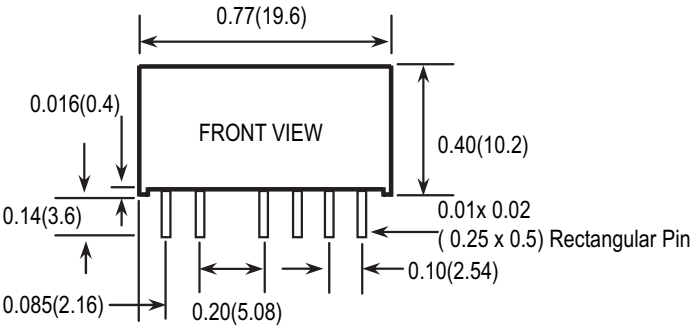
MECHANICAL DIMENSIONS



All dimensions in inches(mm)
Tolerance : x.xx±0.02(x.x±0.5)
x.xxx±0.01(x.xx±0.25)
Pin pitch tolerance ±0.014(0.35)

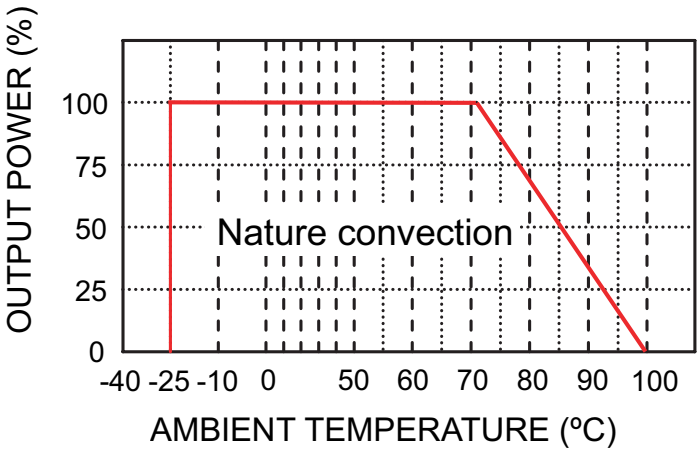
STANDARD MODELS

Pin #	Single Outputs	Dual Outputs
1	+ Input	+ Input
2	- Input	- Input
4	- Output	- Output
5	NC	Common
6	+ Output	+ Output
7	No Pin	No Pin

"N" MODELS

Pin #	Single Outputs	Dual Outputs
1	+ Input	+ Input
2	- Input	- Input
4	No Pin	No Pin
5	- Output	- Output
6	NC	Common
7	+ Output	+ Output

OUTPUT DERATING CURVE



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