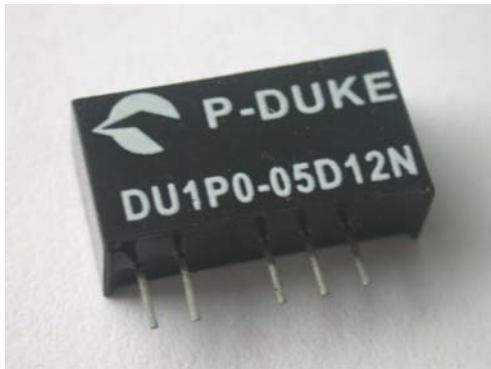


DUP SERIES

DC / DC Single & Dual Output: 1 Watt



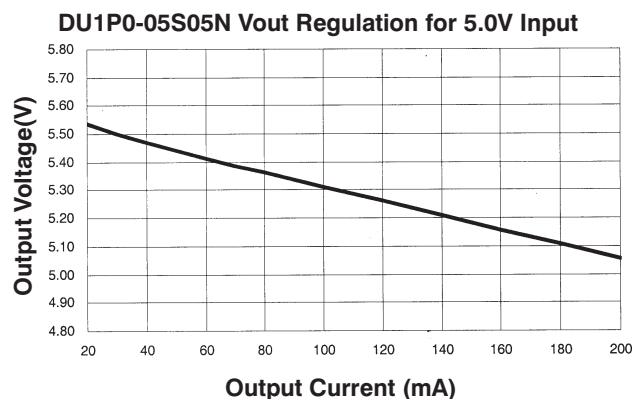
Features

- 1.0 watt output power, PCB mounting
- Input options: 5V, 12V, 15V & 24vdc
- Industry standard footprint
- 1000V isolation standard models
- 3000V isolation option (-N models)
- Single-in-line (SIP) package
- High efficiency
- Safety Approvals EN60950, UL60950
- High MTBF >1m hrs
- High operating temperature
- Non-Conductive case

Specifications:

Input Voltage	5VDC (4.5 V~ 5.5) 12VDC (10.8 ~ 13.2) 15VDC (13.5 ~ 16.5) 24VDC (21.6 ~ 26.4)
Input Filter	Capacitor
Efficiency	Model dependent 73 ~ 83%
Output Power	1 watt
Voltage Accuracy	±5% (full load and nominal input)
Minimum Load	10% to meet regulation
Line Regulation	1.3% per 1% Vin (10 ~ 100% load)
Load Regulation	5V output ±10% (20% to 100% load) Other outputs ±8% (20% to 100% load)
Ripple & Noise	See table (20MHz bandwidth)
Temperature Coefficient	±0.1% per °C max
Short circuit Protection	Short Term
Isolation Voltage	Input – Output: 1000VDC (Standard models) Input – Output: 3000VDC (-N models)

Isolation Capacitance	30pF max.
Switching Frequency	60KHz
Safety	IEC60950, EN60950, UL60950
Case Material	Non-conductive black plastic
Potting Material	Epoxy UL94-V0
Operating Temperature	-25°C to + 71°C at rated load -25°C to + 85°C (with derating)
Thermal Shock	MIL-STD-810F
Vibration	10-55Hz, 10G, 30 min along X, Y and Z
Humidity	5% to 95% RH
MTBF	1.471 x 10 ⁷ hrs
Dimensions	19.6 x 6.0 x 10.2mm
Weight	2.0g



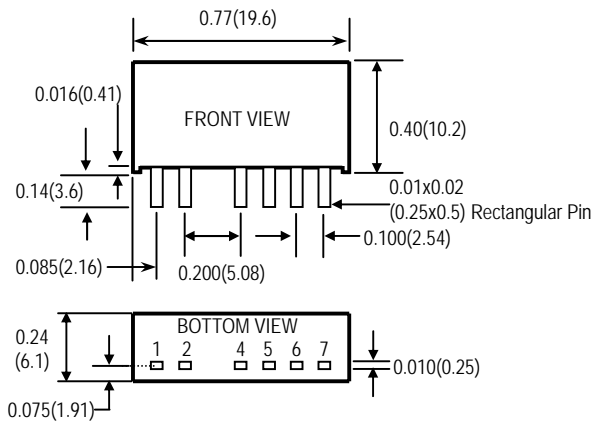
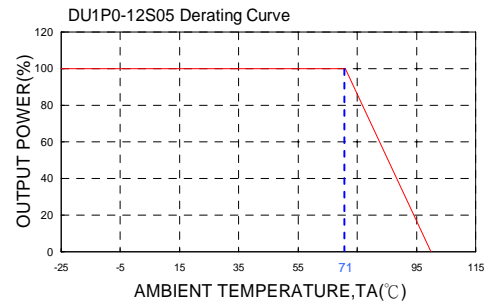
DUP SERIES

DC / DC Single & Dual Output: 1 Watt

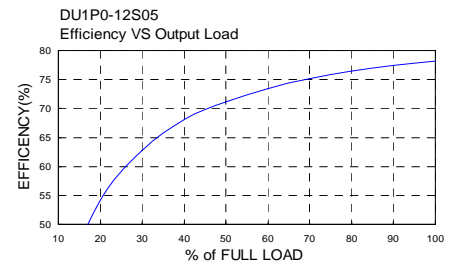
Model	Input V	Output V	Output Current		Output Ripple & Noise	Input Current		Eff (%)	Capacitor Load max
			Min. load	Full load		No load ⁽³⁾	Full load ⁽¹⁾		
DU1P0-05S05	4.5 – 5.5 V	5 V	20mA	200mA	100mVp-p	42mA	274mA	77	330uF
DU1P0-05S12	4.5 – 5.5 V	12 V	8.3mA	83mA	100mVp-p	32mA	255mA	82	330uF
DU1P0-05S15	4.5 – 5.5 V	15 V	6.7mA	67mA	100mVp-p	35mA	261mA	81	330uF
DU1P0-05D05	4.5 – 5.5 V	± 5 V	± 10mA	± 100mA	100mVp-p	40mA	270mA	78	±150uF
DU1P0-05D12	4.5 – 5.5 V	± 12 V	± 4.2mA	± 42mA	100mVp-p	35mA	258mA	82	±150uF
DU1P0-05D15	4.5 – 5.5 V	± 15 V	± 3.3mA	± 33mA	100mVp-p	40mA	257mA	81	±150uF
DU1P0-12S05	10.8 – 13.2 V	5 V	20mA	200mA	100mVp-p	17mA	114mA	77	330uF
DU1P0-12S12	10.8 – 13.2 V	12 V	8.3mA	83mA	100mVp-p	17mA	106mA	82	330uF
DU1P0-12S15	10.8 – 13.2 V	15 V	6.7mA	67mA	100mVp-p	18mA	112mA	79	330uF
DU1P0-12D05	10.8 – 13.2 V	± 5 V	± 10mA	± 100mA	100mVp-p	18mA	114mA	77	±150uF
DU1P0-12D12	10.8 – 13.2 V	± 12 V	± 4.2mA	± 42mA	100mVp-p	18mA	109mA	81	±150uF
DU1P0-12D15	10.8 – 13.2 V	± 15 V	± 3.3mA	± 33mA	100mVp-p	18mA	106mA	82	±150uF
DU1P0-15S05	13.5 – 16.5 V	5 V	20mA	200mA	100mVp-p	20mA	97mA	73	330uF
DU1P0-15S12	13.5 – 16.5 V	12 V	8.3mA	83mA	100mVp-p	18mA	89mA	79	330uF
DU1P0-15S15	13.5 – 16.5 V	15 V	6.7mA	67mA	100mVp-p	18mA	88mA	80	330uF
DU1P0-15D05	13.5 – 16.5 V	± 5 V	± 10mA	± 100mA	100mVp-p	18mA	94mA	75	±150uF
DU1P0-15D12	13.5 – 16.5 V	± 12 V	± 4.2mA	± 42mA	100mVp-p	16mA	88mA	80	±150uF
DU1P0-15D15	13.5 – 16.5 V	± 15 V	± 3.3mA	± 33mA	100mVp-p	16mA	87mA	80	±150uF
DU1P0-24S05	21.6 – 26.4 V	5 V	20mA	200mA	100mVp-p	12mA	61mA	72	330uF
DU1P0-24S12	21.6 – 26.4 V	12 V	8.3mA	83mA	100mVp-p	12mA	56mA	78	330uF
DU1P0-24S15	21.6 – 26.4 V	15 V	6.7mA	67mA	100mVp-p	10mA	57mA	78	330uF
DU1P0-24D05	21.6 – 26.4 V	± 5 V	± 10mA	± 100mA	100mVp-p	12mA	59mA	75	±150uF
DU1P0-24D12	21.6 – 26.4 V	± 12 V	± 4.2mA	± 42mA	100mVp-p	10mA	57mA	78	±150uF
DU1P0-24D15	21.6 – 26.4 V	± 15 V	± 3.3mA	± 33mA	100mVp-p	10mA	55mA	79	±150uF

Notes

1. MTBF calculated to BELLCORE TR-NWT-000332. Case 1: 50% Stress, Temperature at 40°C. (Ground fixed and controlled environment).
2. Typical values at nominal input voltage and full load.
3. Tests by minimum Vin and constant resistive load.
4. The output requires a minimum loading on the output to maintain specified regulation. Operation under no-load condition will not damage these devices, however they may not meet all listed specification.



1. All dimensions in Inches (mm)
Tolerance: X.XX±0.02 (X.XX±0.5)
X.XXX±0.01 (X.XX±0.25)
2. Pin pitch tolerance ±0.01(0.25)
3. Pin dimension tolerance ±0.004 (0.1)



Standard 1kV		
PIN	Single	Dual
1	+ Input	+ Input
2	- Input	- Input
4	- Output	- Output
5	NC	Common
6	+ Output	+ Output

"N" Models 3kV		
PIN	Single	Dual
1	+ Input	+ Input
2	- Input	- Input
5	- Output	- Output
6	NC	Common
7	+ Output	+ Output