

### APPLICATIONS

Wireless Network  
Telecom/Datacom  
Industry Control System  
Measurement Equipment  
Semiconductor Equipment

### FEATURES

- 1 WATT UNREGULATED OUTPUT POWER
- OUTPUT CURRENT UP TO 0.2A
- SINGLE-IN-LINE PACKAGE (SIP)
- HIGH EFFICIENCY FOR LOW POWER APPLICATION
- INPUT RANGE FROM 4.5VDC TO 5.5VDC, 10.8VDC TO 13.2 VDC, 13.5VDC TO 16.5VDC AND 21.6VDC TO 26.4VDC
- UL 94-V0 NON-CONDUCTED CASE
- INTERNAL INPUT & OUTPUT FILTER
- INPUT / OUTPUT ISOLATION UP TO 3KVDC
- SUFFIX-N ISOLATION LEVEL REINFORCE
- CE MARK MEETS 2006/95/EC, 93/68/EEC AND 2004/108/EC
- UL60950-1, EN60950-1 AND IEC60950-1 LICENSED
- ISO9001 CERTIFIED MANUFACTURING FACILITIES
- COMPLIANT TO RoHS EU DIRECTIVE 2002/95/EC

### OPTIONS

3KV ISOLATION

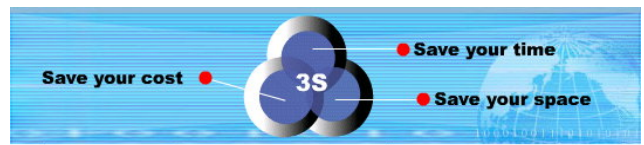
### DESCRIPTION

The DU1P0 series are the standard building blocks for on-board distributed power systems. They are ideally suited to provide single and dual supplies on primarily digital boards with added benefit of galvanic isolation to reduce switching noise.

**TECHNICAL SPECIFICATION** All specifications are typical at nominal input, full load and 25°C otherwise noted

OUTPUT SPECIFICATIONS			
Output power			1 Watt, max.
Voltage accuracy	Full load and nominal Vin		± 5%
Minimum load (Note 6)			10% of FL
Line regulation	LL to HL at Full Load		1.3% / 1% of Vin
Load regulation	20% to 100% FL	5V output others	± 10% ± 8%
Ripple and noise	20MHz bandwidth		See table
Temperature coefficient			±0.1% / °C, max.
Short circuit protection (Note 7)			1 Sec.
GENERAL SPECIFICATIONS			
Efficiency			See table
Isolation voltage	Input to Output	Standard Suffix-N	1000VDC, min. 3000VDC, min.
Isolation resistance			10 <sup>9</sup> ohms, min.
Isolation capacitance			30pF, max.
Switching frequency			60KHz, min.
Approvals and standard			IEC60950-1, UL60950-1, EN60950-1
Case material			Non-conductive black plastic
Base material			None
Potting material			Epoxy (UL94-V0)
Dimensions			0.77 X 0.24 X 0.40 Inch (19.6 X 6.1 X 10.2 mm)
Weight			2.0g (0.071oz)
MTBF (Note 1)	BELLCORE TR-NWT-000332		1.471 x 10 <sup>7</sup> hrs
	MIL-HDBK-217F		1.238 x 10 <sup>7</sup> hrs

INPUT SPECIFICATIONS		
Input voltage range	5V nominal input	4.5 – 5.5VDC
	12V nominal input	10.8 – 13.2VDC
	15V nominal input	13.5 – 16.5VDC
	24V nominal input	21.6 – 26.4VDC
Input filter		Capacitor
ENVIRONMENTAL SPECIFICATIONS		
Operating ambient temperature		-25°C ~ +85°C (with derating)
Storage temperature range		-55°C ~ +105°C
Thermal shock		MIL-STD-810F
Vibration		MIL-STD-810F
Relative humidity		5% to 95% RH

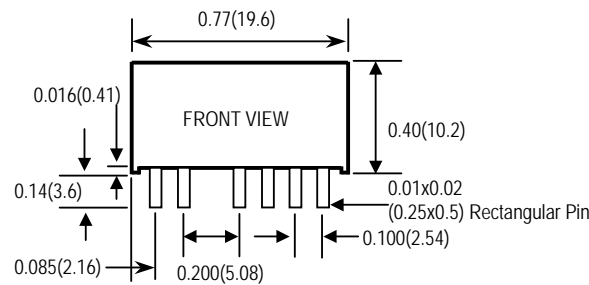
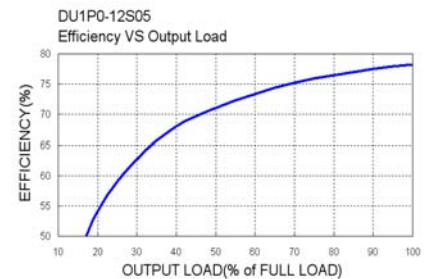
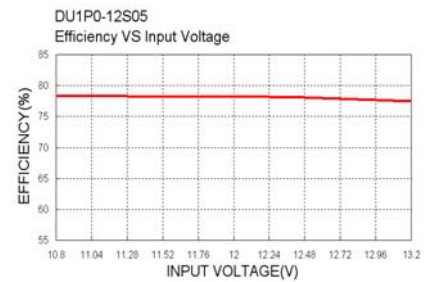
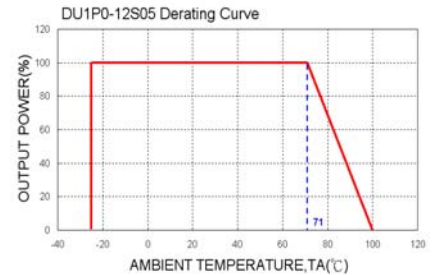




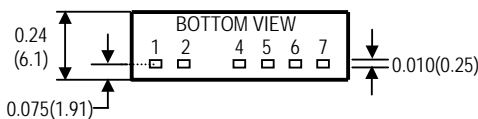
Model Number	Input Range	Output Voltage	Output Current		Output (4) Ripple & Noise	Input Current		Eff (4) (%)	Capacitor Load max(5)
			Min. load	Full load		No load(3)	Full load(2)		
DU1P0-05S05	4.5 – 5.5 VDC	5 VDC	20mA	200mA	100mVp-p	42mA	274mA	77	330µF
DU1P0-05S12	4.5 – 5.5 VDC	12 VDC	8.3mA	83mA	100mVp-p	32mA	255mA	82	330µF
DU1P0-05S15	4.5 – 5.5 VDC	15 VDC	6.7mA	67mA	100mVp-p	35mA	261mA	81	330µF
DU1P0-05D05	4.5 – 5.5 VDC	± 5 VDC	± 10mA	± 100mA	100mVp-p	40mA	270mA	78	±150µF
DU1P0-05D12	4.5 – 5.5 VDC	± 12 VDC	± 4.2mA	± 42mA	100mVp-p	35mA	258mA	82	±150µF
DU1P0-05D15	4.5 – 5.5 VDC	± 15 VDC	± 3.3mA	± 33mA	100mVp-p	40mA	257mA	81	±150µF
DU1P0-12S05	10.8 – 13.2 VDC	5 VDC	20mA	200mA	100mVp-p	17mA	114mA	77	330µF
DU1P0-12S12	10.8 – 13.2 VDC	12 VDC	8.3mA	83mA	100mVp-p	17mA	106mA	82	330µF
DU1P0-12S15	10.8 – 13.2 VDC	15 VDC	6.7mA	67mA	100mVp-p	18mA	112mA	79	330µF
DU1P0-12D05	10.8 – 13.2 VDC	± 5 VDC	± 10mA	± 100mA	100mVp-p	18mA	114mA	77	±150µF
DU1P0-12D12	10.8 – 13.2 VDC	± 12 VDC	± 4.2mA	± 42mA	100mVp-p	18mA	109mA	81	±150µF
DU1P0-12D15	10.8 – 13.2 VDC	± 15 VDC	± 3.3mA	± 33mA	100mVp-p	18mA	106mA	82	±150µF
DU1P0-15S05	13.5 – 16.5 VDC	5 VDC	20mA	200mA	100mVp-p	20mA	97mA	73	330µF
DU1P0-15S12	13.5 – 16.5 VDC	12 VDC	8.3mA	83mA	100mVp-p	18mA	89mA	79	330µF
DU1P0-15S15	13.5 – 16.5 VDC	15 VDC	6.7mA	67mA	100mVp-p	18mA	88mA	80	330µF
DU1P0-15D05	13.5 – 16.5 VDC	± 5 VDC	± 10mA	± 100mA	100mVp-p	18mA	94mA	75	±150µF
DU1P0-15D12	13.5 – 16.5 VDC	± 12 VDC	± 4.2mA	± 42mA	100mVp-p	16mA	88mA	80	±150µF
DU1P0-15D15	13.5 – 16.5 VDC	± 15 VDC	± 3.3mA	± 33mA	100mVp-p	16mA	87mA	80	±150µF
DU1P0-24S05	21.6 – 26.4 VDC	5 VDC	20mA	200mA	100mVp-p	12mA	61mA	72	330µF
DU1P0-24S12	21.6 – 26.4 VDC	12 VDC	8.3mA	83mA	100mVp-p	12mA	56mA	78	330µF
DU1P0-24S15	21.6 – 26.4 VDC	15 VDC	6.7mA	67mA	100mVp-p	10mA	57mA	78	330µF
DU1P0-24D05	21.6 – 26.4 VDC	± 5 VDC	± 10mA	± 100mA	100mVp-p	12mA	59mA	75	±150µF
DU1P0-24D12	21.6 – 26.4 VDC	± 12 VDC	± 4.2mA	± 42mA	100mVp-p	10mA	57mA	78	±150µF
DU1P0-24D15	21.6 – 26.4 VDC	± 15 VDC	± 3.3mA	± 33mA	100mVp-p	10mA	55mA	79	±150µF

**Note**

- BELLCORE TR-NWT-000332. Case 1: 50% Stress, Temperature at 40°C. MIL-HDBK-217F Notice2 @Ta=25 °C, Full load(Ground, Benign, controlled environment).
- Maximum value at nominal input voltage and full load of standard type.
- Typical value at nominal input voltage and no load.
- Typical value at nominal input voltage and full load.
- Test by minimum Vin and constant resistive load.
- 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.
- Internal fuse is not included, so we suggest to use an input line fuse.



STANDARD		
PIN	SINGLE	DUAL
1	+ INPUT	+ INPUT
2	- INPUT	- INPUT
4	- OUTPUT	- OUTPUT
5	NC	COMMON
6	+ OUTPUT	+ OUTPUT



"N" Models		
PIN	SINGLE	DUAL
1	+ INPUT	+ INPUT
2	- INPUT	- INPUT
5	- OUTPUT	- OUTPUT
6	NC	COMMON
7	+ OUTPUT	+ OUTPUT

- 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 ±0.01(0.25)
- Pin dimension tolerance ±0.004 (0.1)

