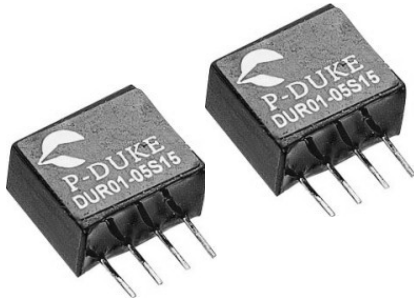




DURO1-SERIES



APPLICATIONS

Wireless Network
Telecom/Datacom
Industry Control System
Measurement
Semiconductor Equipment

FEATURES

- 1 WATTS UNREGULATED OUTPUT POWER
- OUTPUT CURRENT UP TO 303mA
- 4 PIN SINGLE-IN-LINE PACKAGE (SIP)
- HIGH EFFICIENCY FOR LOW POWER APPLICATION
- INPUT RANGE FROM 3.0VDC TO 3.6VDC, 4.5VDC TO 5.5VDC, 10.8VDC TO 13.2VDC, 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 1KVDC
- CE MARK MEETS 2006/95/EC, 93/68/EEC AND 89/336 EEC
- DESIGN MEETS UL60950-1, EN60950-1 AND IEC60950-1
- ISO9001 CERTIFIED MANUFACTURING FACILITIES
- COMPLIANT TO RoHS EU DIRECTIVE 2002/95/EC

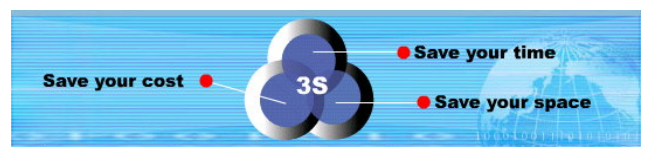
DESCRIPTION

The Duro1 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. All of the rated power may be drawn from a single pin provided the total load does not exceed 1 watt.

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%
Line regulation	LL to HL at Full Load 3.3V & 5V output 1.3%/1% of Vin others 1.2%/1% of Vin
Load regulation	10% to 100% FL 3.3V & 5V output ± 15% others ± 10%
Ripple and noise	20MHz bandwidth See table
Temperature coefficient	±0.1% / °C, max
Short circuit protection	Short term
GENERAL SPECIFICATIONS	
Efficiency	See table
Isolation voltage	1000VDC, min
Isolation resistance	10 ⁹ ohms, min
Isolation capacitance	80pF, typ.
Switching frequency	90KHz, typ
Design meet safety standard	IEC60950-1, UL60950-1, EN60950-1
Case material	Non-conductive black plastic
Potting material	Epoxy (UL94-V0)
Dimensions	0.45 X 0.24 X 0.40 Inch (11.5 X 6.0 X 10.2 mm)
Weight	1.5g (0.053oz)
MTBF (Note 1)	1.137 x 10 ⁹ hrs

INPUT SPECIFICATIONS		
Input voltage range	3.3V nominal input	3.0 – 3.6VDC
	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 temperature range	-40°C ~ +85°C (Non-derating)	
Storage temperature range	-55°C ~ +105°C	
Thermal shock	MIL-STD-810F	
Vibration	10~55Hz, 10G, 30minutes along X,Y and Z	
Relative humidity	5% to 95% RH	



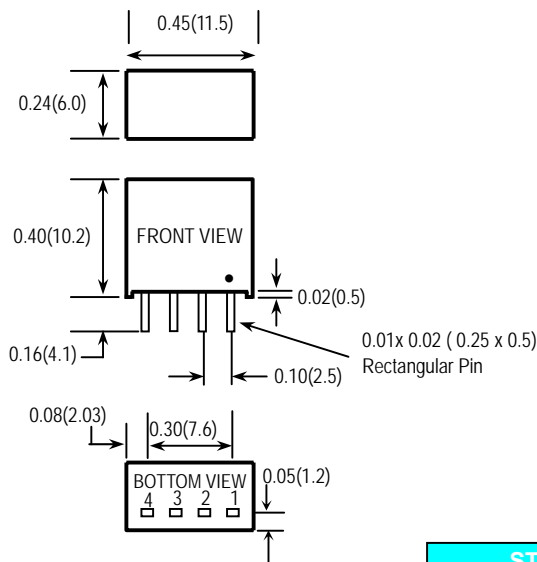


1 WATTS DC-DC CONVERTER

Model Number	Input Range	Output Voltage	Output Current		Output ⁽²⁾ Ripple & Noise	Input Current		Eff ⁽⁴⁾ (%)	Capacitor Load max ⁽⁵⁾
			Min. load	Full load		No load ⁽³⁾	Full load ⁽²⁾		
DUR01-33S33	3.0 – 3.6 VDC	3.3 VDC	30.3mA	303mA	100mVp-p	42mA	473mA	68	6.2uF
DUR01-33S05	3.0 – 3.6 VDC	5 VDC	20mA	200mA	100mVp-p	38mA	451mA	70	6.2uF
DUR01-33S12	3.0 – 3.6 VDC	12 VDC	8.4mA	84mA	100mVp-p	45mA	449mA	72	6.2uF
DUR01-33S15	3.0 – 3.6 VDC	15 VDC	6.6mA	66mA	100mVp-p	45mA	423mA	75	6.2uF
DUR01-05S33	4.5 – 5.5 VDC	3.3 VDC	30.3mA	303mA	100mVp-p	25mA	312mA	68	6.2uF
DUR01-05S05	4.5 – 5.5 VDC	5 VDC	20mA	200mA	100mVp-p	25mA	303mA	70	6.2uF
DUR01-05S12	4.5 – 5.5 VDC	12 VDC	8.4mA	84mA	100mVp-p	25mA	272mA	78	6.2uF
DUR01-05S15	4.5 – 5.5 VDC	15 VDC	6.6mA	66mA	100mVp-p	24mA	262mA	80	6.2uF
DUR01-12S33	10.8 – 13.2 VDC	3.3 VDC	30.3mA	303mA	100mVp-p	14mA	131mA	68	6.2uF
DUR01-12S05	10.8 – 13.2 VDC	5 VDC	20mA	200mA	100mVp-p	10mA	126mA	70	6.2uF
DUR01-12S12	10.8 – 13.2 VDC	12 VDC	8.4mA	84mA	100mVp-p	14mA	113mA	78	6.2uF
DUR01-12S15	10.8 – 13.2 VDC	15 VDC	6.6mA	66mA	100mVp-p	13mA	109mA	80	6.2uF
DUR01-15S33	13.5 – 16.5 VDC	3.3 VDC	30.3mA	303mA	100mVp-p	9mA	105mA	68	6.2uF
DUR01-15S05	13.5 – 16.5 VDC	5 VDC	20mA	200mA	100mVp-p	9mA	101mA	70	6.2uF
DUR01-15S12	13.5 – 16.5 VDC	12 VDC	8.4mA	84mA	100mVp-p	8mA	91mA	78	6.2uF
DUR01-15S15	13.5 – 16.5 VDC	15 VDC	6.6mA	66mA	100mVp-p	9mA	87mA	80	6.2uF
DUR01-24S33	21.6 – 26.4 VDC	3.3 VDC	30.3mA	303mA	100mVp-p	6mA	64mA	70	6.2uF
DUR01-24S05	21.6 – 26.4 VDC	5 VDC	20mA	200mA	100mVp-p	6mA	63mA	70	6.2uF
DUR01-24S12	21.6 – 26.4 VDC	12 VDC	8.4mA	84mA	100mVp-p	5mA	57mA	78	6.2uF
DUR01-24S15	21.6 – 26.4 VDC	15 VDC	6.6mA	66mA	100mVp-p	6mA	54mA	80	6.2uF

Note

1. BELLCORE TR-NWT-000332. Case 1: 50% Stress, Temperature at 40°C. (Ground fixed and controlled environment)
2. Maximum value at nominal input voltage and full load of standard type.
3. Typical value at nominal input voltage and no load.
4. Typical value at nominal input voltage and full load.
5. Test by minimum Vin and constant resistive load.
6. 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.



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	
PIN	SINGLE
1	- INPUT
2	+ INPUT
3	- OUTPUT
4	+ OUTPUT

