



APPLICATIONS

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

FEATURES

- 1 WATT 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 2004/108/EC
- DESIGN MEETS UL60950-1, EN60950-1 AND IEC60950-1
- ISO9001 CERTIFIED MANUFACTURING FACILITIES
- COMPLIANT TO RoHS EU DIRECTIVE 2002/95/EC

DESCRIPTION

The DUR01 series are the standard building blocks for on-board distributed power systems. They are ideally suited to provide single supply 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% of FL.
Line regulation	LL to HL at Full Load	3.3V & 5V output others	1.3%/1% of Vin 1.2%/1% of Vin
Load regulation	10% to 100% FL	3.3V & 5V output others	± 15% ± 10%
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			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)	BELLCORE TR-NWT-000332		1.137 x 10 ⁶ hrs
	MIL-HDBK-217F		9.850 x 10 ⁵ 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 ambient temperature		-40°C ~ +85°C (Non-derating)
Storage temperature range		-55°C ~ +105°C
Thermal shock		MIL-STD-810F
Vibration		MIL-STD-810F
Relative humidity		5% to 95% RH



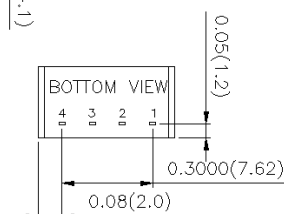
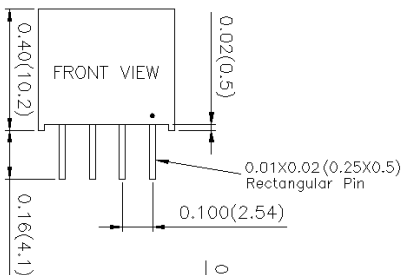
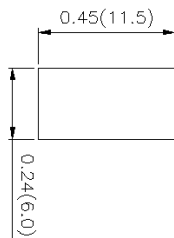
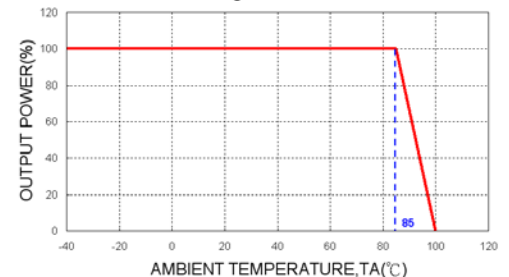


Model Number	Input Range	Output Voltage	Output Current		Output ⁽⁴⁾ Ripple & Noise	Input Current		Eff ⁽⁴⁾ (%)	Capacitor Load max ⁽⁵⁾
			Min. load	Full load		No load ⁽³⁾	Full load ⁽²⁾		
DUR01-33S33	3.0 – 3.6 VDC	3.3 VDC	30.3mA	303mA	100mVp-p	42mA	473mA	68	150μF
DUR01-33S05	3.0 – 3.6 VDC	5 VDC	20mA	200mA	100mVp-p	38mA	451mA	70	100μF
DUR01-33S12	3.0 – 3.6 VDC	12 VDC	8.4mA	84mA	100mVp-p	45mA	449mA	72	47μF
DUR01-33S15	3.0 – 3.6 VDC	15 VDC	6.6mA	66mA	100mVp-p	45mA	423mA	75	33μF
DUR01-05S33	4.5 – 5.5 VDC	3.3 VDC	30.3mA	303mA	100mVp-p	25mA	312mA	68	150μF
DUR01-05S05	4.5 – 5.5 VDC	5 VDC	20mA	200mA	100mVp-p	25mA	303mA	70	100μF
DUR01-05S12	4.5 – 5.5 VDC	12 VDC	8.4mA	84mA	100mVp-p	25mA	272mA	78	47μF
DUR01-05S15	4.5 – 5.5 VDC	15 VDC	6.6mA	66mA	100mVp-p	24mA	262mA	80	33μF
DUR01-12S33	10.8 – 13.2 VDC	3.3 VDC	30.3mA	303mA	100mVp-p	14mA	131mA	68	150μF
DUR01-12S05	10.8 – 13.2 VDC	5 VDC	20mA	200mA	100mVp-p	10mA	126mA	70	100μF
DUR01-12S12	10.8 – 13.2 VDC	12 VDC	8.4mA	84mA	100mVp-p	14mA	113mA	78	47μF
DUR01-12S15	10.8 – 13.2 VDC	15 VDC	6.6mA	66mA	100mVp-p	13mA	109mA	80	33μF
DUR01-15S33	13.5 – 16.5 VDC	3.3 VDC	30.3mA	303mA	100mVp-p	9mA	105mA	68	150μF
DUR01-15S05	13.5 – 16.5 VDC	5 VDC	20mA	200mA	100mVp-p	9mA	101mA	70	100μF
DUR01-15S12	13.5 – 16.5 VDC	12 VDC	8.4mA	84mA	100mVp-p	8mA	91mA	78	47μF
DUR01-15S15	13.5 – 16.5 VDC	15 VDC	6.6mA	66mA	100mVp-p	9mA	87mA	80	33μF
DUR01-24S33	21.6 – 26.4 VDC	3.3 VDC	30.3mA	303mA	100mVp-p	6mA	64mA	70	150μF
DUR01-24S05	21.6 – 26.4 VDC	5 VDC	20mA	200mA	100mVp-p	6mA	63mA	70	100μF
DUR01-24S12	21.6 – 26.4 VDC	12 VDC	8.4mA	84mA	100mVp-p	5mA	57mA	78	47μF
DUR01-24S15	21.6 – 26.4 VDC	15 VDC	6.6mA	66mA	100mVp-p	6mA	54mA	80	33μF

Note

1. 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).
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.
7. **CAUTION: This power module is not internally fused. An input line fuse must always be**

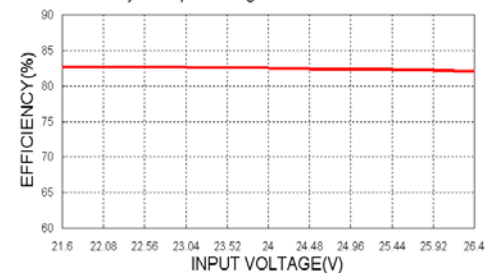
DUR01-24S12 Derating Curve



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

1. All dimensions in Inches (mm)
Tolerance: X.XX±0.02 (X.X±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)

DUR01-24S12
Efficiency VS Input Voltage



DUR01-24S12
Efficiency VS Output Load

