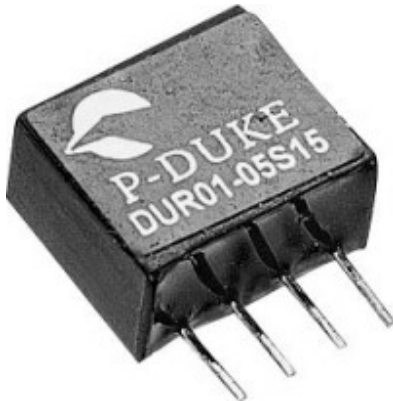




**POWER MATE  
TECHNOLOGY CO.,LTD.**

# DUR01-SERIES



- 1 WATT UNREGULATED OUTPUT POWER
- 4 PIN SINGLE-IN-LINE PACKAGE (SIP)
- HIGH EFFICIENCY FOR LOW POWER APPLICATION
- UL 94-V0 NON-CONDUCTED CASE
- INTERNAL INPUT & OUTPUT FILTER
- INPUT / OUTPUT ISOLATION UP TO 1KVDC

The DUR01 series are the standard building blocks for on-board distributed power systems. They are ideally suited to providing 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 1)			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		100mVp-p
Temperature coefficient			±0.1% / °C, max
Short circuit protection			Short term
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

GENERAL SPECIFICATIONS	
Efficiency	See table
Isolation voltage	1000VDC, min
Isolation resistance	10 <sup>9</sup> ohms, min
Isolation capacitance	80pF, typ.
Switching frequency	90KHz, typ
Design meet safety standard	UL1950, EN60950
Case material	Non-conducted 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 2)	1.137 x 10 <sup>9</sup> hrs
ENVIRONMENTAL SPECIFICATIONS	
Operating temperature range	-40°C ~ +85°C (with derating)
Storage temperature range	-55°C ~ +105°C
Thermal shock	MIL-STD-810D
Vibration	10~55Hz, 2G, 30minutes along X,Y and Z
Relative humidity	5% to 95% RH



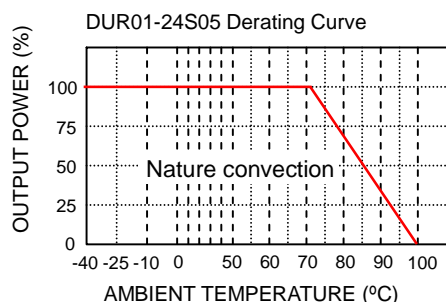
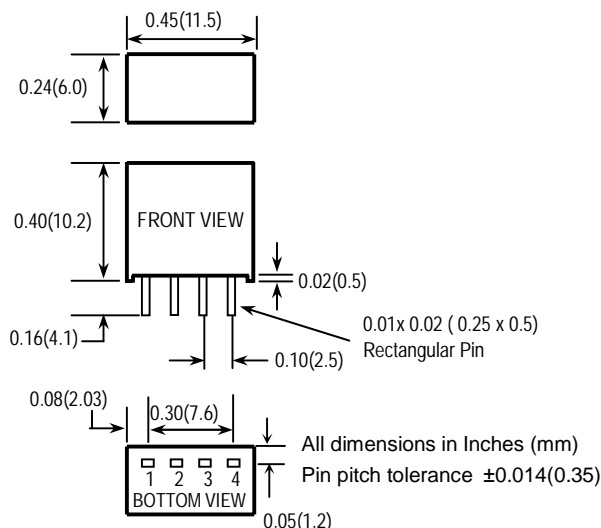
**POWER MATE  
TECHNOLOGY CO., LTD.**

# 1 WATTS DC-DC CONVERTER

Model Number	Input Range	Output Voltage	Output Current	Input Current <sup>(3)</sup>	Eff <sup>(4)</sup> (%)	Capacitor Load max <sup>(5)</sup>
DUR01-33S33	3.0 – 3.6 VDC	3.3 VDC	303mA	473mA	68	6.2uF
DUR01-33S05	3.0 – 3.6 VDC	5 VDC	200mA	451mA	70	6.2uF
DUR01-33S12	3.0 – 3.6 VDC	12 VDC	84mA	449mA	72	6.2uF
DUR01-33S15	3.0 – 3.6 VDC	15 VDC	66mA	423mA	75	6.2uF
DUR01-05S33	4.5 – 5.5 VDC	3.3 VDC	303mA	312mA	68	6.2uF
DUR01-05S05	4.5 – 5.5 VDC	5 VDC	200mA	303mA	70	6.2uF
DUR01-05S12	4.5 – 5.5 VDC	12 VDC	84mA	272mA	78	6.2uF
DUR01-05S15	4.5 – 5.5 VDC	15 VDC	66mA	262mA	80	6.2uF
DUR01-12S33	10.8 – 13.2 VDC	3.3 VDC	303mA	131mA	68	6.2uF
DUR01-12S05	10.8 – 13.2 VDC	5 VDC	200mA	126mA	70	6.2uF
DUR01-12S12	10.8 – 13.2 VDC	12 VDC	84mA	113mA	78	6.2uF
DUR01-12S15	10.8 – 13.2 VDC	15 VDC	66mA	109mA	80	6.2uF
DUR01-15S33	13.5 – 16.5 VDC	3.3 VDC	303mA	105mA	68	6.2uF
DUR01-15S05	13.5 – 16.5 VDC	5 VDC	200mA	101mA	70	6.2uF
DUR01-15S12	13.5 – 16.5 VDC	12 VDC	84mA	91mA	78	6.2uF
DUR01-15S15	13.5 – 16.5 VDC	15 VDC	66mA	87mA	80	6.2uF
DUR01-24S33	21.6 – 26.4 VDC	3.3 VDC	303mA	64mA	70	6.2uF
DUR01-24S05	21.6 – 26.4 VDC	5 VDC	200mA	63mA	70	6.2uF
DUR01-24S12	21.6 – 26.4 VDC	12 VDC	84mA	57mA	78	6.2uF
DUR01-24S15	21.6 – 26.4 VDC	15 VDC	66mA	54mA	80	6.2uF

## Note

1. The DUR01 series required a minimum 10% 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
2. BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40°C. (Ground fixed and controlled environment)
3. Maximum value at nominal input voltage and full load of standard type.
4. Typical value at nominal input voltage and full load.
5. Test by minimum Vin and constant resistor load.



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