SINGLE
1 WATT

CUS SERIES

key features

- industry standard pin out
- non - regulated outputs
- 85C case operation
- short circuit protection
- 5V and 12V inputs Inputs
- input pi filter
- low profile DIP package
- 500V isolation

The CUS series converters are 1.1 to 1.5W non-regulated converters packaged in the industry standard DIP package. Available in 5V or 12V input versions, the CUS is perfect for industrial or EDP applications. The CUS features shortcircuit protection, and 500VDC of isolation. Several output voltages are available, please see the CUD series for dual output applications.

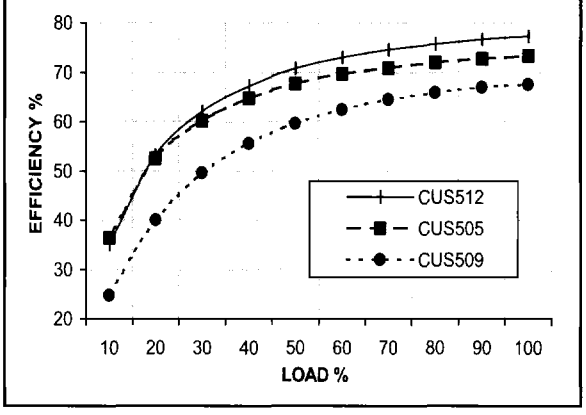
technical specifications

input	
voltage range	
5 VDC nominal	4.65 - 5.50 VDC
12 VDC nominal	10.8 - 13.2 VDC
reflected ripple	20% I_{IN} max.
reverse input current	100% I_{IN} max.
no load input power	0.50W

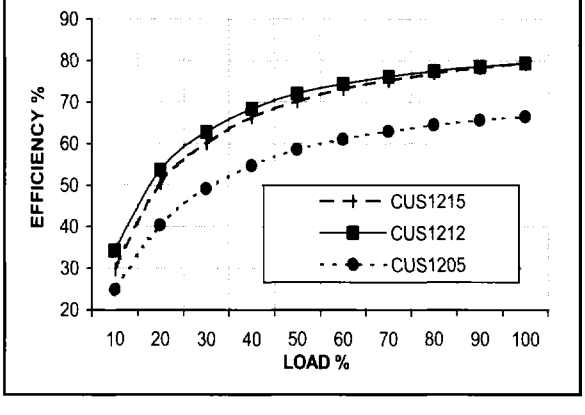
output	
setpoint accuracy	±4%
line regulation V_{IN} min. - V_{IN} max., I_{OUT} rated[1]	±1.5% Vo
load regulation I_{OUT} min. - I_{OUT} max., V_{IN} nom.[2]	±10.0% Vo
minimum output current	10% Vo

general	
switching frequency	40 KHz
isolation	
input - output	500 VDC
isolation resistance - input to output	10^9 Ohms
isolation capacitance - input to output	80pF
case temperature	
operating range	-25 to +85°C
storage range	-40 to +125°C
humidity max, non-condensing	95%
vibration, 3 axes, 5 min each	5 g, 10-55 Hz
safety	consult factory
weight (approx.)	0.5 oz.

eff vs load (5 V_{IN})



eff vs load (12 V_{IN})



notes

[1] per 1.0% change in input voltage.
[2] for load change from 20% to 100%.
Continuous short circuit protection is provided. Long term continuous operation in this mode is not recommended. Converter will auto-restart once fault has been removed

Specifications typically at 25°C, normal line, and full load - unless otherwise stated.

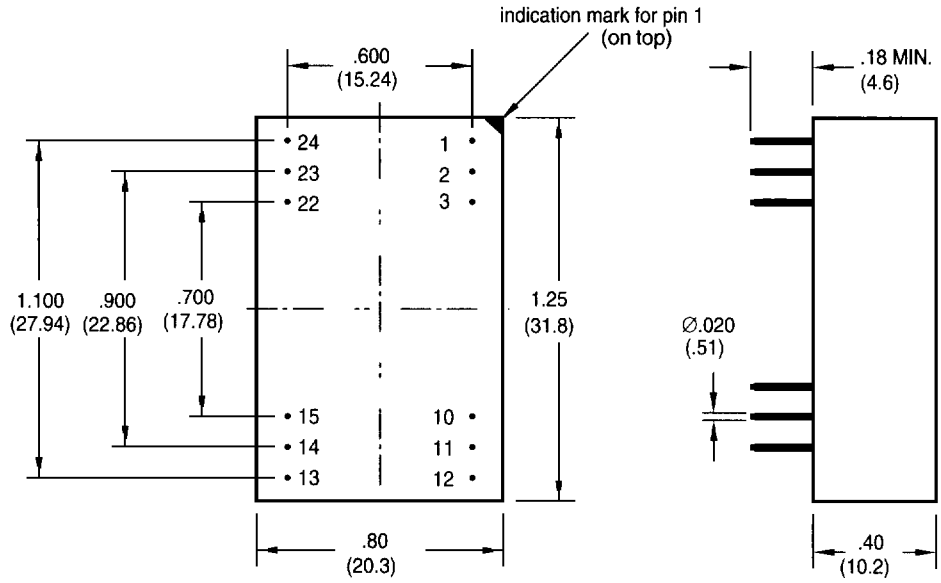
Specifications subject to change without notice.

models

V_{IN} (volts)	V_{IN} range (volts)	I_{IN} max. (amps)	V_{OUT} (volts)	I_{OUT} rated (amps)	ripple & noise pk-pk (mV)	efficiency typ.**	model
5	4.65 - 5.50	0.43	5	.220	50	60%	CUS505
5	4.65 - 5.50	0.50	9	.150	90	64%	CUS509
5	4.65 - 5.50	0.51	12	.125	120	70%	CUS512
5	4.65 - 5.50	0.49	15	.100	150	72%	CUS515
12	10.80 - 13.20	0.17	5	.220	50	64%	CUS1205
12	10.80 - 13.20	0.19	9	.150	90	72%	CUS1209
12	10.80 - 13.20	0.19	12	.125	120	73%	CUS1212
12	10.80 - 13.20	0.21	15	.100	150	73%	CUS1215

* max input current at minimum input voltage, maximum rated output power
** for other output voltages, please consult the factory
*** at nominal V_{IN}, rated output

mechanical drawing



BOTTOM VIEW

thermal impedance

natural convection	15.4°C/W
100 LFM	12.2°C/W
200 LFM	9.3°C/W
300 LFM	7.4°C/W
400 LFM	6.4°C/W

Thermal impedance data is dependant on many environmental factors. The exact thermal performance should be validated for specific application.

pin	function
1 & 24	+V_{IN}
2 & 23	no conn.
3 & 22	no conn.
4 & 21	no pin
5 & 20	no pin
6 & 19	no pin
7 & 18	no pin
8 & 17	no pin
9 & 16	no pin
10 & 15	- V_{OUT}
11 & 14	+ V_{OUT}
12 & 13	- V_{IN}

tolerances (unless otherwise specified)

Inches	**(Millimeters)**
.XX ± .040	.X ± 1.0
.XXX ± .010	.XX ± .25
Pin:	
± .002	± .05