



FEATURES

- RoHS compliant
- Efficiency to 80%
- Power density up to 0.85W/cm³
- Wide temperature performance at full 1 Watt load, -40°C to 85°C
- UL 94V-0 package material
- No heatsink required
- Footprint from 1.17cm²
- Industry standard pinout
- 3kVDC isolation (1 minute)
- Internal SMD construction
- Fully encapsulated with toroidal magnetics
- No external components required
- No electrolytic or tantalum capacitors

DESCRIPTION

CD1329C is a custom 1W DC/DC converter, offering 5V input with output of 5V at 1W.

SELECTION GUIDE								
Order Code	Nominal Input Voltage	Output Voltage	Output Current	Load Regulation (Typ.)	Load Regulation (Max.)	Ripple & Noise (Typ.)	Ripple & Noise (Max.)	Efficiency
	V	V	mA	%		mVp-p		% (Min.)
CD1329C	5	5	200	5.5	8.0	125	150	70

When operated **with** additional external load capacitance the rise time of the input voltage will determine the maximum external capacitance value for guaranteed start up. The slower the rise time of the input voltage the greater the maximum value of the additional external capacitance for reliable start up.

INPUT CHARACTERISTICS						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Voltage range	Continuous operation	4.5	5	5.5	V	
Reflected ripple current			20	40	mA p-p	

ABSOLUTE MAXIMUM RATINGS	
Short-circuit protection ¹	1 second
Lead temperature 1.5mm from case for 10 seconds	300°C
Internal power dissipation	560mW
Input voltage V _{IN}	7V

OUTPUT CHARACTERISTICS					
Parameter	Conditions	Min.	Typ.	Max.	Units
Rated Power ²	T _A =-40°C to 120°C			1	W
Voltage Set Point Accuracy	See tolerance envelope				
Line regulation	High V _{IN} to low V _{IN}		1.06	1.1	%/%

ISOLATION CHARACTERISTICS					
Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation test voltage	Flash tested for 1 minute	3000			VDC
Resistance	Viso= 1000VDC	10			GΩ

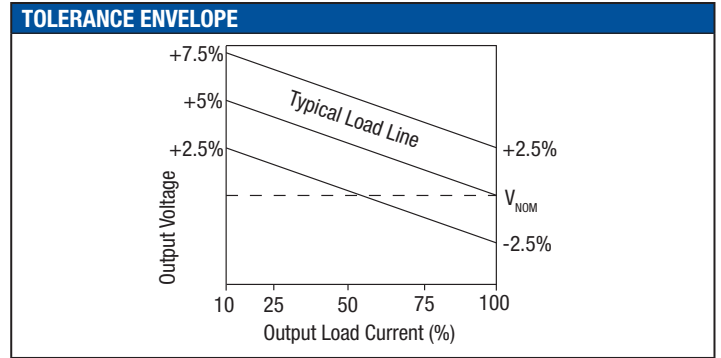
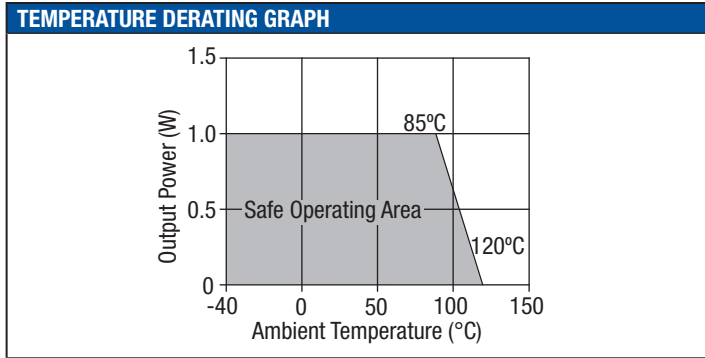
GENERAL CHARACTERISTICS					
Parameter	Conditions	Min.	Typ.	Max.	Units
Switching frequency			80		kHz

TEMPERATURE CHARACTERISTICS					
Parameter	Conditions	Min.	Typ.	Max.	Units
Specification	All output types	-40		85	°C
Storage		-50		125	
Case Temperature above ambient				28	
Cooling	Free air convection				

RoHS COMPLIANCE INFORMATION	
	<p>This DC/DC converter is compatible with RoHS soldering systems with a peak wave solder temperature of 300°C for 10 seconds. The pin termination finish is Tin Plate, Hot Dipped over Matte Tin with Nickel Preplate and is backward compatible with Sn/Pb soldering systems.</p> <p>For further information, please visit www.cd4power.com/rohs</p>

1. Supply voltage must be discontinued at the end of the short circuit duration.
 All specifications typical at T_A=25°C, nominal input voltage and rated output current unless otherwise specified.





TECHNICAL NOTES

ISOLATION VOLTAGE

'Hi Pot Test', 'Flash Tested', 'Withstand Voltage', 'Proof Voltage', 'Dielectric Withstand Voltage' & 'Isolation Test Voltage' are all terms that relate to the same thing, a test voltage, applied for a specified time, across a component designed to provide electrical isolation, to verify the integrity of that isolation.

C&D Technologies CD1329C DC/DC converter is 100% production tested at their stated isolation voltage. This is 3kVDC for 1 minute.

A question commonly asked is, "What is the continuous voltage that can be applied across the part in normal operation?"

For a part holding no specific agency approvals, such as the CD1329C, both input and output should normally be maintained within SELV limits i.e. less than 42.4V peak, or 60VDC. The isolation test voltage represents a measure of immunity to transient voltages and the part should never be used as an element of a safety isolation system. The part could be expected to function correctly with several hundred volts offset applied continuously across the isolation barrier; but then the circuitry on both sides of the barrier must be regarded as operating at an unsafe voltage and further isolation/insulation systems must form a barrier between these circuits and any user-accessible circuitry according to safety standard requirements.

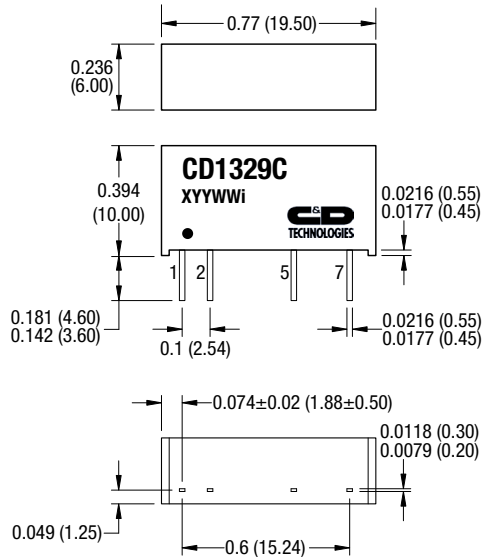
REPEATED HIGH-VOLTAGE ISOLATION TESTING

It is well known that repeated high-voltage isolation testing of a barrier component can actually degrade isolation capability, to a lesser or greater degree depending on materials, construction and environment. CD1329C has toroidal isolation transformers, with no additional insulation between primary and secondary windings of enameled wire. While parts can be expected to withstand several times the stated test voltage, the isolation capability does depend on the wire insulation. Any material, including this enamel (typically polyurethane) is susceptible to eventual chemical degradation when subject to very high applied voltages thus implying that the number of tests should be strictly limited. We therefore strongly advise against repeated high voltage isolation testing, but if it is absolutely required, that the voltage be reduced by 20% from specified test voltage.

This consideration equally applies to agency recognized parts rated for better than functional isolation where the wire enamel insulation is always supplemented by a further insulation system of physical spacing or barriers.

PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS

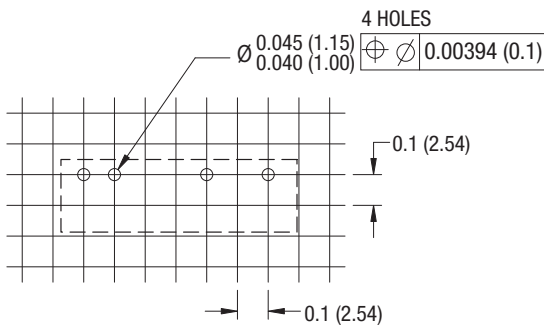


7 Pin SIP	
Pin	Function
1	+V _{IN}
2	-V _{IN}
5	-V _{OUT}
7	+V _{OUT}

All dimensions in inches ± 0.01 (mm ± 0.25 mm). All pins on a 0.1 (2.54) pitch and within ± 0.01 (0.25) of true position.

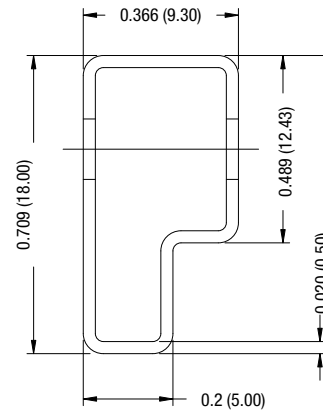
Weight: 2.1g

RECOMMENDED FOOTPRINT DETAILS



Unless otherwise stated all dimensions in inches (mm) ± 0.5 mm.

TUBE OUTLINE DIMENSIONS



Unless otherwise stated all dimensions in inches (mm) ± 0.5 mm.
Tube length : 20.47 (520mm ± 2 mm).

Tube Quantity : 25