

ISOLATED 1W DUAL OUTPUT DC/DC CONVERTERS
FEATURE

- n RoHS compliant
- n Efficiency up to 80%
- n Dual output type
- n UL94V-0 package material
- n Industry standard pin-out
- n Power density 0.85W/cm³
- n 1kV input to output isolation
- n Wide temperature performance at full 1 Watt load, -40°C to 85°C
- n No electrolytic or tantalum capacitors
- n No external components required



Order Code	Input Voltage(Vdc)	Input Current(mA)		Output Voltage(Vdc)	Output Current(mA)	%Eff. (Typ)	Cap. Load max.(uF)
		0% Load	100% Load				
UA05D05S1	5	45	289	±5	±100	68.9	100
UA05D09S1	5	45	267	±9	±55	75.0	100
UA05D12S1	5	45	260	±12	±42	77.1	100
UA05D15S1	5	45	256	±15	±33	77.9	100
UA12D05S1	12	18	120	±5	±100	69.2	100
UA12D09S1	12	18	113	±9	±55	73.9	100
UA12D12S1	12	18	111	±12	±42	75.0	100
UA12D15S1	12	18	110	±15	±33	76.2	100
UA15D05S1	15	14	91	±5	±100	71.2	100
UA15D12S1	15	14	87	±12	±42	77.7	100
UA15D15S1	15	14	84	±15	±33	79.9	100
UA05D05D1	5	45	289	±5	±100	68.8	100
UA05D09D1	5	45	267	±9	±55	75.1	100
UA05D12D1	5	45	260	±12	±42	76.7	100
UA05D15D1	5	45	256	±15	±33	78.3	100
UA12D05D1	12	18	120	±5	±100	69.1	100
UA12D09D1	12	18	113	±9	±55	73.8	100
UA12D12D1	12	18	111	±12	±42	74.9	100
UA12D15D1	12	18	110	±15	±33	75.8	100
UA15D05D1	15	14	91	±5	±100	71.1	100
UA15D12D1	15	14	87	±12	±42	77.9	100
UA15D15D1	15	14	84	±15	±33	79.9	100

*Add suffix 'P' for continue Short Circuit Protection, e.g, UA05D05S1P.

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INPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage range	5V input types	4.5	5	5.5	Vdc
	12V input types	10.8	12	13.2	
	15V input types	13.5	15	16.5	
Reflected ripple current			20	40	mA p-p

OUTPUT CHARACTERISTICS

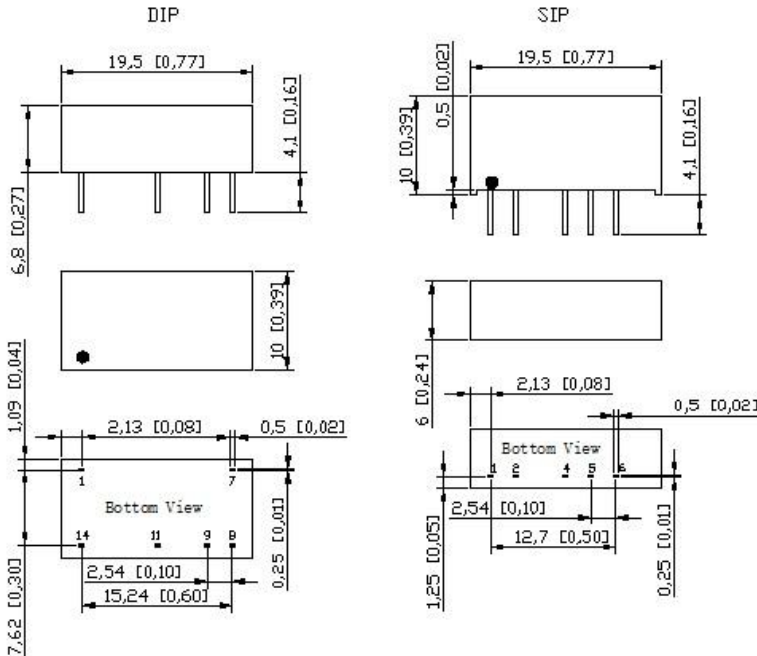
Parameter	Conditions	Min.	Typ.	Max.	Units
Rated Power	TA=-40°C to 85°C			1	W
Voltage Set Point Accuracy	See tolerance envelope				
Line regulation	High VIN to low VIN		1.0	1.2	%/%
Load regulation	10% Load to 100% Load		10	15	%

GENERAL CHARACTERISTICS

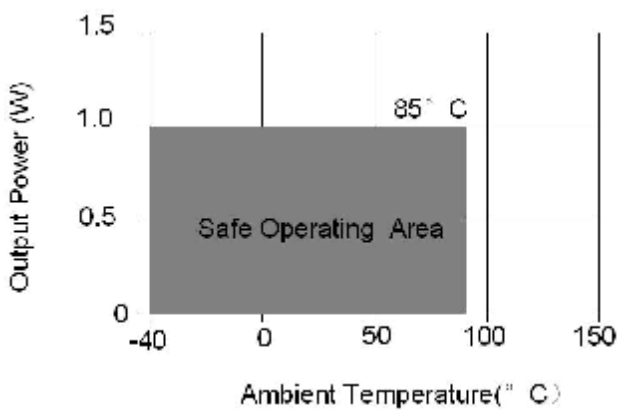
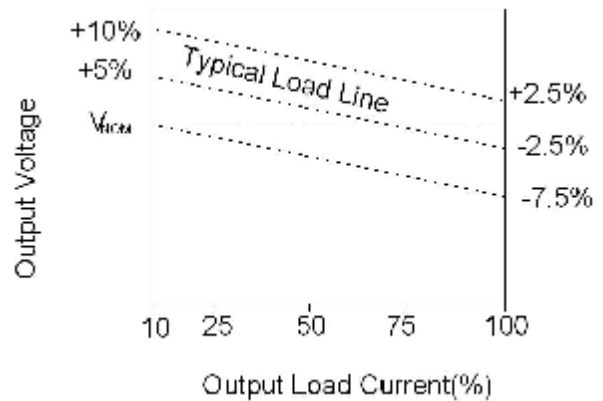
Isolation Voltage					1000VDC min.
Isolation Resistance					10 ⁹ Ohms min.
Isolation Capacitance					10pF typ.
Switching frequency				5V input types	110kHz
				12V input types	140kHz
				15V input types	90kHz
Operation Ambient Temperature Range					-40°C ~85°C
Derating					See Derating Curve
Case Temperature					110°C max
Cooling					Natural Convection
Storage Temperature Range					-50°C to +130°C
Humidity					95%RH max. Non condensing
MTBF					MIL-STD-217F TBD
Dimensions		DIP	19.5x10.0x6.8mm (0.77x0.39x0.27 inches)		
		SIP	19.5x6.0x10.0mm (0.77x0.24x0.39 inches)		
Case Material					Non-Conductive Black Plastic
Weight					DIP 2.8 g
					SIP 2.6 g

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MECHANICAL DIMENSIONS & PIN CONNECTION

All Dimensions In Millimeters[Inches]
 Tolerance Millimeters: X \pm 1.0, XX \pm .25
 Inches: XX \pm .04, XXX \pm .010



PIN CONNECTION			
SIP		DIP	
Pin	Function	Pin	Function
1	+VIN	1	-VIN
2	-VIN	7	NA
4	-VOUT	8	0V
5	0V	9	+VOUT
6	+VOUT	11	-VOUT
		14	+VIN

Derating Curve

Output Voltage Tolerance Envelope


The voltage tolerance envelope shows typical load regulation characteristics for this product series. The tolerance envelope is the maximum output voltage variation due to changes in output loading.

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NOTE

1. Measured From High Line to Low Line.
2. Measured From Full Load to min. Load.
3. Maximum case temperature under any operating condition should Not be exceeded 85°C.
4. The output ripple and noise is measured with 10uF tantalum and 1uF Ceramic capacitor across output.
5. All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted.
6. The minimum load to meet datasheet specification is 10% of the full rated load across the specified input voltage range. Lower than 10% minimum loading will result in an increase in output voltage, which may rise to typically double the specified output voltage if the output load falls to less than 5%.