

LDO06C Series

3 Vdc to 13.8 Vdc Input Single Output

NEW Product

- **6 A current rating**
- **Input voltage range: 3-13.8 V**
- **Adjustable output voltage: 0.59-5.1 V**
 - **Optional 3 pin model factory set**
 - **Optional 5 pin model factory set with power good option**
- **Excellent transient response**
- **Power enable (5 pin model)**
- **Minimum airflow**
- **Small package**
- **Termination voltage capability**
- **RoHS compliant**



The LDO06C series is a new high density, open frame, non-isolated converter for space sensitive applications. This model has a wide input range of 3-13.8 V and offers a 0.59-5.1 V adjustable output with 6 A capability. Typical efficiency for this model is 92% (5 Vin, 2.5 Vout, 6 A load). The 5 pin version of this voltage device offers the standard features of enable, and with a default wide adjustable output voltage range or option of power good.



All specifications are typical at nominal input, full load at 25 °C unless otherwise stated

SPECIFICATIONS

OUTPUT SPECIFICATIONS

Output voltage	(See Note 5)	0.59-5.1 V
Output setpoint accuracy	0.1% trim resistors	±1.0%
Line regulation	Low line to high line	±0.2%
Load regulation	Full load to min. load	±0.5%
Min/max load		0 A/6 A
Overshoot	At turn-on	0.5% max.
Undershoot	At turn-off	100 mV max.
Ripple and noise 5 Hz to 20 MHz	(See Note 1)	30 mV Vin = 5 V, Vout = 2.5 V
Transient response	(See Notes 1, 2)	130 mV max. deviation 15 µs recovery to within regulation band

INPUT SPECIFICATIONS

Input voltage range		3-13.8 Vdc
Input current	Minimum load Remote OFF	50 mA 5 mA
Input current (max.)	(See Note 3)	6 A @ Io max.
Start-up time	Power up Remote ON/OFF	3 ms 2 ms

GENERAL SPECIFICATIONS

Efficiency	Vin=5 V, Vo=2.5 V, Io=6 A	92% Typ.
Switching frequency	Fixed	750 kHz
Approvals and standards (pending)		EN60950 UL/cUL6950
Material flammability		UL94V-0
Weight		1.899 g/0.067oz.
MTBF	12 V @ 40 °C 100% load Bellcore 332	8,392,808 hours
Coplanarity	Surface mount models	150 µm

ENVIRONMENTAL SPECIFICATIONS

Thermal performance (See Note 5)	Operating ambient, temperature Non-operating	0 °C to +70 °C -40 °C to +125 °C
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PROTECTION

Short-circuit	Hiccup, non-latching
Overvoltage	Hiccup, non-latching

RECOMMENDED SYSTEM CAPACITANCE

Input capacitance	(See Note 6)	0 µF
Output capacitance	(See Note 7)	0 µF

International Safety Standard Approvals



UL/cUL CAN/CSA 22.2 No. E139421
UL60950 File No. TBD



TÜV Product Service (EN60950) Certificate No. TBD
CB report and certificate to IEC60950

LDO06C Series

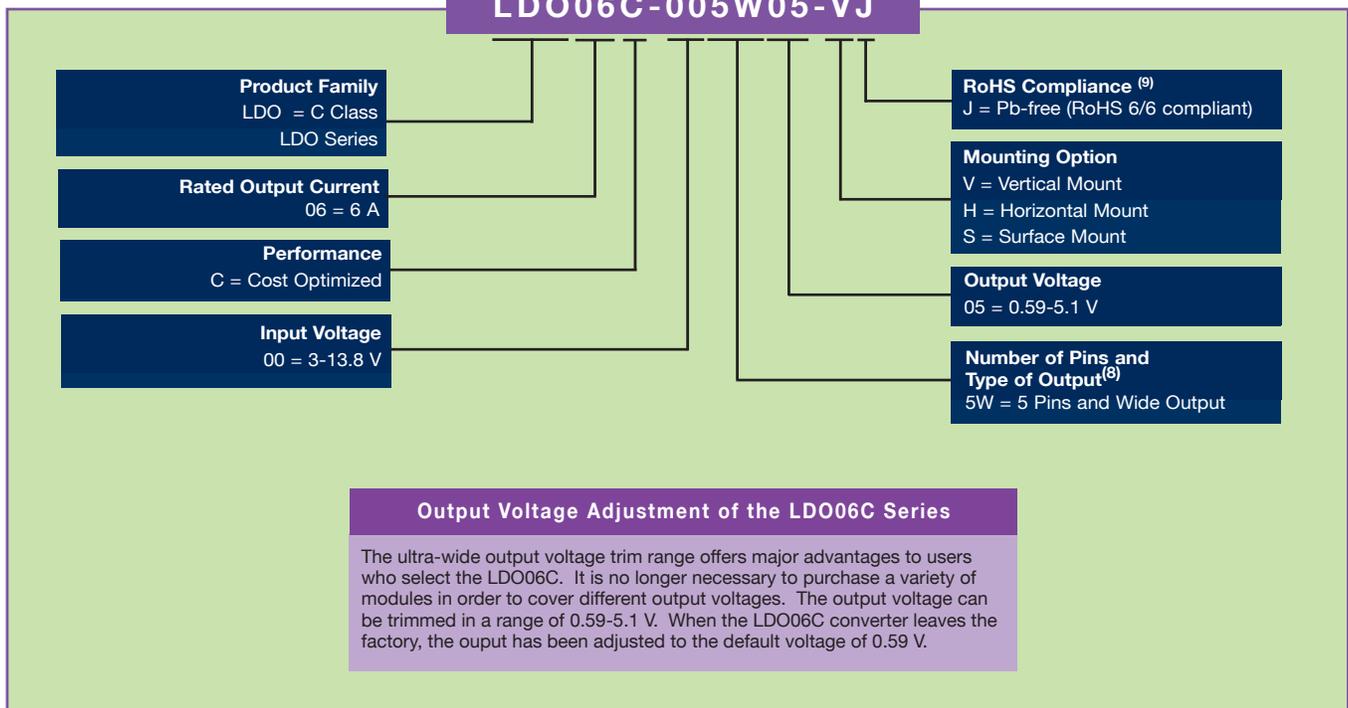
3 Vdc to 13.8 Vdc Input Single Output

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NEW Product

OUTPUT POWER (MAX.)	INPUT VOLTAGE	OVP	OUTPUT VOLTAGE	OUTPUT CURRENT (MIN.)	OUTPUT CURRENT (MAX.)	EFFICIENCY (TYP.)	REGULATION		MODEL NUMBER ^(9, 10)
							LINE	LOAD	
30 W	3-13.8 Vdc	N/A	0.59-5.1 V	0 A	6 A	92%	±0.2%	±0.5%	LDO06C-005W05-VJ
30 W	3-13.8 Vdc	N/A	0.59-5.1 V	0 A	6 A	92%	±0.2%	±0.5%	LDO06C-005W05-HJ
30 W	3-13.8 Vdc	N/A	0.59-5.1 V	0 A	6 A	92%	±0.2%	±0.5%	LDO06C-005W05-SJ

Part Number System with Options



Notes

- 1 Measured as per recommended system capacitance. See Application Note 186.
- 2 $di/dt = 10 \text{ A}/\mu\text{s}$, $V_{in} = \text{Nom}$, $T_c = 25 \text{ }^\circ\text{C}$, load change = 0.50 lo to full lo and full lo to 0.50.
- 3 External input fusing is recommended.
- 4 Additional part numbers may be available with different output voltages.
- 5 Airflow dependent, 100 LFM minimum required.
- 6 No capacitor needed for ripple current capability.
- 7 No capacitor needed for stability.
- 8 Consult factory for 3 pin (fixed output) version part numbers.
- 9 TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.
- 10 NOTICE: Some models do not support all options. Please contact your local Artesyn representative or use the on-line model number search tool at <http://www.artesyn.com/powergroup/products.htm> to find a suitable alternative.

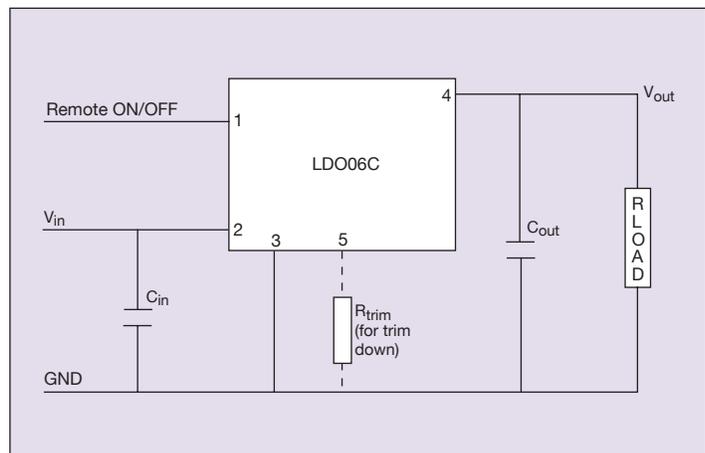


Figure 1: Standard Application Drawing

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PIN CONNECTIONS	
PIN NO.	FUNCTION
1	Enable
2	Vin
3	Common / RTN
4	Vout
5	PG / Trim

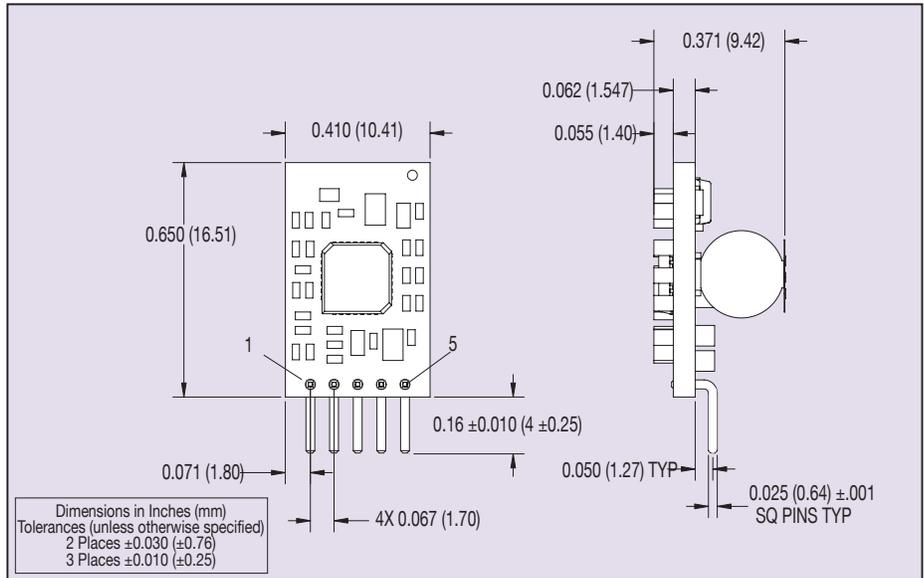


Figure 2: Vertical Mount Mechanical Drawing

PIN CONNECTIONS	
PIN NO.	FUNCTION
1	Enable
2	Vin
3	Common / RTN
4	Vout
5	PG / Trim
6	Mech Pin (Horz/SMT only)

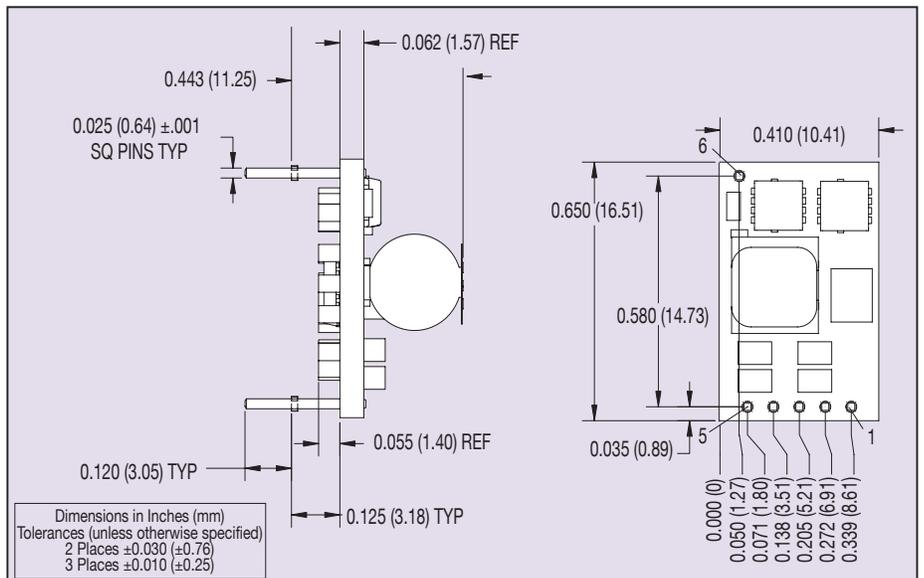


Figure 3: Horizontal Mount Mechanical Drawing

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DC-DC CONVERTERS

C Class Non-isolated

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NEW Product

PIN CONNECTIONS	
PIN NO.	FUNCTION
1	Enable
2	Vin
3	Common / RTN
4	Vout
5	PG / Trim
6	Mech Pin
7	Mech Pin

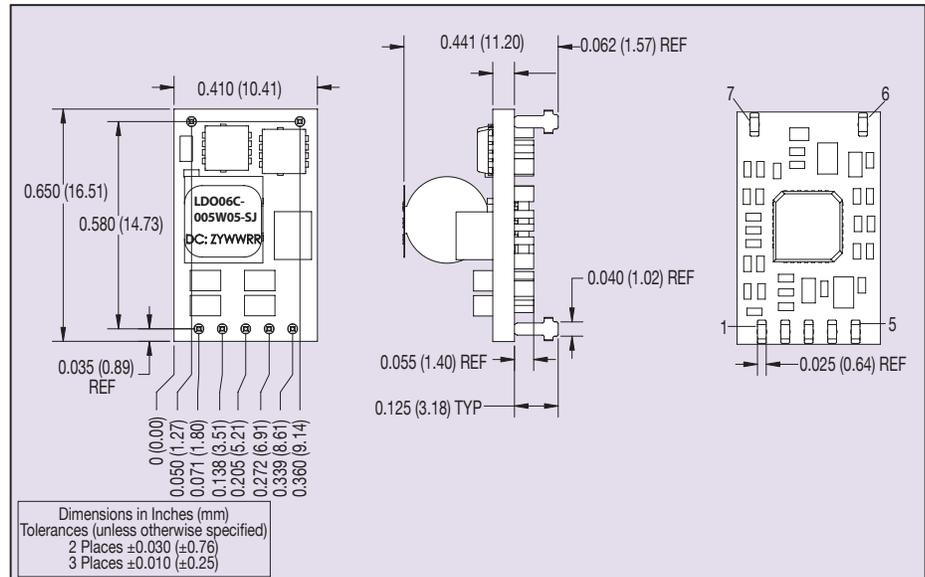


Figure 4: Surface Mount Mechanical Drawing

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Please consult our website for the following items: ✓Application Note ✓Longform Datasheet

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