

## PL5 Series

5A Non-Isolated  
DC-DC Converters

- Industry Standard Package and Pin Out
- DOSA Compatible Models
- Low Voltage Outputs to 0.75V
- Pin and SMT Versions
- Output Voltage Adjustment
- Remote On/Off

### Key Market Segments & Applications

Telecommunications  
Data Communications  
Networking Equipment  
Test Equipment  
Industrial Electronics  
Distributed Power Architecture

### PL5 Features and Benefits

#### Features

- High Efficiency up to 94%
- Wide Output Voltage Adjustment Range
- SMT or Through Hole Packages
- Industry Standard Pin Out

#### Benefits

- Reduces Input Current Draw
- Stock One Part for all Voltages
- Multiple Mounting Methods
- Second Sourcing

### Specifications

| ITEMS                       | MODEL |     | PL5S-05C   | PL5SMS-05C | PL5S-12C            | PL5SMS-12C |
|-----------------------------|-------|-----|--|------------|---------------------|------------|
|                             | (2)   | VDC | 0.75 - 3.3VDC  |            | 0.75 - 5.0VDC       |            |
| Output Voltage Range        | (2)   | VDC | 0.75 - 3.3VDC  |            | 0.75 - 5.0VDC       |            |
| Output Current              |       | A   | 5 Amps   |            |                     |            |
| Output Voltage Accuracy     |       | %   | ±1.5%  |            |                     |            |
| Turn on/off Threshold (typ) |       | VDC | On: 2.0V, Off: 1.9V  |            | On: 8.0V, Off: 7.9V |            |
| Ripple & Noise (Typ)        | (1)   | mV  | 20mV rms, 50mV pk-pkVo=5VDC, 45mV rms, 75mV pk-pk                    |            |                     |            |
| Line Regulation (Typ)       |       | %   | ± 0.4% (Vo=3.3V)   |            | ± 0.2% (Vo=3.3V)    |            |
| Load Regulation (Typ)       |       | %   | ± 0.5% (Vo=3.3V)   |            |                     |            |
| Capacitive Load (max)       |       | µF  | 3000µF   |            |                     |            |
| Transient Response          |       | -   | <200µs settling time for 25% load change                             |            |                     |            |
| Overcurrent Protection      |       | -   | Continuous   |            |                     |            |
| Overvoltage Protection      |       | -   | N/A  |            |                     |            |
| Over Temp. Protection       |       | °C  | 120°C typ.   |            |                     |            |
| Remote Sense                |       | -   | N/A  |            |                     |            |
| Remote On / Off             |       | -   | On: Vin or open circuit; Off: <0.4VDC                                |            |                     |            |
| Operating Temperature       |       | °C  | -40°C to +85°C   |            |                     |            |
| Operating Humidity          |       | %   | 20 - 95% Non condensing  |            |                     |            |
| Storage Temperature         |       | °C  | -55°C to +125°C  |            |                     |            |
| Storage Humidity            |       | %   | 10 - 95% Non condensing  |            |                     |            |
| Cooling                     |       | -   | Convection, or forced air  |            |                     |            |
| Vibration (non operating)   |       | -   | 10 - 500 -10 Hz, amplitude 1.524mm, X, Y, Z 6 minutes each           |            |                     |            |
| Shock                       |       | -   | half sine wave, 40g, 11ms, 3 times each axis, +X, -X, +Y, -Y, +Z, -Z |            |                     |            |
| Safety Agency Approvals     |       | -   | UL/C-UL60950   |            |                     |            |
| Switching Frequency         |       | kHz | 300kHz   |            |                     |            |
| Weight (Typ)                |       | g   | 2.1  | 2.4        | 2.1                 | 2.4        |
| Size (W x L x H)            |       | -   | See outline drawing  |            |                     |            |
| Warranty                    |       | yrs | 2  |            |                     |            |

**Note: See Installation Manual for full details, test methods of parameters and application notes**

(1) The output noise is measured with a 10µF tantalum cap and 1µF ceramic cap across output (2) See application notes for Trim equations and tables

| Model Selector                 |                     |                      |                  |                             |                               |          |
|--------------------------------|---------------------|----------------------|------------------|-----------------------------|-------------------------------|----------|
| Model                          | Input Voltage (VDC) | Output Voltage (VDC) | Output Curr. (A) | Input Current* No Load (mA) | Input Current* Full Load (mA) | Eff. (%) |
|                                | 3.0 - 5.5           | 0.75                 | 5                | 25                          | 949                           | 79       |
|                                | 3.0 - 5.5           | 1.2                  | 5                | 30                          | 1412                          | 85       |
|                                | 3.0 - 5.5           | 1.5                  | 5                | 30                          | 1724                          | 87       |
| <b>PL5S-05C and PL5SMS-05C</b> | 3.0 - 5.5           | 1.8                  | 5                | 35                          | 2022                          | 89       |
|                                | 3.0 - 5.5           | 2                    | 5                | 35                          | 2222                          | 90       |
|                                | 3.0 - 5.5           | 2.5                  | 5                | 35                          | 2217                          | 92       |
|                                | 4.5 - 5.5           | 3.3                  | 5                | 35                          | 3511                          | 94       |
|                                | 8.3 - 14            | 0.75                 | 5                | 20                          | 428                           | 73       |
|                                | 8.3 - 14            | 1.2                  | 5                | 25                          | 625                           | 80       |
|                                | 8.3 - 14            | 1.5                  | 5                | 25                          | 762                           | 82       |
| <b>PL5S-12C and PL5SMS-12C</b> | 8.3 - 14            | 1.8                  | 5                | 30                          | 893                           | 84       |
|                                | 8.3 - 14            | 2                    | 5                | 30                          | 980                           | 85       |
|                                | 8.3 - 14            | 2.5                  | 5                | 35                          | 1197                          | 87       |
|                                | 8.3 - 14            | 3.3                  | 5                | 45                          | 1545                          | 89       |
|                                | 8.3 - 14            | 5.0                  | 5                | 50                          | 2264                          | 92       |

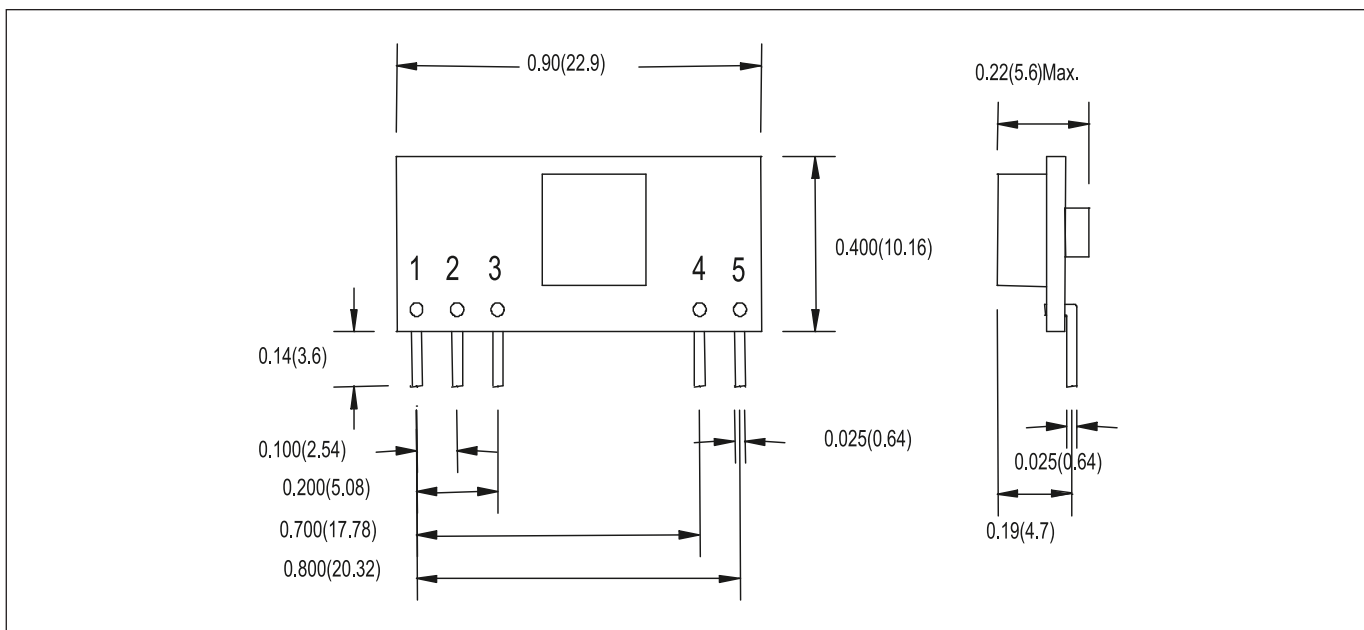
PL5S - SIL 5 pins  
 PL5SMS - Surface Mount

\* At nominal input voltage (5V or 12V depending on model)

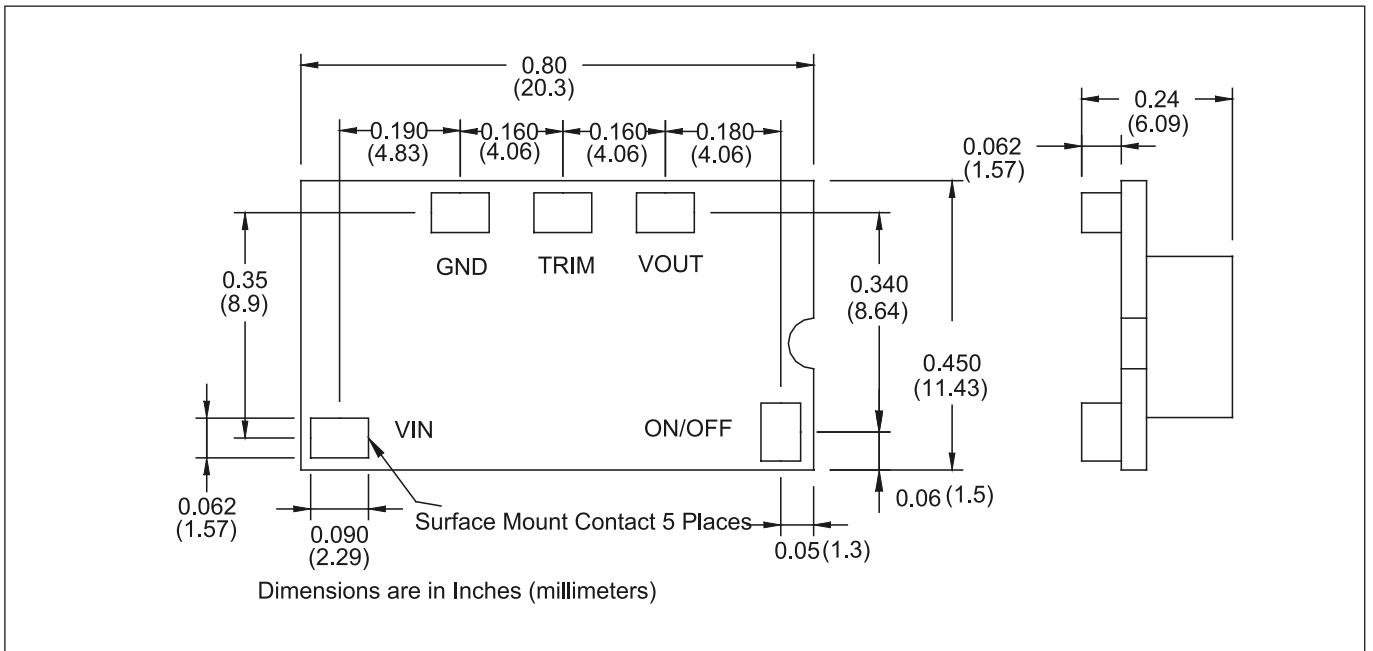
| Remote On /Off Option |   |
|-----------------------|---|
| Suffix                | Function  |
| Blank                 | On: Vin or open circuit; Off<0.4VDC                 |
| N                     | On: open circuit or <0.4VDC;<br>Off: >2.8VDC to Vin |

| Pinout |          |     |          |
|--------|----------|-----|----------|
| PIN    | Function | PIN | Function |
| 1      | + Output | 2   | Trim     |
| 3      | Common   | 4   | +V Input |
| 5      | On/Off   |     |          |

Outline Drawing PL5S Series



Outline Drawing PL5SMS Series



Derating Curve

