

PXA15 Series

Single Output 15W
DC-DC Converters

- Industry Standard 1" x 1" Footprint
- 9-36V or 18-75VDC Input
- Pin & Surface Mount Models
- Efficiency up to 88%
- Fixed switching Frequency

Key Market Segments & Applications

Telecom/Datcom
Process Control
Wireless Network
Measurement & Test

PXA15 Features and Benefits

Features

- UL, C-UL, VDE CE
- 2:1 and 4:1 Range Input
- Surface mount or Through hole

Benefits

- Easier system approvals
- Less parts to inventory
- Reduced radiated noise

| Specifications | Single Output | | |
|---|---|-------------------------------------|------------------|
| Max Output Power | 15W | | |
| Voltage Accuracy | +/-1% | | |
| Voltage Adjustment (1) | +/-10% | | |
| Minimum Load | None | | |
| Line Regulation | +/-0.2% | | |
| Load Regulation | +/-0.2% | | |
| Ripple and Noise | See table | | |
| Start up time | Nominal VIN and constant Resistive load | Power Up 30mS Remote ON/OFF 30mS | |
| Start up voltage 2:1 Input 24V/48V | 17VDC/33VDC | | |
| Start up voltage 4:1 Input 24V/48V | 9VDC/18VDC | | |
| Shut down voltage 2:1 Input 24V/48V | 14.5VDC/30.5VDC | | |
| Shut down voltage 4:1 24V/48V | 8VDC/16VDC | | |
| Remote on/off | Positive Logic: ON: Open or 3-15V, OFF Short or <1.2V Negative Logic: ON: Short or <1.2V, OFF: Open or 3-15V | | |
| Efficiency | See table | | |
| Temperature Coefficient | <+/-0.02%/°C | | |
| Operating Temperature | -40°C to +85°C, derating necessary above 60°C | | |
| Storage Temperature | -55°C to +125°C | | |
| Thermal Shock | MIL-STD-810F | | |
| Relative Humidity (non condensing) | 5 to 95% | | |
| Transient Response (25% step load change) | PXA < 200µS, PXA-W < 300µS recovery | | |
| Overvoltage Protection (Zener clamp) | 120 - 130% | | |
| Overcurrent and Short Circuit Protection | Typically at 150%, hiccup with self recovery | | |
| Input Surge Voltage (Maximum for 100ms) | 24V input: 50V, 48V input: 100V | | |
| Reflected input ripple (peak to peak) | 30mA Typ | | |
| Isolation Voltage (Basic Insulation) | 2250VDC minimum | | |
| Isolation Resistance | 10 ⁹ Ω minimum | | |
| Isolation Capacitance (max) | 2:1 Input, 1000pF/ 4:1 Input, 1500pF | | |
| Typical Switching Frequency (Fixed) | 2:1 Input | 3.3V, 5V 12V, 15V | 270kHz 470kHz |
| | 4:1 Input | 3.3V, 5V 12V, 15V | 350kHz 400kHz |
| | 2:1 Input | | 2,200,000 hours |
| | 4:1 Input | | 1,322,000 hours |
| MTBF (BELLCORE TR-NWT-000332) | MIL-STD-810F | | |
| Conducted and Radiated Emissions (2) | EN55022 Level A | | |
| Immunity (3) | EN61000-4-3, -4, -5, -6 Pref Criteria A | | |
| Safety Agency Certifications | IEC/UL/CSA/EN 62368-1, 60950-1, CE Mark | | |
| Size mm (L x W x H) | 27.9 x 23.9 x 8.5 | | |
| Weight (g) | 10.5 | | |
| Warranty (yrs) | 3 | | |

| Model Selector | | | | | | | | |
|--------------------------------------|------------------|------------------|----------------|-----------------|--------------------------|--------------|------------------------|-------------------------|
| Model | Output Voltage V | Output Current A | Output Power W | Input Voltage V | Nominal Input Current mA | Efficiency % | Ripple and Noise mVp-p | Max Load Capacitance uF |
| 4:1 INPUT Single Outputs | | | | | | | | |
| PXA15-24WS3P3 | 3.3V | 4.0A | 13.2W | 9 - 36VDC | 680mA | 85% | 100mVp-p | 1000uF |
| PXA15-48WS3P3 | 3.3V | 4.0A | 13.2W | 18 - 75VDC | 340mA | 85% | 100mVp-p | 1000uF |
| PXA15-24WS05 | 5V | 3.0A | 15W | 9 - 36VDC | 754mA | 87% | 100mVp-p | 1000uF |
| PXA15-48WS05 | 5V | 3.0A | 15W | 18 - 75VDC | 377mA | 87% | 100mVp-p | 1000uF |
| PXA15-24WS12 | 12V | 1.25A | 15W | 9 - 36VDC | 793mA | 86% | 100mVp-p | 330uF |
| PXA15-48WS12 | 12V | 1.25A | 15W | 18 - 75VDC | 397mA | 86% | 100mVp-p | 330uF |
| PXA15-24WS15 | 15V | 1.0A | 15W | 9 - 36VDC | 763mA | 86% | 100mVp-p | 220uF |
| PXA15-48WS15 | 15V | 1.0A | 15W | 18 - 75VDC | 382mA | 86% | 100mVp-p | 220uF |
| 2:1 INPUT | | | | | | | | |
| PXA15-24S3P3 | 3.3V | 3.5A | 10.5W | 18-36VDC | 587mA | 86% | 75mVp-p | 1000uF |
| PXA15-48S3P3 | 3.3V | 3.5A | 10.5W | 36-75VDC | 297mA | 85% | 75mVp-p | 1000uF |
| PXA15-24S05 | 5V | 3.0A | 15W | 18-36VDC | 753mA | 87% | 75mVp-p | 1000uF |
| PXA15-48S05 | 5V | 3.0A | 15W | 36-75VDC | 377mA | 87% | 75mVp-p | 1000uF |
| PXA15-24S12 | 12V | 1.25A | 15W | 18-36VDC | 753mA | 87% | 100mVp-p | 330uF |
| PXA15-48S12 | 12V | 1.25A | 15W | 36-75VDC | 377mA | 87% | 100mVp-p | 330uF |
| PXA15-24S15 | 15V | 1.0A | 15W | 18-36VDC | 744mA | 88% | 100mVp-p | 220uF |
| PXA15-48S15 | 15V | 1.0A | 15W | 36-75VDC | 372mA | 88% | 100mVp-p | 220uF |

Specification Notes:

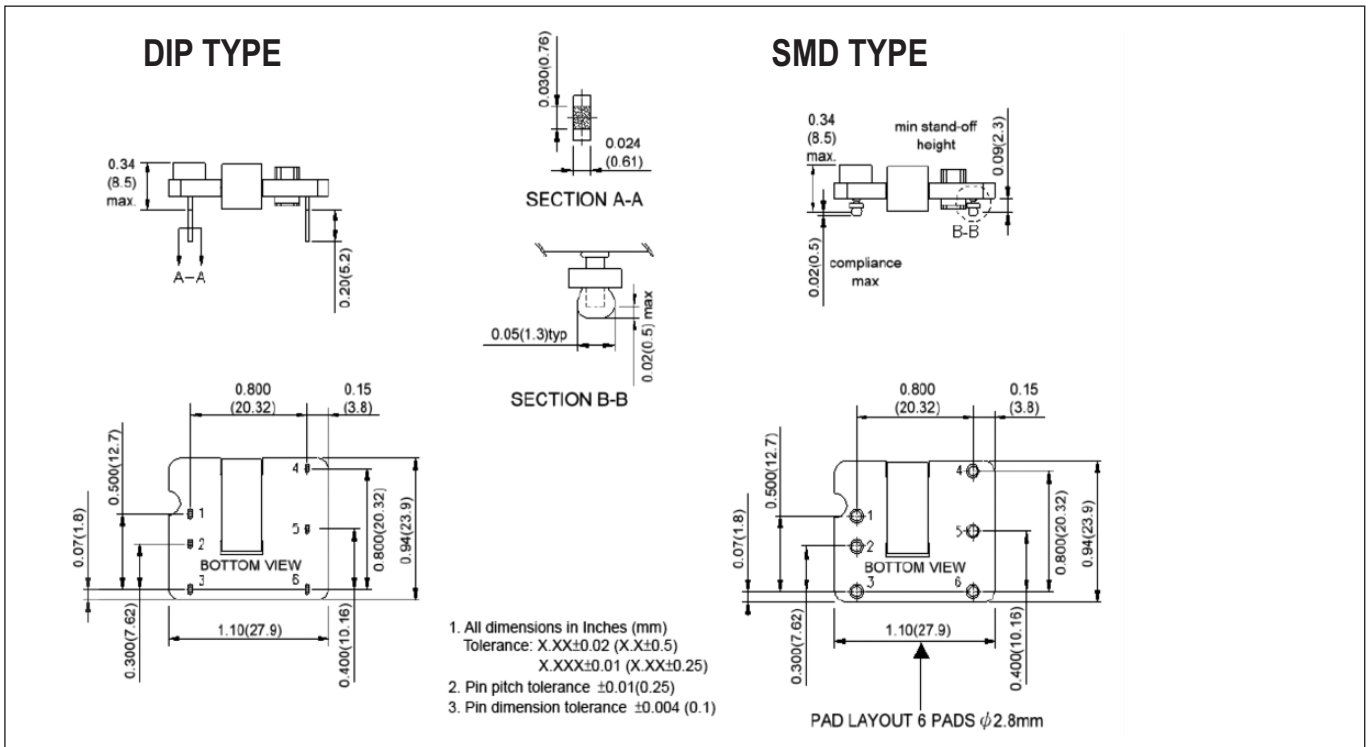
- (1) Output can be trimmed using an external resistor
- (2) To meet EN55022 Class B external filter components are required. See additional application note.
- (3) To meet EN61000-4-4, EN610004-5 an external filter capacitor is required. See additional application note.

| Remote On/Off Options | |
|-----------------------|----------------|
| Suffix | Description |
| P | Positive Logic |
| N | Negative Logic |
| S | Surface Mount |
| T | Trim |

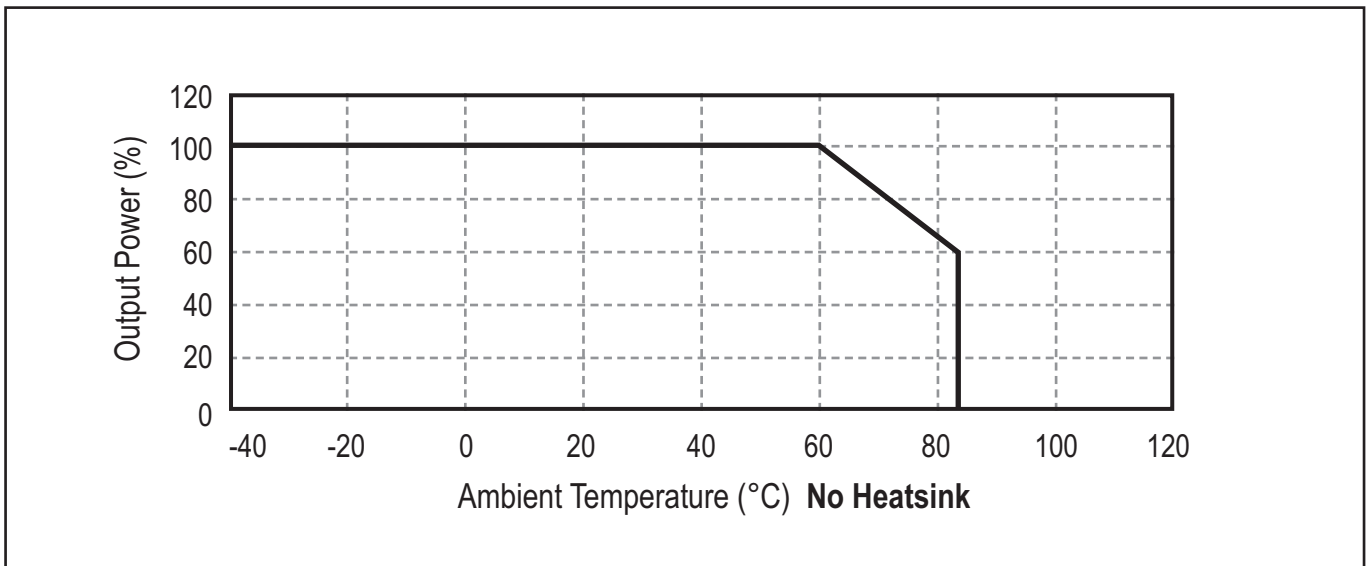
-NST or -NT as standard
Delete suffix if not required

| Pinout - Single Output | |
|------------------------|---------------|
| Pin# | Function |
| 1 | + Input |
| 2 | - Input |
| 3 | Remote On/Off |
| 4 | + Output |
| 5 | Trim |
| 6 | - Output |

Outline Drawing PXA15 Series



Derating Curve PXA15 Series





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