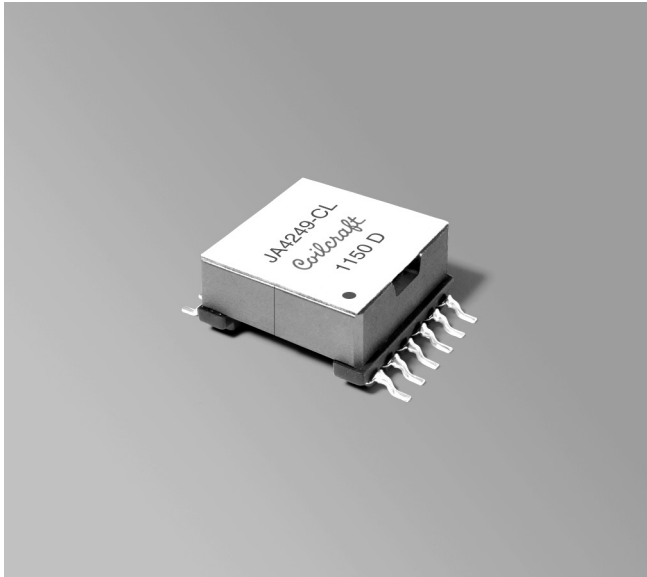




Forward Mode Transformers

For Texas Instruments
TPS23756 PoE Interface



- Developed for the TI TPS23756 High Power/High Efficiency PoE Interface and DC/DC Controller.
- Designed for forward topology operating at 250 kHz with an extended input voltage range of 10 – 57 V.
- 1500 Vrms, one minute isolation, primary and bias to secondary

Core material Ferrite

Terminations RoHS tin-silver (96.5/3.5) over tin over nickel over phos bronze. Other terminations available at additional cost.

Weight 12.1 – 13.1 g

Ambient temperature –40°C to +125°C

Storage temperature Component: –40°C to +125°C.

Tape and reel packaging: –40°C to +80°C

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Mean Time Between Failures (MTBF) / Failures in Time (FIT) 26,315,789 hours / 38 per billion hours, Calculated per Telcordia SR-322

Packaging 175 per 13" reel Plastic tape: 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 11.9 mm pocket depth

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

| Part number ¹ | Inductance ² min (µH) | DCR max (mOhms) ³ | | | Leakage inductance ⁴ max (µH) | Input voltage ⁵ range (V) | Turns ratio ⁶ | | Output ⁷ |
|--------------------------|----------------------------------|------------------------------|-------|-------|--|--------------------------------------|--------------------------|------------|---------------------|
| | | pri | sec | bias | | | pri : sec | pri : bias | |
| JA4249-CL_ | 90 | 0.0180 | 0.015 | 0.320 | 0.120 | 10 – 57 | 1 : 0.80 | 1 : 1.9 | 5 V, 5 A |
| JA4667-AL_ | 90 | 0.0175 | 0.047 | 0.320 | 0.085 | 10 – 57 | 1 : 1.9 | 1 : 1.9 | 12 V, 2 A |

1. When ordering, please specify a **packaging** code:

JA4667-ALD

Packaging: D = 13" machine ready reel. EIA-481 embossed plastic tape (175 parts per full reel).

B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter D instead.

2. Inductance is measured at 250 kHz, 0.2 Vrms, 0 Adc.

3. DCR for the secondary is measured with the windings connected in parallel.

4. Leakage inductance is for the primary and is measured with the secondary shorted.

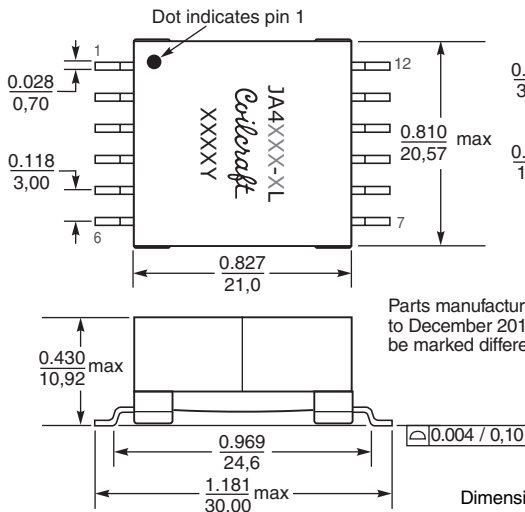
5. Maximum duty cycle at minimum input voltage is 0.72.

6. Turns ratio is with the primary windings and secondary windings connected in parallel.

7. Output is with the secondary windings connected in parallel. Bias winding output is 12 V, 20 mA.

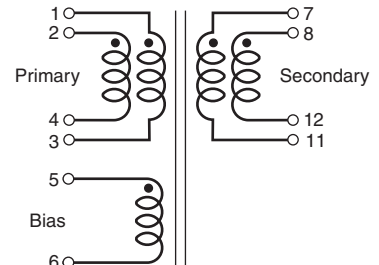
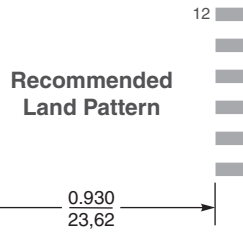
8. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



Parts manufactured prior to December 2011 may be marked differently.

Dimensions are in inches/mm



Primary windings and secondary windings to be connected in parallel on PC board.



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