Features

- IEEE 802.3 Ethernet compatible
- Compatible with 1G/2.5G/5G Base-T
- PoE+ capable
- Discrete transformers and common mode chip inductors for flexible PCB layout
- Pairing common mode chip inductor SRF2012A-801Y for EMI reduction
- Expanded temperature range: -40 to +85 °C
- RoHS compliant* and halogen free**

Electrical Specifications @ 25 °C

Inductance (Pin 1-2 & 6-7 / short 3-4)
230 µH min. @ 100 kHz, 0.1 V, 0 mA
200 µH min. @ 100 kHz, 0.1 V, 15 mA

Turns Ratio
Pin 1-2 : 6-7 / short 3-4 : 1:1 ± 3 %
1-250 MHz: -1.5 dB typ.
35 pF typ.
PoE+:
1500 V ac, 60 s

Insertion Loss
1-250 MHz:
-1.5 dB typ.
-2.3 dB max.

Capacitance (Pin 3-5 / short 3-4)
35 pF typ.

PoE+
700 mA

Hi-Pot (Pin 1-6, short 3-4)
1500 V ac, 60 s

Operating Temperature
-40 °C to +85 °C

Storage Temperature
-40 °C to +85 °C

Additional Information

Click these links for more information:
PRODUCT TECHNICAL LIBRARY INVENTORY SAMPLES CONTACT

How To Order

SM453230 - 231 - N7 Y P
Model
Packaging
Termination
Tolerance
Interface

P = PoE

Product Dimensions

Terminal Dimensions – Top View

DIMENSIONS:
MM (INCHES)

0.14 ± 0.05
0.30 ± 0.06
0.85 ± 0.16
0.41 ± 0.06
0.45 ± 0.08
0.50 ± 0.20
2.70 ± 0.20
1.00 ± 0.20
1.00 ± 0.20
4.70 ± 0.2
0.41 ± 0.06
0.90 ± 0.16
0.32 ± 0.06
0.61 ± 0.10
0.60 ± 0.20
4.70 ± 0.2
(0.006 ± .002)
(0.036 ± .006)
(0.033 ± .006)
(0.004 ± .002)
(0.020 ± .004)
(0.019 ± .004)
(0.185 ± .008)
(0.039 ± .008)
(0.106 ± .008)
(0.018 ± .003)
(0.012 ± .002)
(0.019 ± .004)
(0.024 ± .003)
(0.130 ± .008)
(0.012 ± .002)

WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.
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Recommended Layout

Electrical Schematic

Solder Paste Stencil Aperture Recommendation

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Solder Reflow Recommendations

**Profile Feature**  | **Pb-Free Assembly**
--- | ---
Preheat / Soak:  
Temperature Min. \((T_{\text{min}})\) | 150 °C
Temperature Max. \((T_{\text{max}})\) | 200 °C
Time \((t_{\text{s}})\) from \((T_{\text{min}})\) to \((T_{\text{max}})\) | 60–120 seconds

Ramp Up Rate \((T_{\text{L}}\) to \(T_{\text{P}})\) | 3 °C / second max.

Liquidous Temperature \((T_{\text{L}})\) | 217 °C
Time \((t_{\text{L}})\) maintained above \(T_{\text{L}}\) | 60–150 seconds

Peak Package Body Temperature \((T_{\text{P}})\) | 250 °C
Time \((t_{\text{P}})\) \* within 5 °C of the specified classification temperature \((T_{\text{C}})\) | 30 seconds\*

Ramp Down Rate \((T_{\text{P}}\) to \(T_{\text{L}})\) | 6 °C / second max.

Time 25 °C to Peak Temperature | 8 minutes max.

*Tolerance for peak profile temperature \((T_{\text{P}})\) is defined as a supplier minimum and a user maximum.

Packaging Specifications

Dimensions:

- **Cover Tape**
  - 2.0 ± 0.5 (0.079 ± 0.020)
  - 1.75 ± 0.10 (0.069 ± 0.004)
  - 12.00 ± 0.10 (0.472 ± 0.004)
  - 8.00 ± 0.10 (0.315 ± 0.004)

- **Embossed Carrier**
  - 2.0 ± 0.5 (0.079 ± 0.020)
  - 1.75 ± 0.10 (0.069 ± 0.004)
  - 12.00 ± 0.10 (0.472 ± 0.004)

- **User Direction of Feed**
  - QTY: 2000 PCS. PER REEL

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