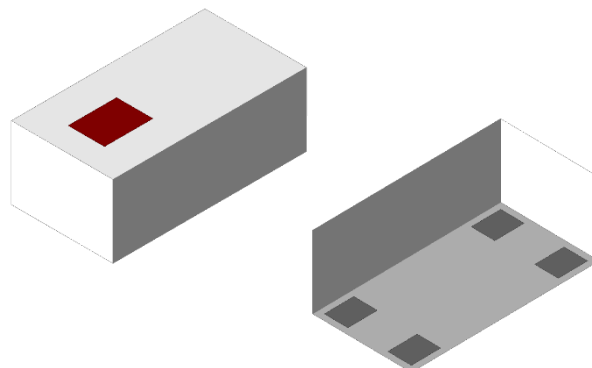


## 898 MHz Directional RF Coupler

- 865 – 928 MHz passband
- For wireless applications, such as ISM consumer Sub GHz, IoT smart home, cellular, LoRa®, etc
- Small size, EIA 0603, SMD
- RoHS compliant



### General Specifications<sup>1 2</sup>

| Passband Frequency (MHz) | 880 - 915 | 865 - 928 |
|--------------------------|-----------|-----------|
| Insertion Loss (dB)      |           | 0.35 Max. |
| Return Loss (dB)         |           | 18 Min.   |
| Coupling                 | 17 ± 1.0  | 17 ± 1.2  |
| Isolation (dB)           |           | 30 Min.   |

### Maximum Ratings

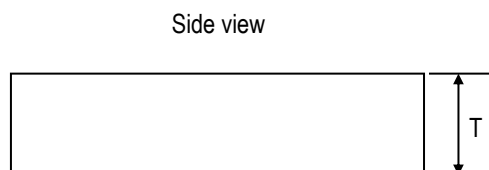
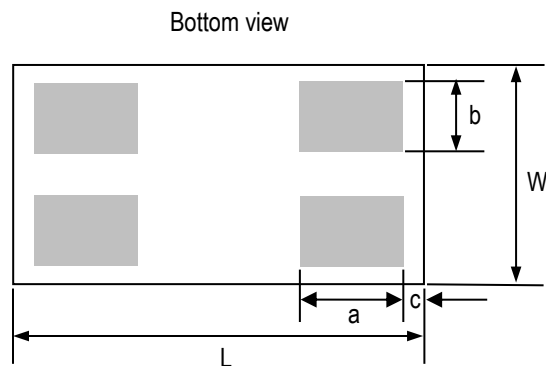
|  |  |
|--|--|
| Power Capacity (W)   | 2 Max. (CW)                                    |
| Operating Temperature (°C)                                       | -40 to +85                                     |
| Recommended Storage Conditions post-installation (°C)            | -40 to +85                                     |
| Recommended Storage Conditions and Period for Unused T&R Product | 45% - 75% RH<br>+5 to +35 °C<br>18 Months Max. |

<sup>1</sup> Typical value represents average measurement at 25°C. Min./Max. values represent measurements over specified operating temperature.

<sup>2</sup> General specifications measured on Johanson's evaluation board P/N 0898CP14C0035001CE1.

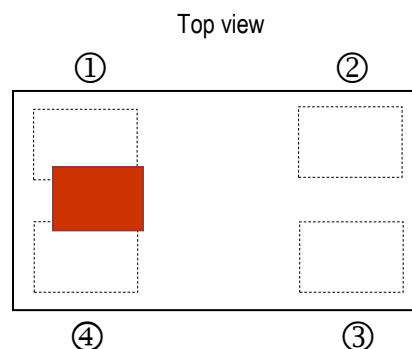
**Mechanical Dimensions**

|          | Inches |   |       | Millimeters |   |      |
|----------|--------|---|-------|-------------|---|------|
| <b>L</b> | 0.063  | ± | 0.004 | 1.60        | ± | 0.10 |
| <b>W</b> | 0.033  | ± | 0.004 | 0.84        | ± | 0.10 |
| <b>T</b> | 0.024  | ± | 0.004 | 0.60        | ± | 0.10 |
| <b>a</b> | 0.010  | ± | 0.002 | 0.25        | ± | 0.05 |
| <b>b</b> | 0.008  | ± | 0.002 | 0.20        | ± | 0.05 |
| <b>c</b> | 0.002  | ± | 0.002 | 0.05        | ± | 0.05 |



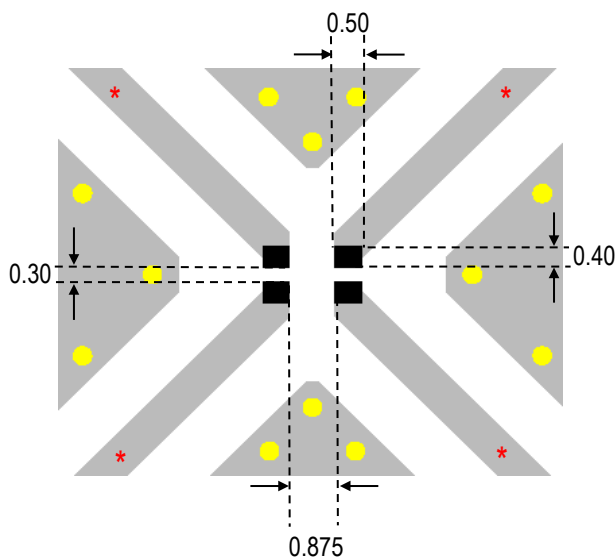
**Terminal Configuration<sup>3</sup>**

| Pin Number | Function    |
|------------|-------------|
| 1          | In          |
| 2          | Main Out    |
| 3          | Termination |
| 4          | Coupled Out |



<sup>3</sup> The termination type is Nickel Tin. Go to: <https://www.johansontechnology.com/ipcsoldering-profile> for Typical Soldering Profile.


**Recommended PCB Layout**



Units in mm

 Solder Resist

 Land

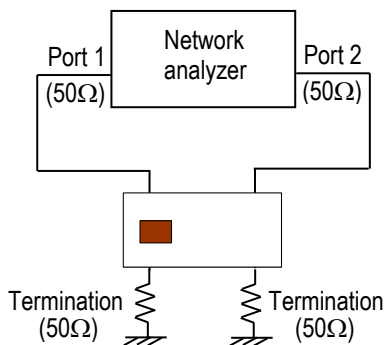
 Through-hole ( $\phi 0.3$ )

\* Transmission line width should be designed to match 50Ω characteristic impedance, depending on PCB material and thickness.

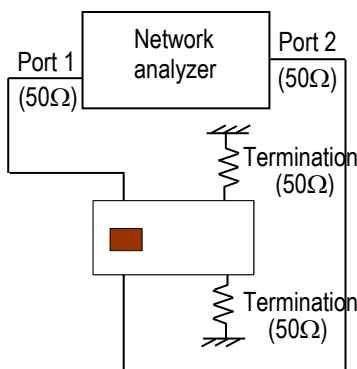
If you would like the CAD PCB layout or have any technical questions, please contact our application engineers at <https://www.johansontechnology.com/ask-a-question>

**Measuring Diagram**

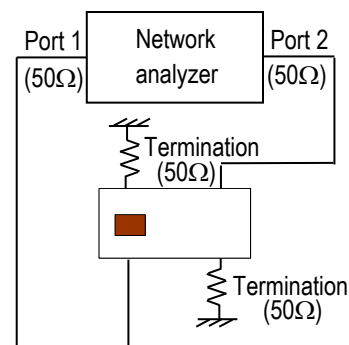
**Insertion Loss and Return Loss**



**Coupling**

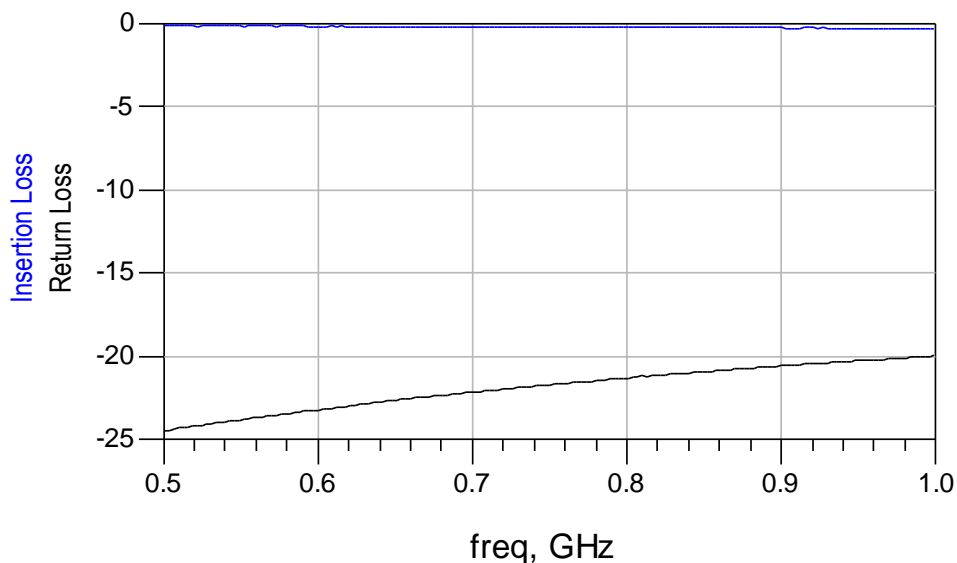


**Isolation**

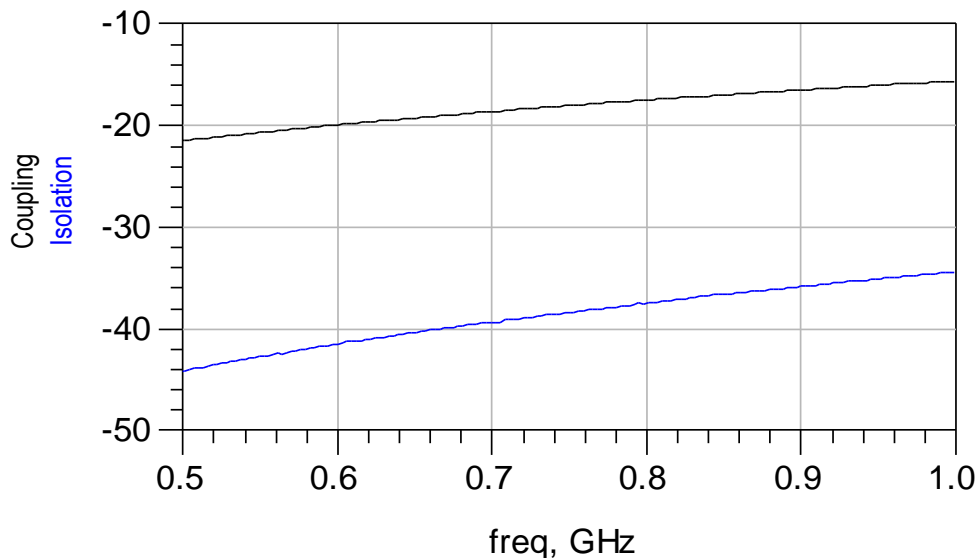


**RF Measurements (T = 25°C)**

**Insertion Loss and Return Loss**



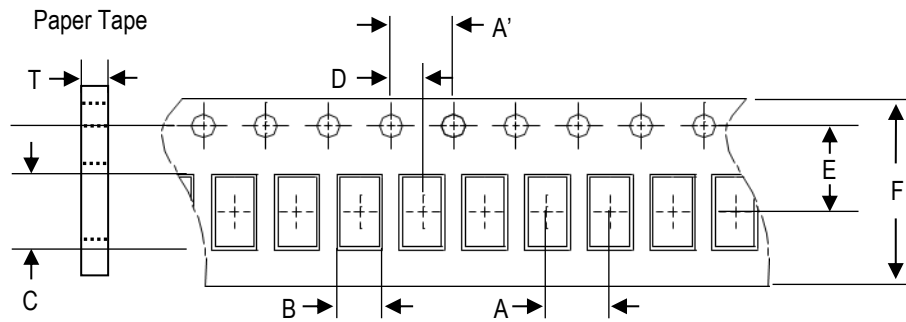
**Coupling and Isolation**



S-parameter and layout file available upon request. Please contact us at <https://www.johansontechnology.com/ask-a-question>

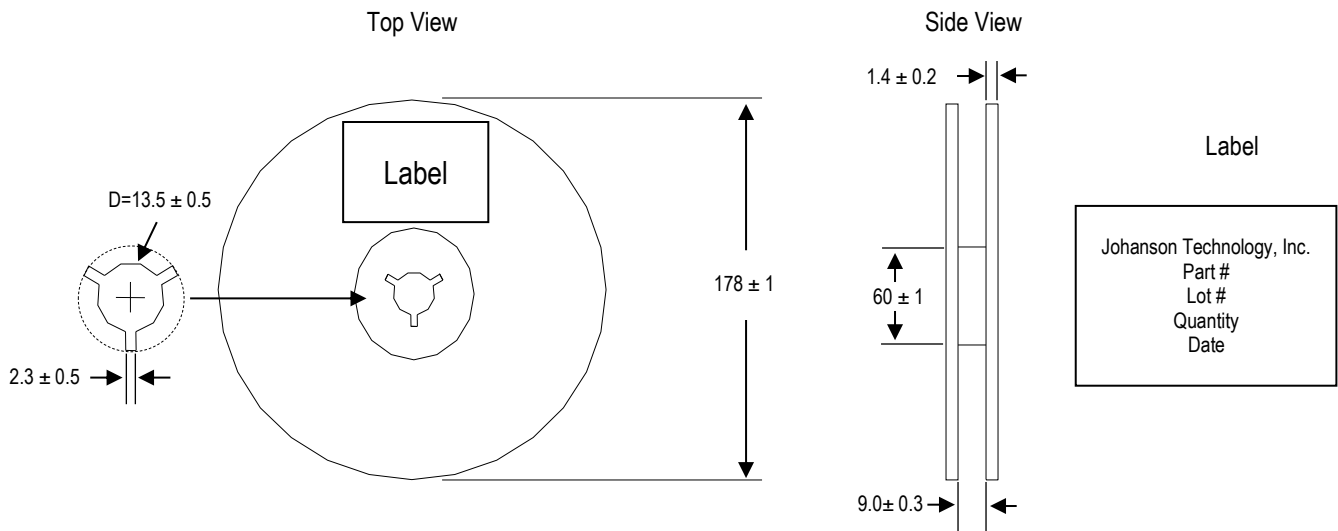
**Tape and Reel Specification (Units in mm)**

**Tape Dimensions**

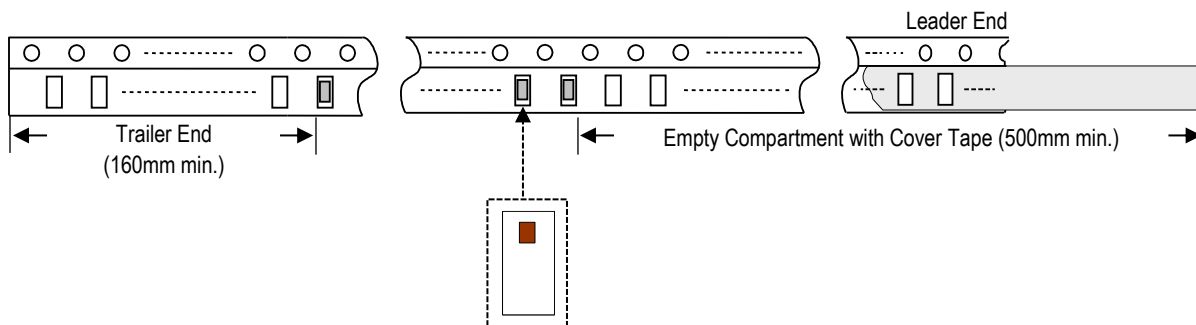


| A       | A'      | B       | C        | D       | E       | F       | T         | Quantity/reel | Tape material |
|---------|---------|---------|----------|---------|---------|---------|-----------|---------------|---------------|
| 4.0±0.1 | 4.0±0.1 | 1.1±0.1 | 1.92±0.1 | 2.0±0.1 | 3.5±0.1 | 8.0±0.1 | 0.75±0.05 | 4,000pcs.     | Paper         |

**Reel Dimensions**



**Leader and Trailer Dimensions**



**Orderable Part Numbers**

| Packaging Style                       | Part Number                             | Termination |
|---------------------------------------|---|-------------|
| Bulk (loose pcs.)                     | 0898CP14C0035001B                       | Nickel Tin  |
| T & R (7" Reel Paper Tape)            | 0898CP14C0035001T (Qty: 4,000 pcs/reel) |             |
| Evaluation Board with 4 SMA Connector | 0898CP14C0035001CE1                     |             |

**Important Links**

[0898CP14C0035001T Product Page](#)

[More RF Couplers](#)

[Soldering Information](#)

[MSL Information](#)

[Packaging Information](#)

[Recommended Storage Condition and Max Shelf Life](#)

[RoHS Compliance](#)

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