

High Frequency Ceramic Solutions

862 - 928MHz, 2.4 - 2.5GHz Integrated Impedance-matched Balun Filter for Texas Instruments CC1352R and CC1352P P/N: 0900PC15A0036

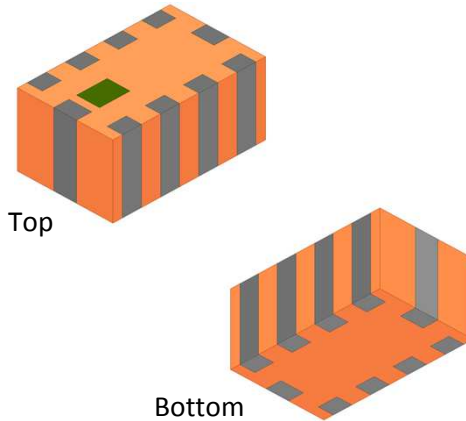
Detail Specification: 5/12/2021

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Do you need a small sub-GHz or 2.4GHz antenna? Go to: <https://www.johansontechnology.com/antennas>

General Specifications

| | | |
|----------------------------------|---|--|
| Part Number | 0900PC15A0036 | |
| Frequency (MHz) | 862 - 928 | 2400 - 2500 |
| Insertion Loss (dB) | 1.8 typ (2.0 max.) | 1.3 typ (1.6 max.) |
| Return Loss (dB) | 14 typ. (10 min.) | 14 typ. (10 min.) |
| Phase Balance (deg) | 180±15 | 180±15 |
| Amplitude Difference (dB) | 0.8 typ. (1.5 max.) | 1.0 typ. (2.0 max.) |
| Attenuation (dB @MHz) | 17 min. @1736 - 1856 40 min. @2604 - 2784 | 20 min. @4800 - 5000 40 min. @7200 - 7500 |
| Unbalanced Impedance (Ω) | 50 | |
| Balanced Impedance (Ω) | Impedance matched to Texas Instruments CC1352R and CC1352P | |
| Power Capacity (W) | 3 max. CW | |
| Operating Temperature | -40°C to +85°C | |
| Quantity/Reel | 4,000 | |



| | |
|--|---|
| Recommended Storage Conditions and Period for unused product on T&R | +5 to +35°C Humidity 45~75%RH 18 months max.* |
|--|---|

*18 months max. in vacuum sealed bag and 1 week after opened. Please see: <https://www.johansontechnology.com/silverleads>

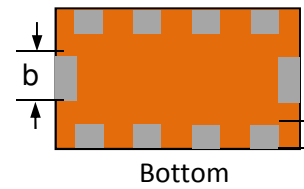
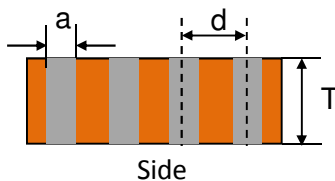
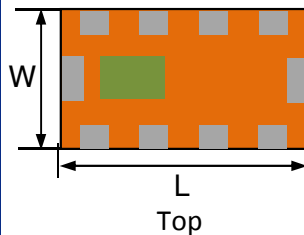
Part Number Explanation

| P/N Suffix | Packing Style | Bulk (loose pcs.) | Suffix = S | E.g. 0900PC15A0036S |
|------------|-------------------|-------------------|---------------|----------------------------|
| | | T & R | Suffix = E | E.g. 0900PC15A0036E |
| | Termination Style | Ag/Pt | Suffix = None | E.g. 0900PC15A0036(E or S) |

For more Texas Instruments matched balun-filters, go to: <https://www.johansontechnology.com/ti>

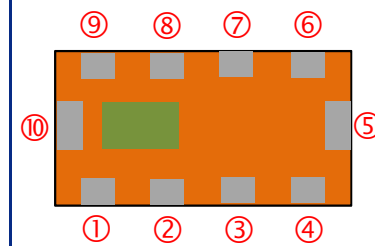
Mechanical Dimensions

| | In | mm |
|----------|--------------------|-----------------|
| L | 0.079 ± 0.008 | 2.00 ± 0.2 |
| W | 0.049 ± 0.008 | 1.25 ± 0.2 |
| T | 0.039 max. | 1.00 max. |
| a | 0.010 ± 0.004 | 0.25 ± 0.1 |
| b | 0.012 ± 0.006 | 0.30 ± 0.15 |
| c | 0.008+0.004/-0.006 | 0.20 +0.1/-0.15 |
| d | 0.020 ± 0.004 | 0.50 ± 0.1 |



Terminal Configuration

| No. | Function | No. | Function |
|-----|---------------|-----|----------------|
| 1 | ANT (2.4GHz) | 6 | RF_N (Sub-GHz) |
| 2 | GND | 7 | RX_P (Sub-GHz) |
| 3 | GND | 8 | RF_N (2.4GHz) |
| 4 | ANT (Sub-GHz) | 9 | RF_P (2.4GHz) |
| 5 | RX_TX | 10 | GND |



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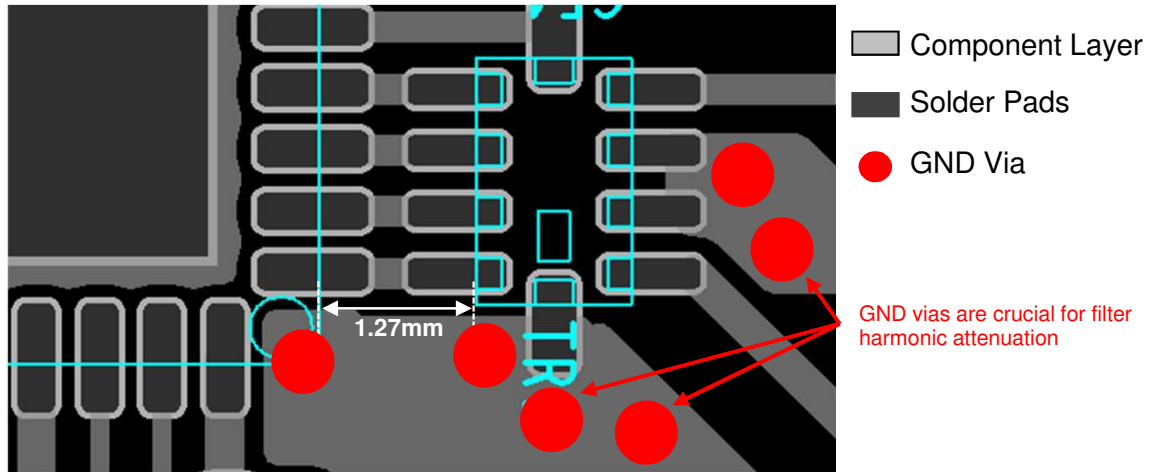
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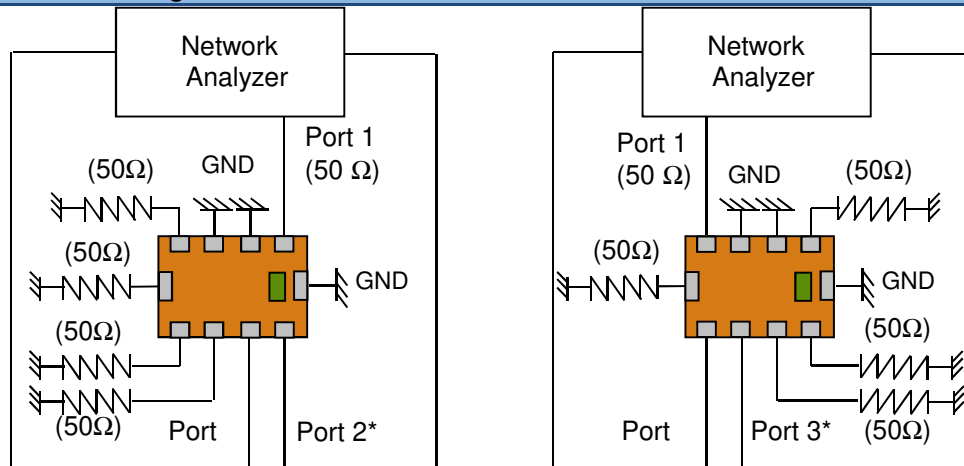
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Pad-Soldermask Guidelines



For reference design package and PCB CAD files, please contact us at: <https://www.johansontechnology.com/ask-a-question>

PCB Reference Design Schematic



Port 1: Unbalanced Port, **Ports 2 and 3:** Balanced Port

*Impedance for ports 2 and 3 = Conjugate to Balanced Impedance/2

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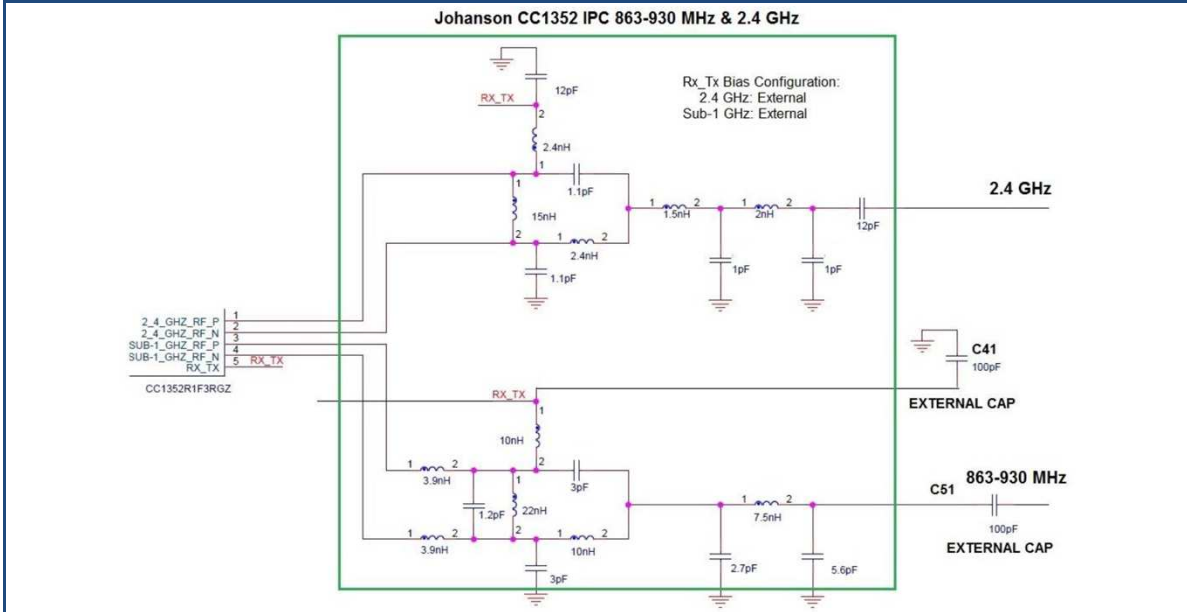
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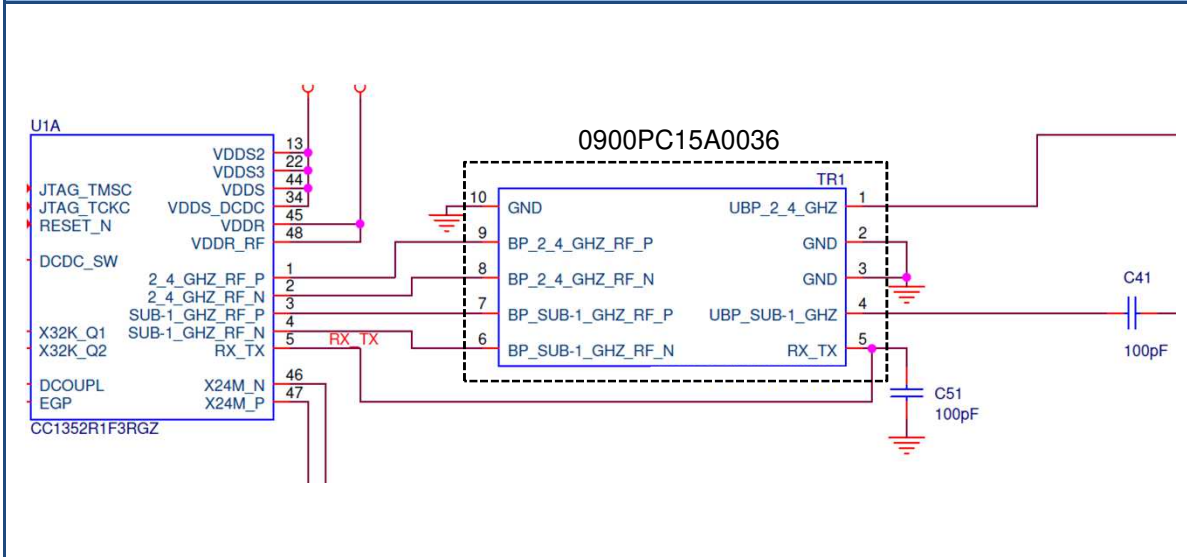
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Discrete Components Integrated into IPC



PCB Reference Design Schematic



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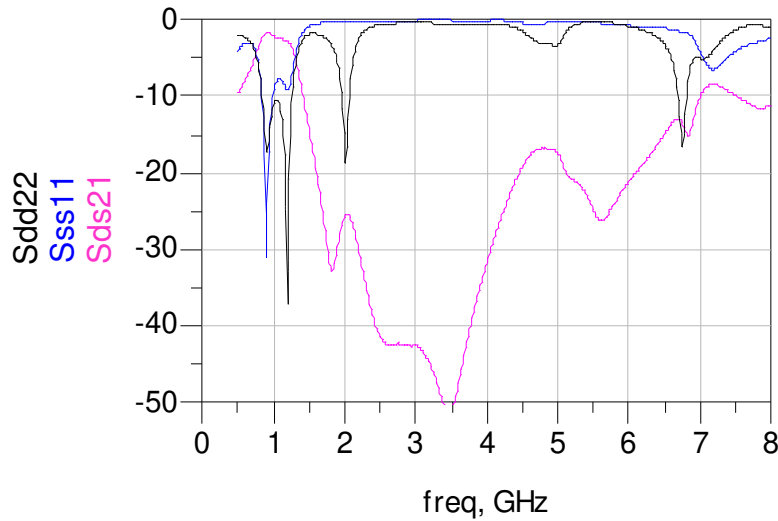
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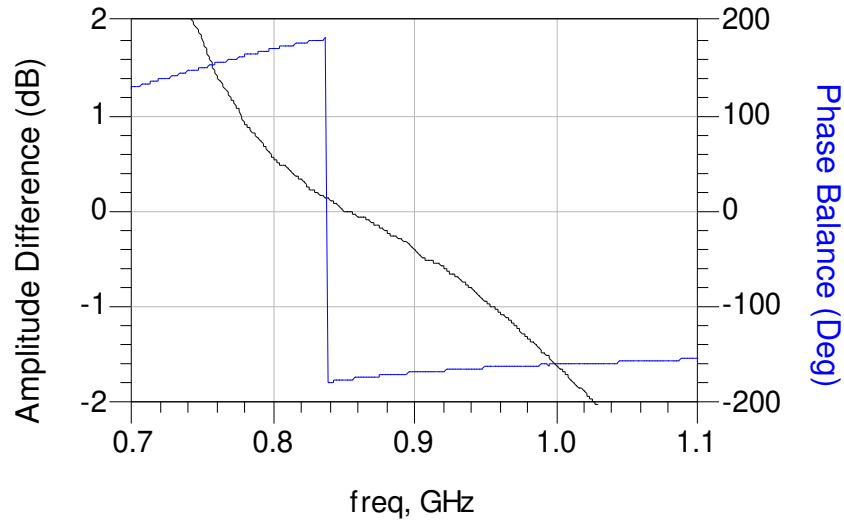
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Sub-GHz Electrical Characteristics at T=25°C

Insertion Loss, Attenuation



Phase Balance, Amplitude Difference



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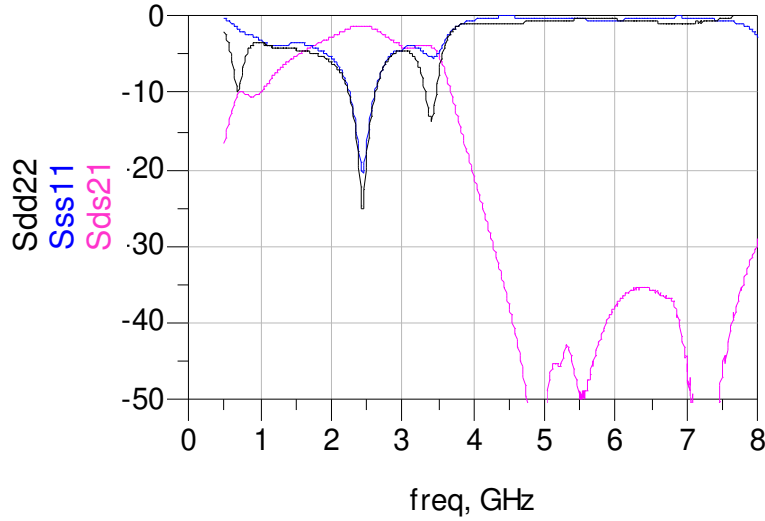
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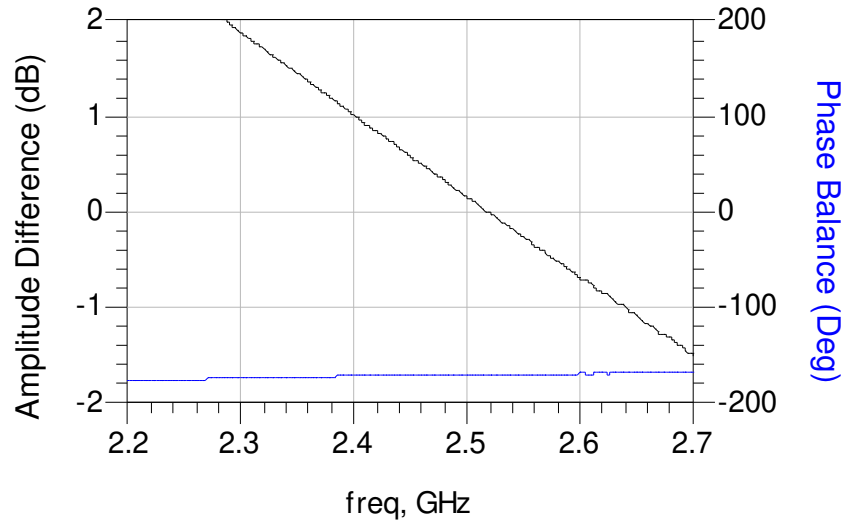
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2.4GHz Electrical Characteristics at T=25°C

Insertion Loss, Attenuation



Phase Balance, Amplitude Difference



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Application Notes, Layout Files, and more

<https://www.johansontechnology.com/ti>

Small SMD 900MHz (or 2.4G, 5G) antennas at:

<https://www.johansontechnology.com/antennas>

RoHS Compliance

<https://www.johansontechnology.com/rohs-compliance>

Soldering Information

<https://www.johansontechnology.com/ipcsoldering-profile>

Antenna layout and tuning techniques

<https://www.johansontechnology.com/tuning>

Antenna layout review, tuning, and characterization services

<https://www.johansontechnology.com/ipc-antenna-services>

MSL Info

<https://www.johansontechnology.com/msl-rating>

Recommended Storage Condition and Max Shelf Life

<https://www.johansontechnology.com/recommended-storage-conditions>

Packaging information

<https://www.johansontechnology.com/tape-reel-packaging>

Silverleads Information

<https://www.johansontechnology.com/silverleads>

Would you like us to review your layout for free? Need an embedded antenna recommendation for your application?

Contact us at:

<https://www.johansontechnology.com/ask-a-question>

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