

# High Frequency Ceramic Solutions

**NXP (Freescale) KW40, KW30, and KW20 Impedance Matched Front End P/N: 2450BM15B0026**  
**Balun + BPF (FCC/ETSI-compliant filter embedded)**

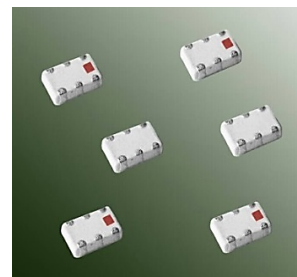
Detail Specification: 5/26/2016

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## General Specifications

|                      |                                                                               |
|----------------------|-------------------------------------------------------------------------------|
| Part Number          | 2450BM15B0026                                                                 |
| Frequency (MHz)      | 2400-2500                                                                     |
| Unbalanced Impedance | 50                                                                            |
| Balanced Impedance   | Conj. match to NXP Freescale KW40/30/20 RF Chipsets*                          |
| Insertion Loss       | 1.0 dB Typ (1.5 dB max.)                                                      |
| Return Loss          | 9.5 dB min.                                                                   |
| Phase Diff.          | 180±10 deg.                                                                   |
| Amp. Diff.           | 2.0 max.                                                                      |
| Attenuation          | 15 dB min.@ 1170 MHz<br>22 dB min.@ 4800~5000MHz<br>18 dB min.@ 7200~7500 MHz |
| Q'ty/Reel            | 4,000 pcs                                                                     |
| Power Capacity       | 2W max. CW                                                                    |

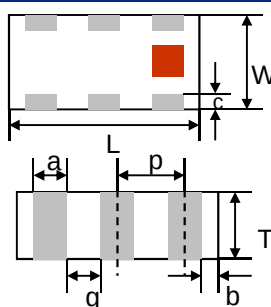


|                                                          |                                              |
|----------------------------------------------------------|----------------------------------------------|
| Operating Temperature                                    | -40°C to +85°C                               |
| Storage Temperature Range                                | -40°C to +85°C                               |
| Storage Period                                           | 18 months max                                |
| Recommended Storage Conditions for unused product on T&R | +5 to +35°C, Humidity: 45-75%RH, 18 mos. Max |

\*Do you need help with the layout (free service)? Send us a message and we'll put you in touch with an RF Engineer!  
[www.johansontechnology.com/ask-a-question](http://www.johansontechnology.com/ask-a-question)

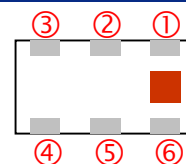
## Mechanical Dimensions

|   | In                   | mm              |
|---|----------------------|-----------------|
| L | 0.079 ± 0.004        | 2.00 ± 0.10     |
| W | 0.049 ± 0.004        | 1.25 ± 0.10     |
| T | 0.028 ± 0.004        | 0.70 ± 0.10     |
| a | 0.012 ± 0.004        | 0.30 ± 0.10     |
| b | 0.008 ± 0.004        | 0.20 ± 0.10     |
| c | 0.012 ± 0.004/-0.008 | 0.30 ± 0.1/-0.2 |
| g | 0.014 ± 0.004        | 0.35 ± 0.10     |
| p | 0.026 ± 0.002        | 0.65 ± 0.05     |



## Terminal Configuration

| No. | Function        | No. | Function      |
|-----|-----------------|-----|---------------|
| 1   | Unbalanced Port | 4   | Balanced Port |
| 2   | GND or DC Feed  | 5   | GND           |
| 3   | Balanced Port   | 6   | GND           |



## Part Number Explanation

| P/N Suffix | Packing Style | Bulk     | Suffix = S    | eg. 2450BM15B0026S        |
|------------|---------------|----------|---------------|---------------------------|
|            |               | T & R    | Suffix = E    | eg. 2450BM15B0026E        |
|            |               | 100% Tin | Suffix = None | eg. 2450BM15B0026(E or S) |

Download the measured s-parameters (to simulate our component), schematic, and gerber/layout files at:  
[www.johansontechnology.com/nxp](http://www.johansontechnology.com/nxp)

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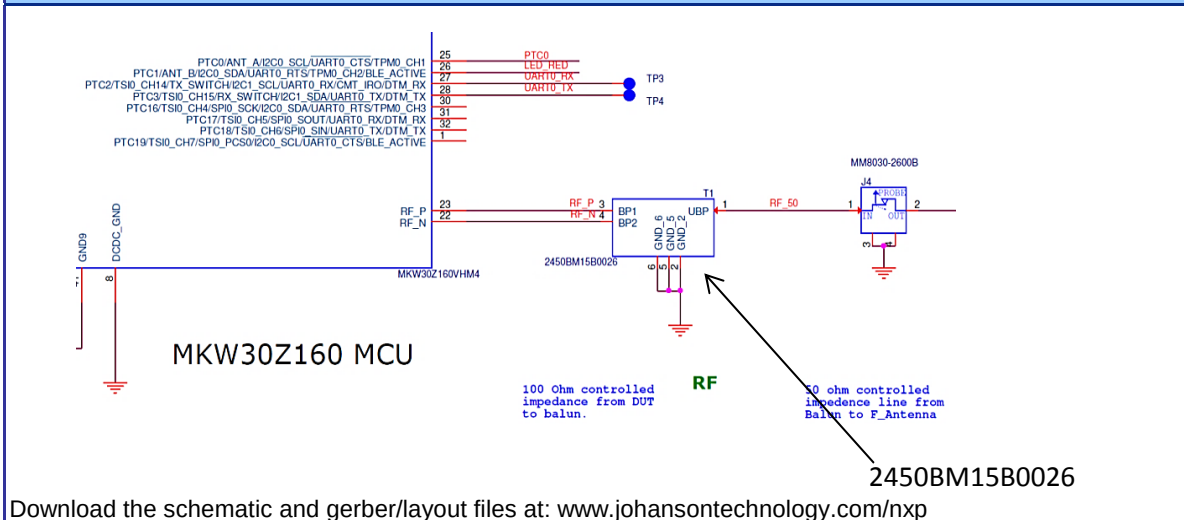
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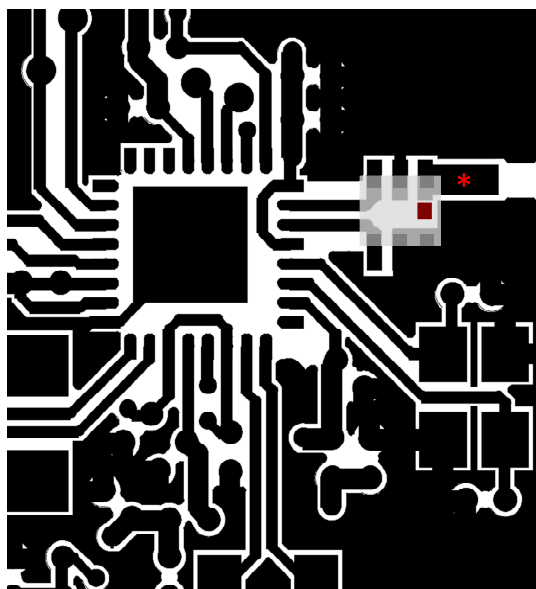
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## Schematic



## Layout Mounting Considerations



Need help with the layout of the component or help choosing a mini 2.4GHz antenna? Contact us at: [www.johansontechnology.com/ask-a-question](http://www.johansontechnology.com/ask-a-question)

\* Line width should be designed to match 50ohm characteristic impedance, depending on PCB material and thickness. Grounded CPWG is recommended.

Download the complete layout file at at: [www.johansontechnology.com/nxp](http://www.johansontechnology.com/nxp)

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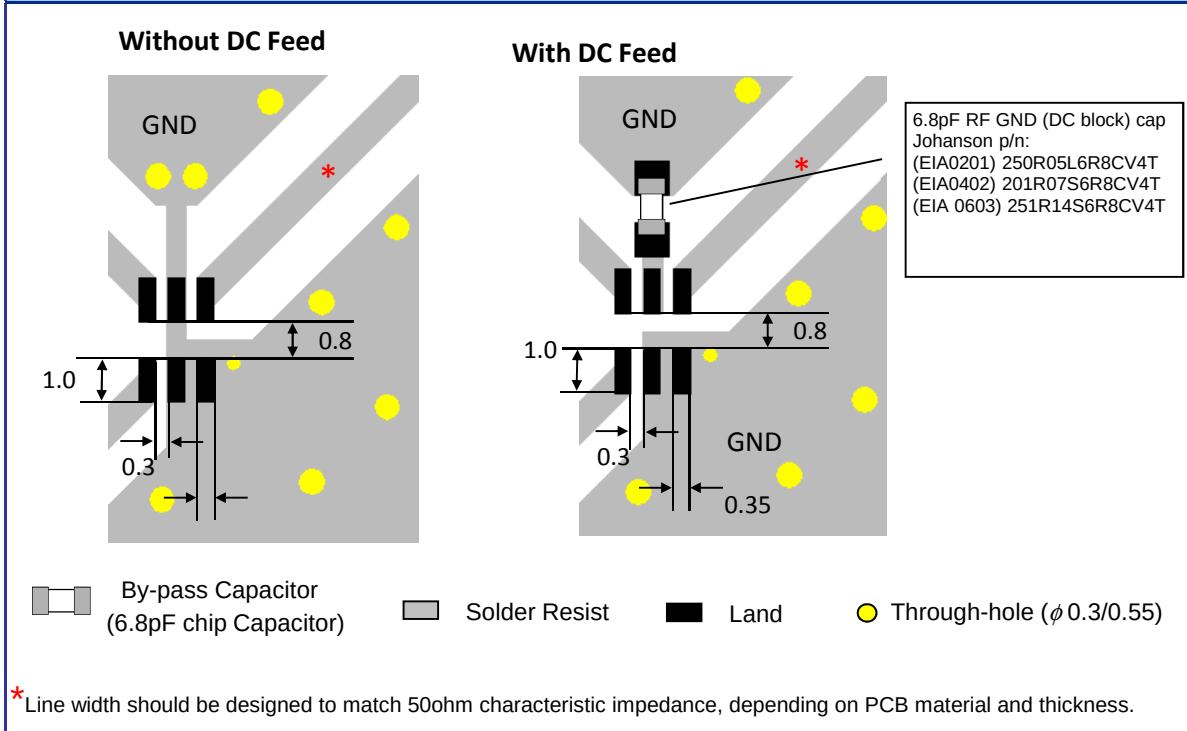
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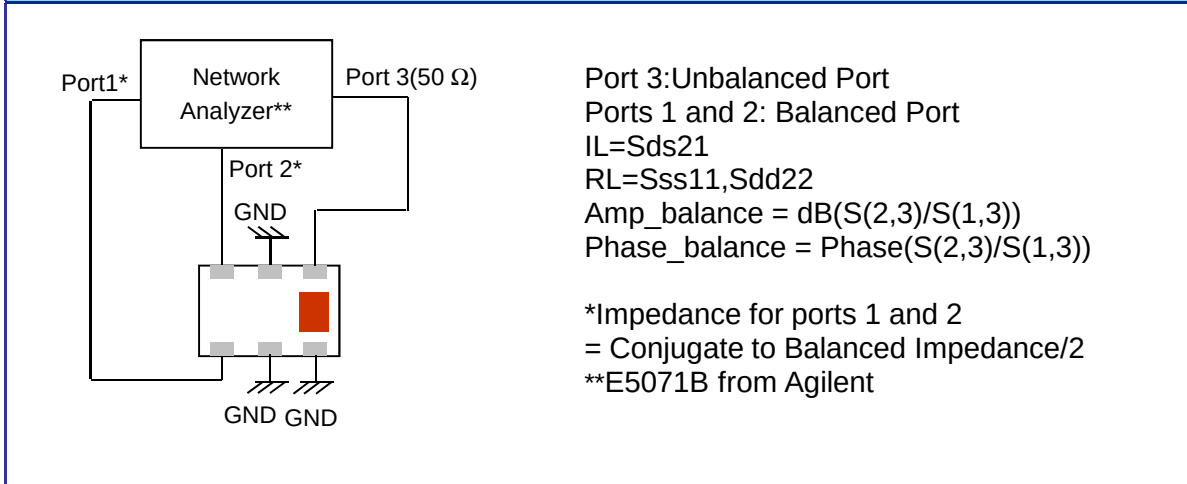
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## Mounting Considerations



## Mounting Diagram



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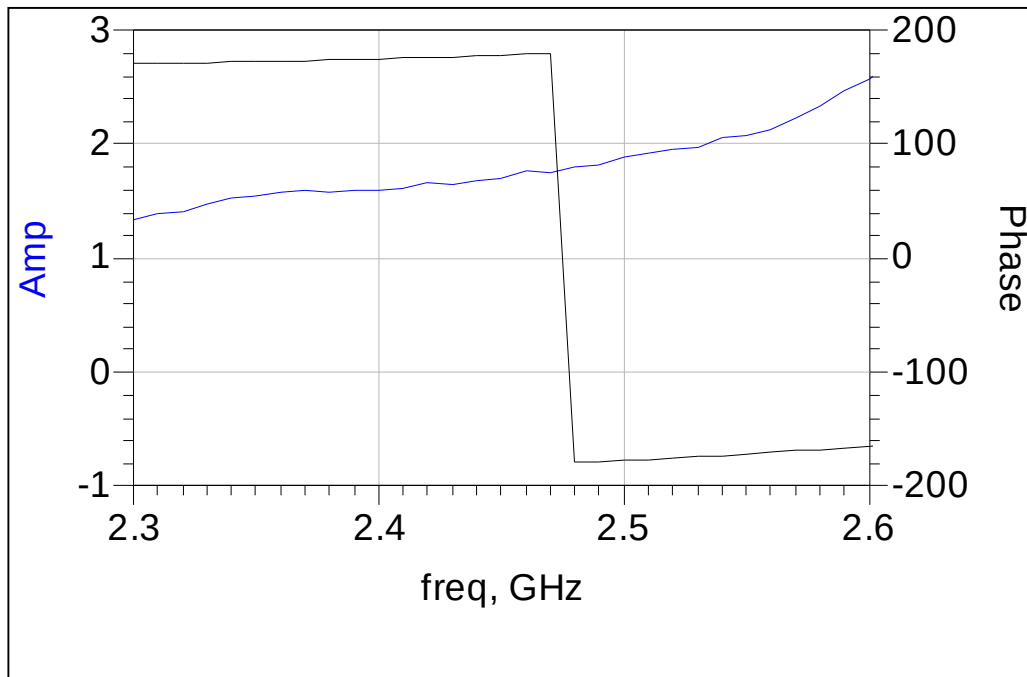
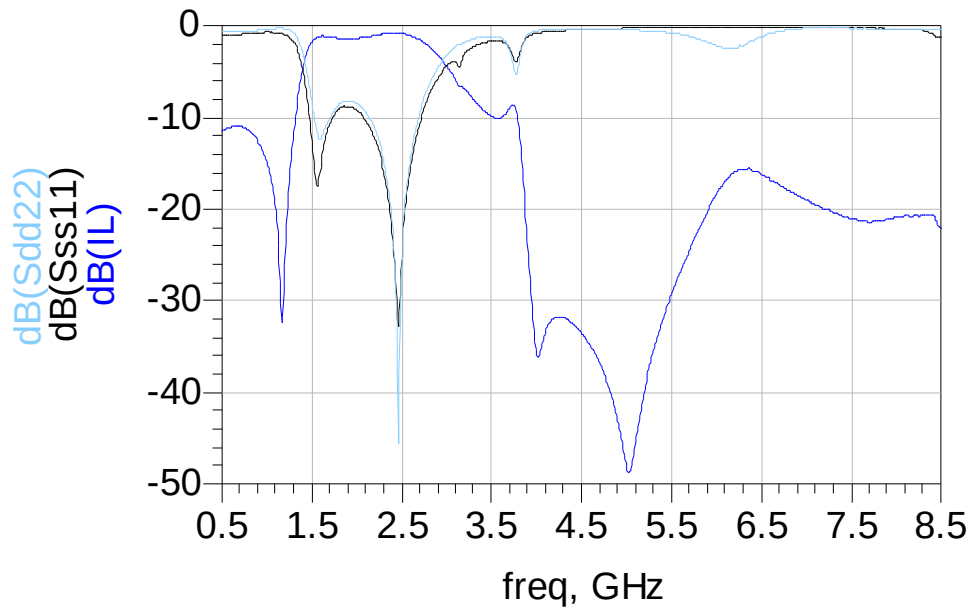
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## Typical Electrical Characteristics (T=25°C)



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## Application Notes, Layout Files, and more

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## Mini Antennas for BLE applications

[www.johansontechnology.com/antennas](http://www.johansontechnology.com/antennas)

## Antenna layout and tuning techniques

[www.johansontechnology.com/tuning](http://www.johansontechnology.com/tuning)

## Antenna layout review, tuning, and characterization services

[www.johansontechnology.com/ipc-antenna-services.html](http://www.johansontechnology.com/ipc-antenna-services.html)

## Soldering Information

[www.johansontechnology.com/ipcsoldering-profile](http://www.johansontechnology.com/ipcsoldering-profile)

## MSL Info

[www.johansontechnology.com/msl-rating](http://www.johansontechnology.com/msl-rating)

## Recommended Storage Condition and Max Shelf Life

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

## Packaging information

[www.johansontechnology.com/ipcpackaging.html](http://www.johansontechnology.com/ipcpackaging.html)

## RoHS Compliance

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