

High Frequency Ceramic Solutions

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

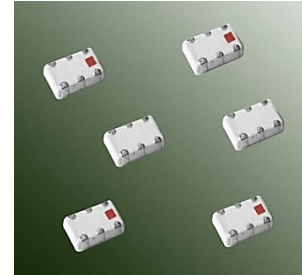
Detail Specification: 5/26/2016

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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 22 dB min. @ 4800~5000MHz 18 dB min. @ 7200~7500 MHz |
| Q'ty/Reel | 4,000 pcs |
| Power Capacity | 2W max. CW |

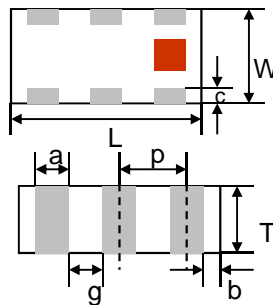


| | |
|---|--|
| Operating Temperature | -40°C to +85°C |
| Storage Temperature Range | -40°C to +85°C |
| Storage Period | 18 months max |
| Recommended Storage Conditions for unused product on T&R | +5 to +35°C, Humidity: 45-75%RH, 18 mos. Max |

*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

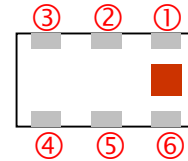
Mechanical Dimensions

| | 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 +.004/-.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

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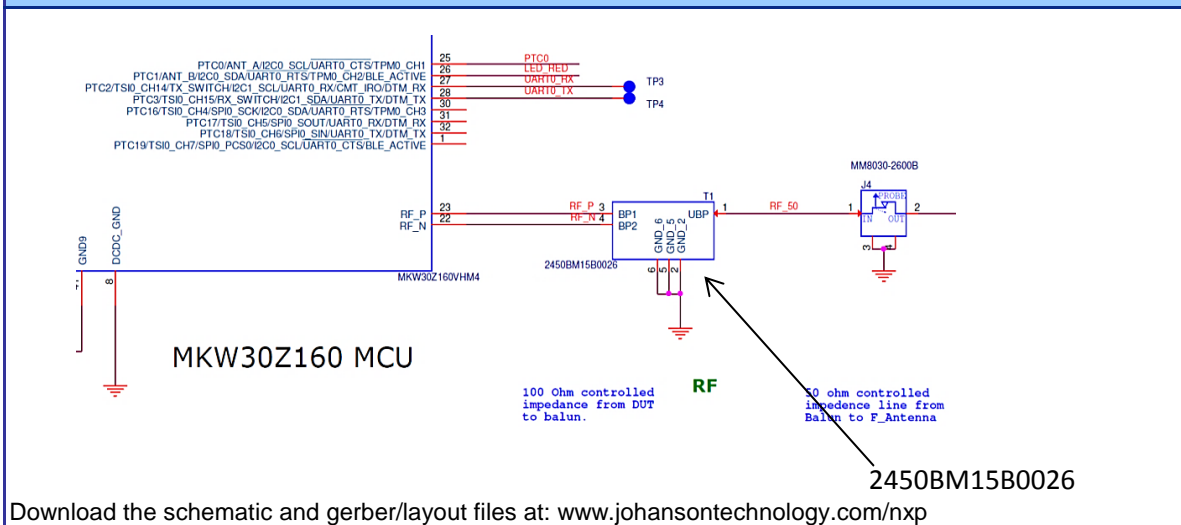
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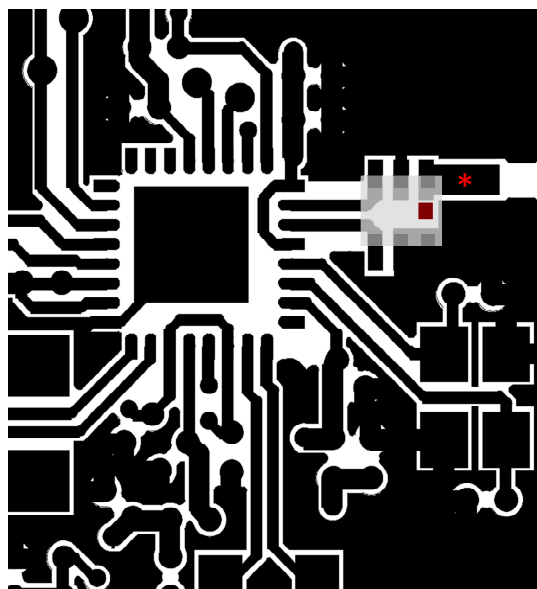
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Schematic



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

* 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

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Mounting Considerations

Without DC Feed

With DC Feed

6.8pF RF GND (DC block) cap
Johanson p/n:
(EIA0201) 250R05L6R8CV4T
(EIA0402) 201R07S6R8CV4T
(EIA 0603) 251R14S6R8CV4T

By-pass Capacitor (6.8pF chip Capacitor)
 Solder Resist
 Land
 Through-hole (ϕ 0.3/0.55)

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

Mounting Diagram

Port 3: Unbalanced Port
Ports 1 and 2: Balanced Port
 $IL = S_{ds21}$
 $RL = S_{ss11}, S_{dd22}$
 $Amp_balance = dB(S(2,3)/S(1,3))$
 $Phase_balance = Phase(S(2,3)/S(1,3))$

*Impedance for ports 1 and 2
= Conjugate to Balanced Impedance/2
 **E5071B from Agilent

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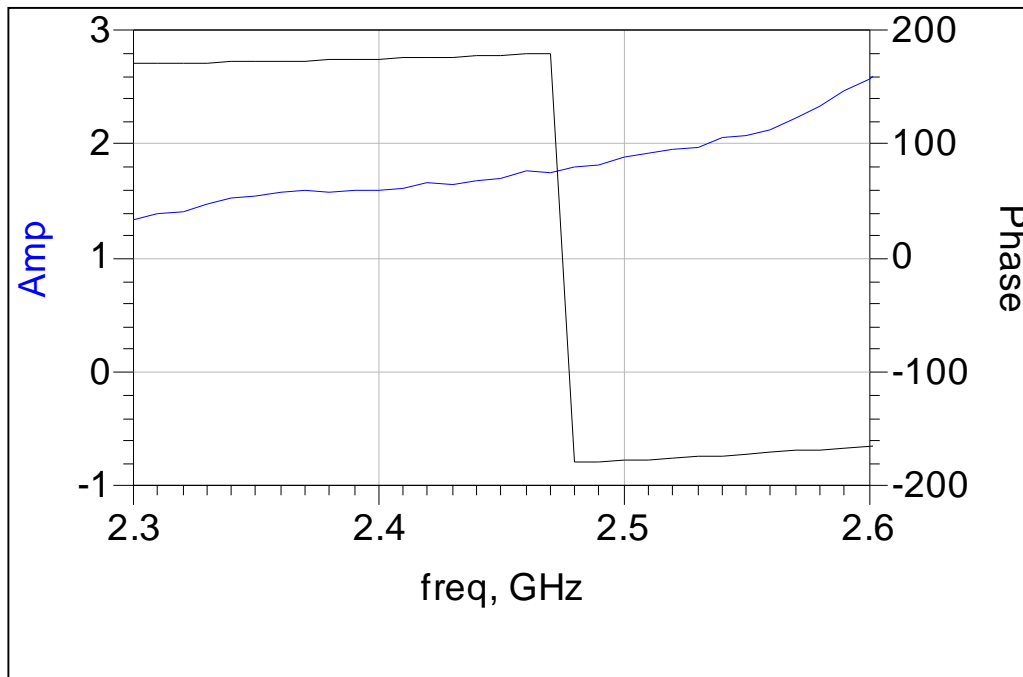
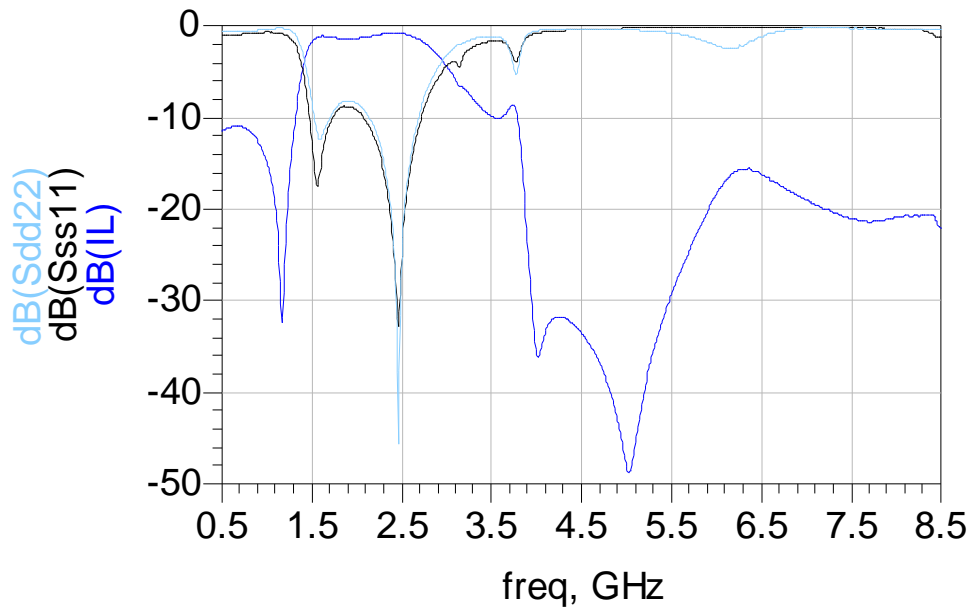
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Typical Electrical Characteristics (T=25°C)



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Application Notes, Layout Files, and more

www.johansontechnology.com/nxp

Mini Antennas for BLE applications

www.johansontechnology.com/antennas

Antenna layout and tuning techniques

www.johansontechnology.com/tuning

Antenna layout review, tuning, and characterization services

www.johansontechnology.com/ipc-antenna-services.html

Soldering Information

www.johansontechnology.com/ipcsoldering-profile

MSL Info

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

RoHS Compliance

www.johansontechnology.com/rohs-compliance

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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