

High Frequency Ceramic Solutions

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

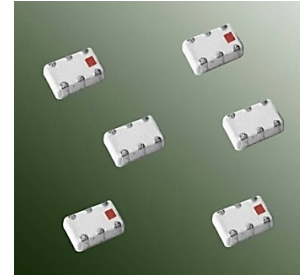
Detail Specification: 5/26/2016

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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

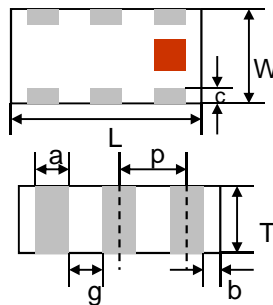


Operating Temperature	-40°C to +85°C
Storage Temperature Range	-40°C to +85°C
Storage Period	18 months max
Recommended Storage Conditions for unused product on T&R	+5 to +35°C, Humidity: 45-75%RH, 18 mos. Max

*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

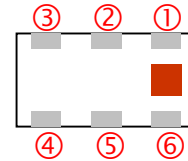
Mechanical Dimensions

	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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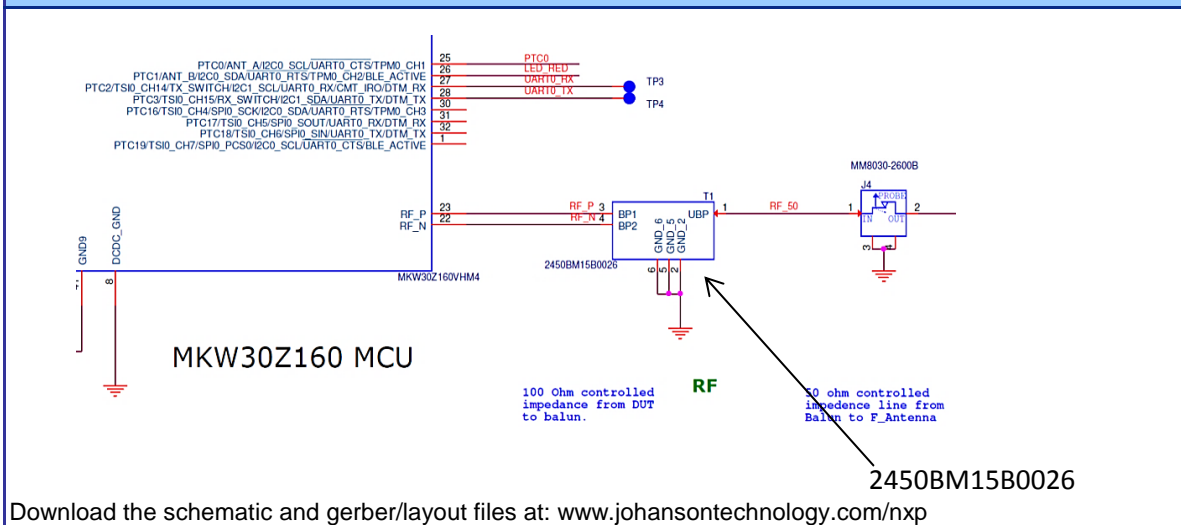
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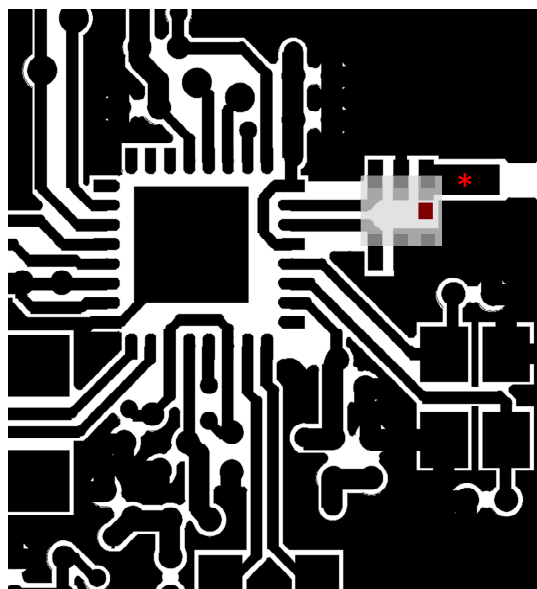
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Schematic



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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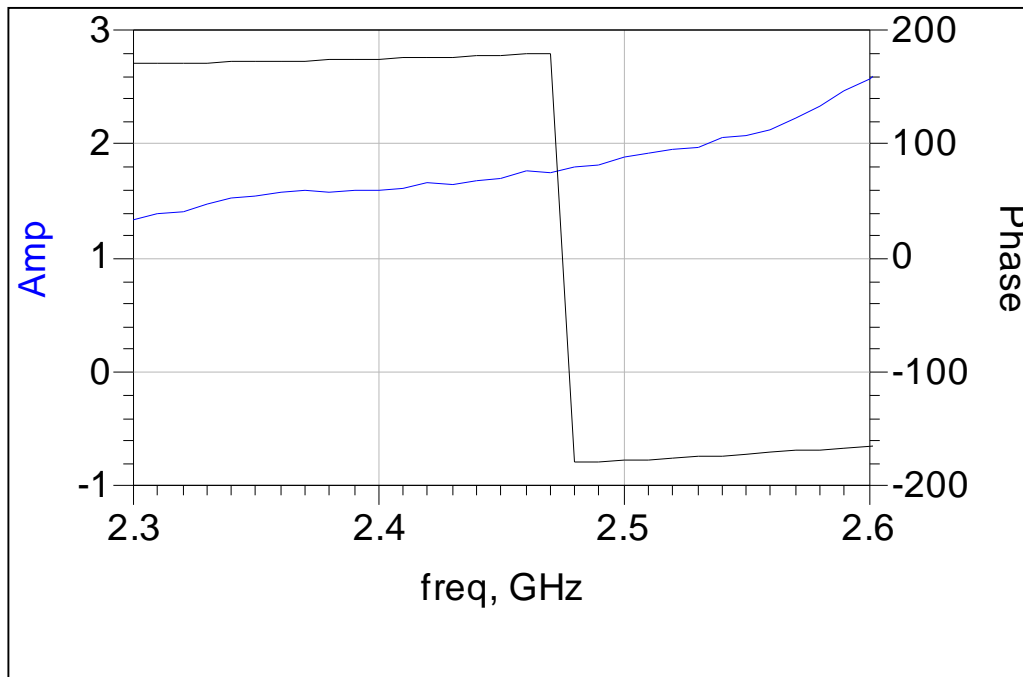
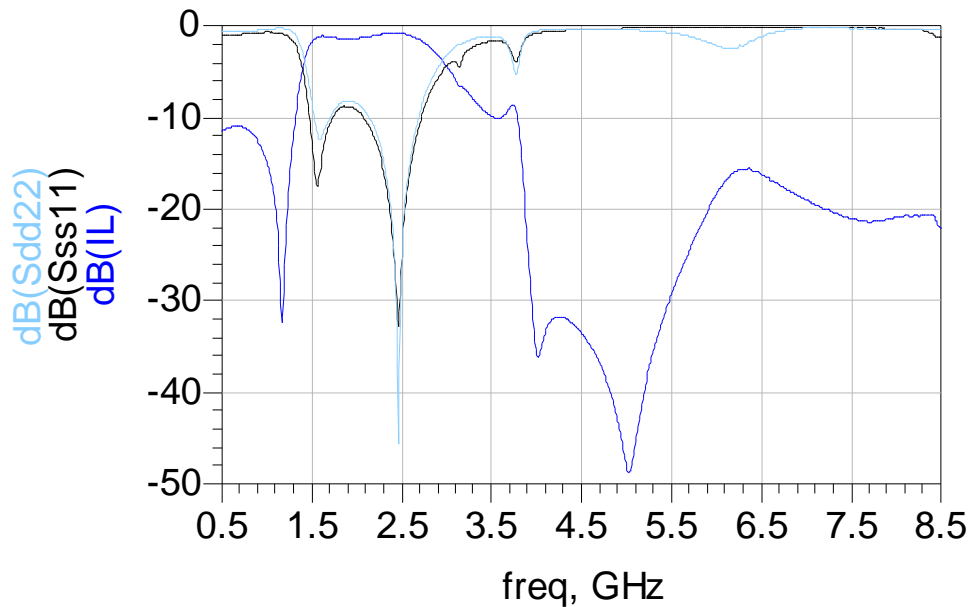
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Typical Electrical Characteristics (T=25°C)



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Application Notes, Layout Files, and more

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Mini Antennas for BLE applications

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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

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Recommended Storage Condition and Max Shelf Life

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

Packaging information

www.johansontechnology.com/ipcpackaging.html

RoHS Compliance

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