Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

High Frequency Ceramic Solutions

For the Full App Note and Layout Files, go to: www.johansontechnology.com/microchip

General Specifications

General Specifications	
Part Number	0896BM15A0032
Frequency (MHz)	863 - 928
Unbalanced Impedance	50 Ω
Balanced Differential Impedance	Conjugate match to Microchip (Atmel) SAM R30
Insertion Loss	1.5 dB Typ (1.7dB max.)
Return Loss (dB)	12dB Typ (9.5 min.)

Attenuation Differential mode (dB):	
40 Typ. (30 min.) @ 1726-1856 MHz	
49 Typ. (40 min.) @ 2589-2784 MHz	
46 Typ. (38 min.) @ 3452-3712 MHz	

Phase Difference (deg.)	180 ± 10
Amplitude Difference	2.0 max.
Power Capacity	1W max (CW)
Qty/Reel (pcs)	4,000
Operating Temp. Range	-40 - +85°C
Storage Temp. Range	-40 - +85°C
Recommended Storage Conditions of Unused Product on T&R	+5 - +35 °C, Humidity 45-75%
Storage Period	18 months max.
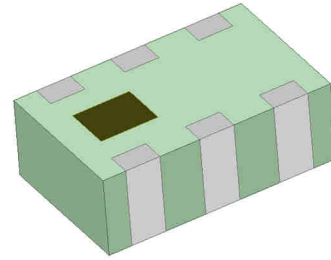
Do you need help selecting the best sub-GHz antenna for your application? Send us a message at:
www.johansontechnology.com/ask-a-question

Part Number Explanation

P/N Suffix	Packaging Style	Bulk	Suffix = S	E.g. 0896BM15A0032S
		T & R	Suffix = E	E.g. 0896BM15A0032E
	Termination Style	100% Tin	Suffix = None	E.g. 0896BM15A0032(E or S)

Mechanical Dimensions

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

Terminal Configuration

No	Function	No	Function
1	Unbalanced Port	4	Balanced Port
2	GND	5	GND
3	Balanced Port	6	GND

Johanson Technology, Inc. reserves the right to make design changes without notice.
All sales are subject to Johanson Technology, Inc. terms and conditions.

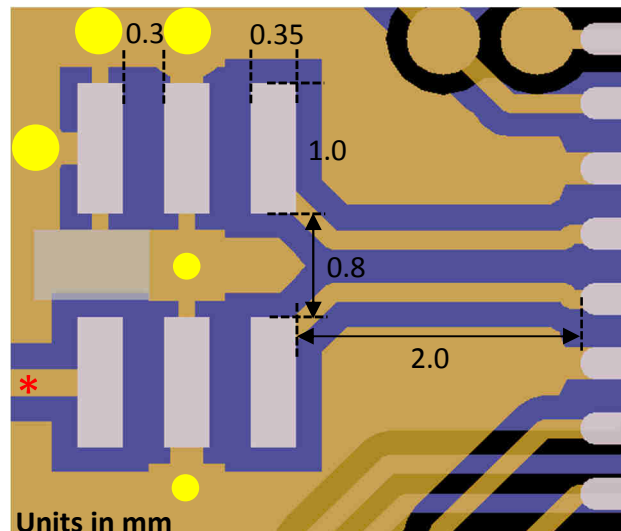**Sub-GHz Impedance Matched Balun + LPF integrated Passive Component** **P/N: 0896BM15A0032**
for Microchip SAM R30

Detail Specification: 1/27/2017   Page 2 of 4

Mounting Considerations

0.3   0.35

1.0

0.8

2.0

*

Units in mm

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

Vias are important for proper harmonic

🟧 GND

⬜ Footprint

🟡 GND Vias (ϕ 0.35/ϕ 0.2)

Would you like us to provide the layout files of the Microchip chipset + 2450BM15A0032? Review your layout for free? Please go to this link to contact our RF team: www.johansontechnology.com/ask-a-question "Applications Engineering" on the drop down question type

Do you need the layout/gerber files of the above? Go to: www.johansontechnology.com/microchip or send us message to review your layout at: http://www.johansontechnology.com/ask-a-question

Measuring Diagram

Port 3* | Network Analyzer | Port 2*

Port 1(50 Ω)

GND

GND

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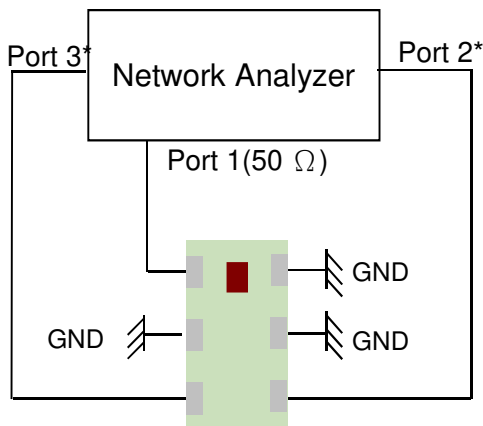
Port 1:Unbalanced Port
Ports 2 and 3: Balanced Port
$IL=S_{ds21}$
$RL=S_{ss11}$
Amp_balance = dB(S(2,1)/S(3,1))
Phase_balance = Phase(S(2,1)/S(3,1))

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

You can download the s-parameters at: http://www.johansontechnology.com/microchip

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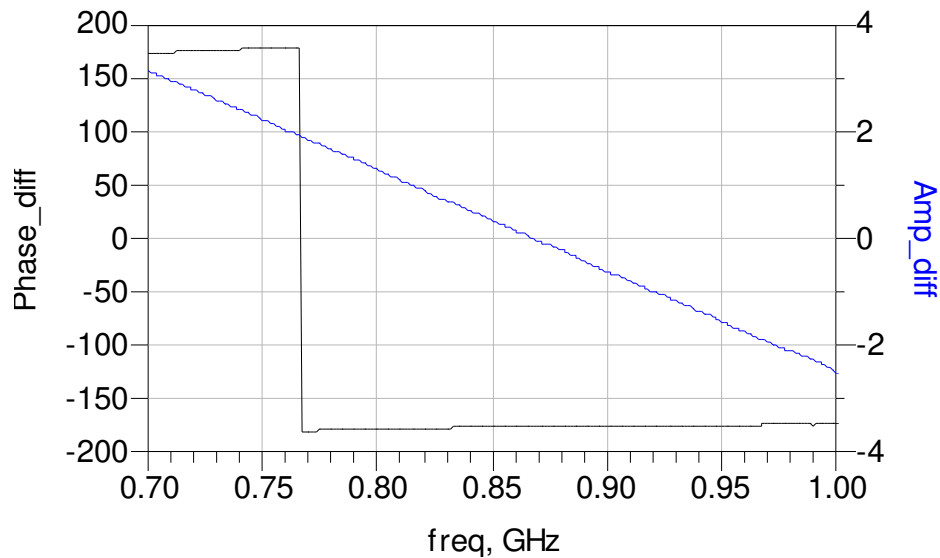
Ver 1.0

High Frequency Ceramic Solutions

Typical Electrical Characteristics (T=25°C)

Insertion and Return Loss
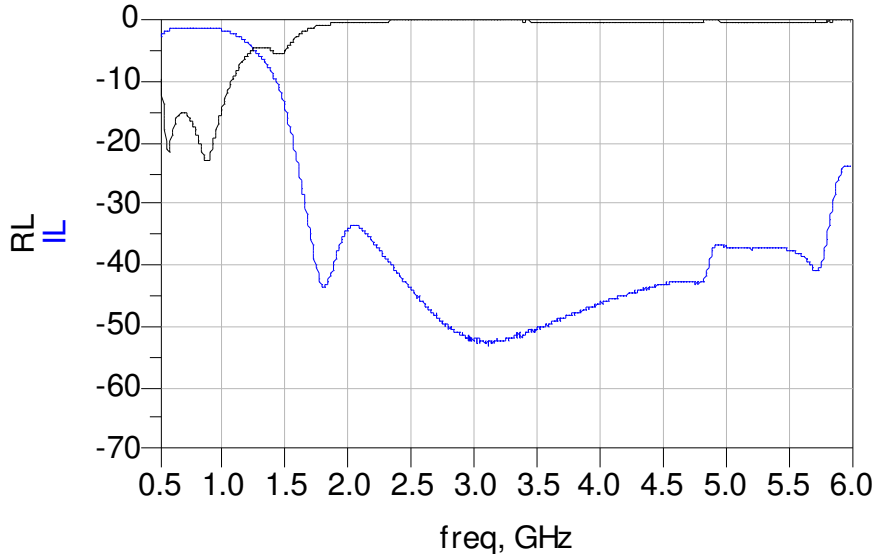
Amplitude and Phase Balance

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Sub-GHz Impedance Matched Balun + LPF integrated Passive Component **P/N: 0896BM15A0032**
for Microchip SAM R30

Detail Specification: 1/27/2017

Application Notes, Layout Files, and more

http://www.johansontechnology.com/microchip

Packaging information

www.johansontechnology.com/tape-reel-packaging

Soldering Information

www.johansontechnology.com/ipcsoldering-profile

MSL Info

www.johansontechnology.com/msl-rating

Recommended Storage Condition and Max Shelf Life

www.johansontechnology.com/recommended-storage-conditions

RoHS Compliance

www.johansontechnology.com/rohs-compliance

Antenna layout and tuning techniques

www.johansontechnology.com/tuning

Antenna layout review, tuning, and characterization services

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