

# "High Frequency Ceramic Solutions"

**900MHz / 2.4GHz SMD Diplexer for IoT, BLE, WiFi, Zigbee, LPWAN, Home Automation, and Smart Readers.**

**P/N 0900DP15A2450**

Detail Specification: 8/26/2016

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## General Specifications

Passband (MHz)	863 ~ 960	2400 ~ 2500
Insertion Loss (dB)	0.57 typ. 0.65 max.	1.3 typ. 1.4 max.
Return loss (dB)	9.5 min.	
Attenuation (dB)	27.5 typ./25 min. @1726-1920MHz 23 typ./17 min. @2589-2880MHz 14 typ./ 9 min. @3452-3840MHz	22 typ./17 min. @1850-1910MHz 36 typ./20 min. @4800-5000MHz 17 typ./12 min. @7200-7500MHz
Isolation (dB)	33 Typ./30 min. @2400-2500MHz	44 Typ./35 min. @863-960MHz
Operating Temp.	-40 to +85 °C	



Actual product picture

Storage Conditions <sup>1</sup>	-45 to +85°C
Storage Period	18 months max.
Power Capacity	2W max. (CW)
Reel Quantity	4,000 pcs

<sup>1</sup>For pre-installation storage (product still on T&R) +5 to +35 °C, Humidity 45~75%RH is recommended

## Part Number Explanation

P/N Suffix	Packing Style	Bulk	Suffix = S	eg. 0900DP15A2450S
		T & R	Suffix = E	eg. 0900DP15A2450E
	Termination style	100% Tin	Suffix = None	eg. 0900DP15A2450(E or S)
	Evaluation Board	0900DP15A2450-EB1SMA		

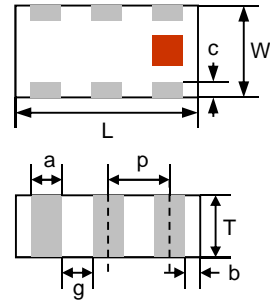
## Terminal Configuration

No.	Function
1	2.4G Band
2	GND
3	900M Band
4	GND
5	Common Port
6	GND

(Top)

## Mechanical Dimensions

	In	mm
L	0.079 ± 0.004	2.00 ± 0.1
W	0.049 ± 0.004	1.25 ± 0.1
T	0.037 ± 0.004	0.95 ± 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 ± 0.10
p	0.026 ± 0.002	0.65 ± 0.05



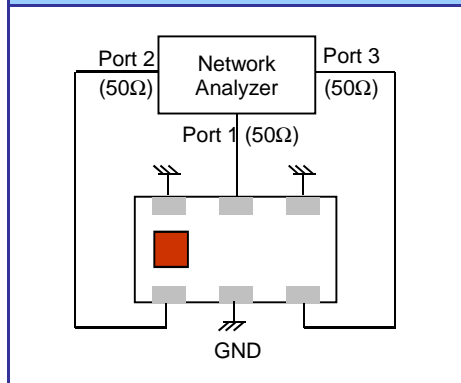
## Mounting Considerations

Need the layout file of the above? Send us a message at: [www.johansontechnology.com/ask-a-question](http://www.johansontechnology.com/ask-a-question)

- Solder Resist
- Land
- Through-hole (φ0.35)

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

## Measuring Diagram



# "High Frequency Ceramic Solutions"

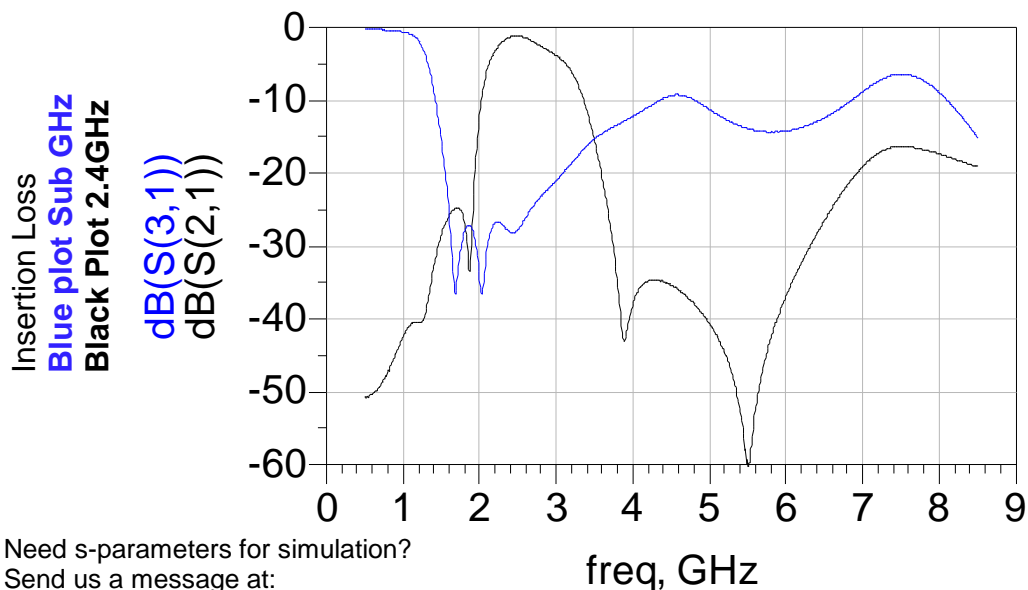
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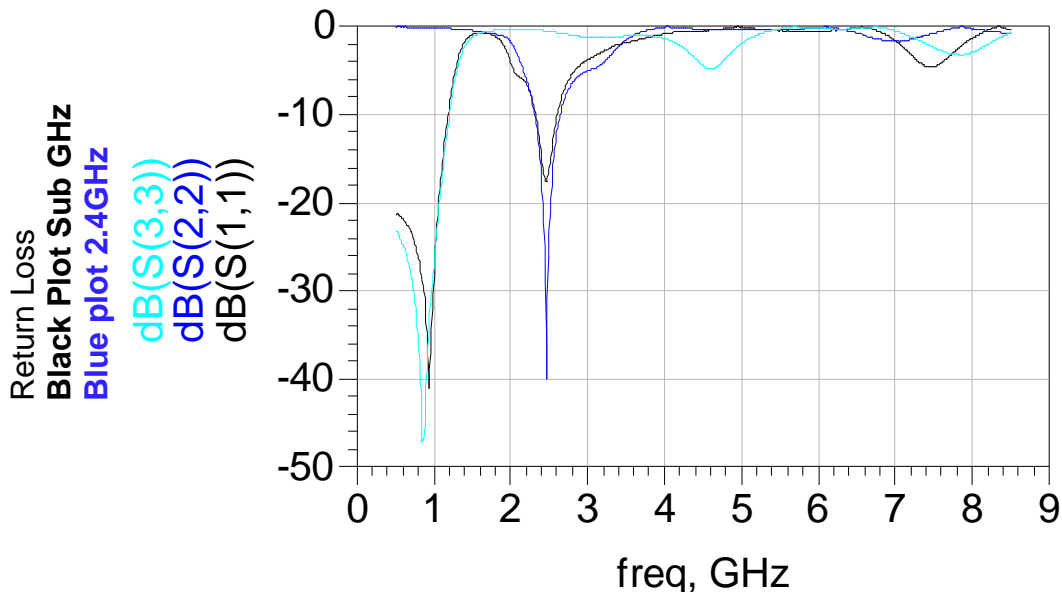
## Typical Electrical Characteristics (T=25 °C)



Need s-parameters for simulation?

Send us a message at:

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## RoHS Compliance

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

## Packaging information

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

## Soldering Information

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

## Layout Files, s-parameters and any other technical questions

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

## MSL Info

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

## Recommended Storage Condition and Max Shelf Life

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

## Antenna layout and tuning techniques

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

## Antenna layout review, tuning, and characterization services

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

Need some FREE design guidance, layout/gerber files, or s-parameters for simulation?  
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