

# "High Frequency Ceramic Solutions"

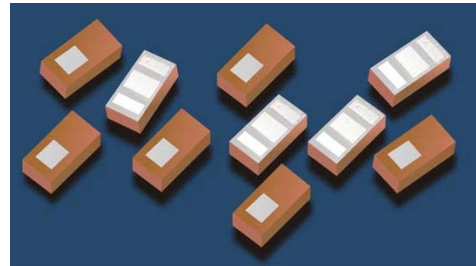
## 2.4GHz High Rejection BPF with LGA-type terminations for P/N 2450BP15Q0100 reduced effective footprint

Detail Specification: 6/19/2013

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| General Specifications |  |
|------------------------|--|
| Part Number            | 2450BP15Q0100                            |
| Frequency (MHz)        | 2400 ~ 2500                              |
| Attenuation (dB)       | 35 min. @ 824 ~ 960MHz                   |
|                        | 30 min. @ 1545 ~ 1605MHz                 |
|                        | 35 min. @ 1710 ~ 1990MHz                 |
|                        | 30 min. @ 2170MHz                        |
|                        | 30 min. @ 4800 ~ 5000MHz                 |
|                        | 25 min. @ 7200 ~ 7500MHz                 |
| Insertion Loss (dB)    | 1.8 max. @ 25 °C<br>2.0 max. @ -40~85 °C |
| Return Loss (dB)       | 10 min                                   |
| Power Capacity         | 2 Watts max. (CW)                        |

|                                |   |
|--------------------------------|---|
| Operating Temperature          | -40 to +85°C  |
| Recommended Storage Conditions | +5 to +35°C, Humidity 45~75%RH, 18 months, 1 week max after opened* |
| Reel Quantity                  | 4,000   |
| Solder Paste                   | SAC 305 type is recommended.  |

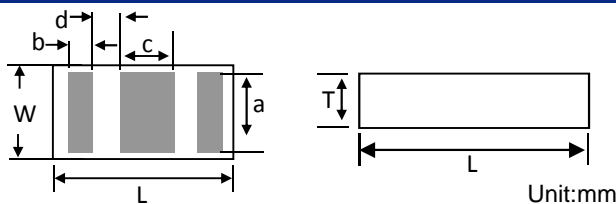


### Part Number Explanation

|            |                         |   |               |                            |
|------------|-------------------------|---|---------------|----------------------------|
| P/N Suffix | Packing Style           | Bulk                                      | Suffix = S    | eg. 2450BP15Q0100S         |
|            |                         | T & R                                     | Suffix = E    | eg. 2450BP15Q0100E         |
|            | Termination style       | 100% Tin                                  | Suffix = None | eg. 2450BP15Q0100 (E or S) |
|            | 50 ohm Evaluation Board | 2450BP15Q0100-EBSMA (with SMA Connectors) |               |                            |

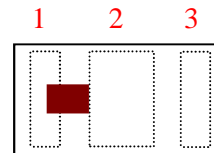
### Mechanical Dimensions

|   | In            | mm           |
|---|---------------|--------------|
| L | 0.079 ± 0.006 | 2.0 ± 0.15   |
| W | 0.049 ± 0.004 | 1.25 ± 0.10  |
| T | 0.028 Max.    | 0.70 Max.    |
| a | 0.037 ± 0.004 | 0.95 ± 0.10  |
| b | 0.011 ± 0.004 | 0.275 ± 0.10 |
| c | 0.024 ± 0.004 | 0.6 ± 0.10   |
| d | 0.010 ± 0.002 | 0.25 ± 0.05  |



### Terminal Configuration

| No. | Function |
|-----|----------|
| 1   | I/O      |
| 2   | GND      |
| 3   | I/O      |



Pins 1 and 3 are interchangeable (symmetrical component)

Pins 1 and 3 have a DC path to Pin 2

If DC block required, a 10pF - 15pF low loss cap should be mounted at the I/O's

\*For more info go to [www.johansontechnology.com/silverleads](http://www.johansontechnology.com/silverleads)



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Ver 1.2

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**P/N 2450BP15Q0100**

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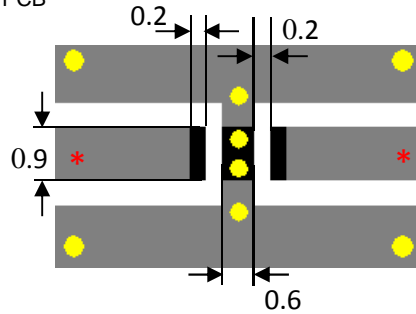
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## Mounting Considerations

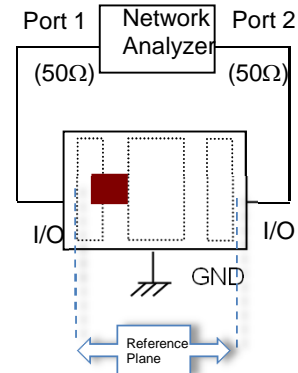
\*Line width should be designed to match  $50\ \Omega$  characteristic impedance, depending on PCB material and thickness.

### LEGEND

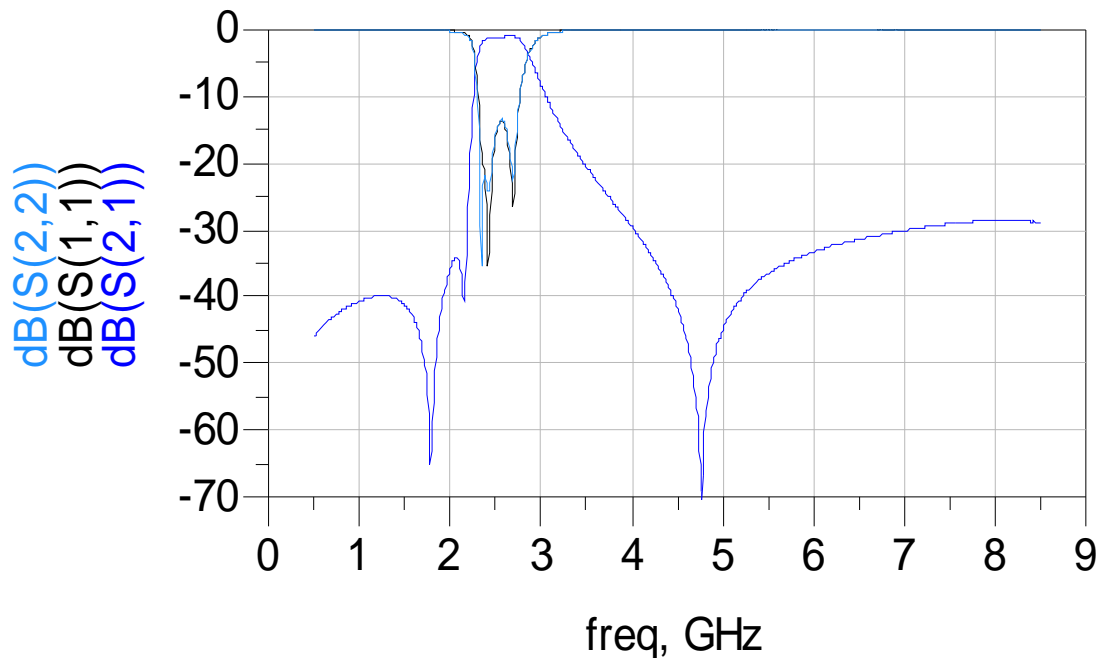
-  Solder
-  Land
-  Through-hole ( $\phi 0.3$ )



## Measuring Diagram



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



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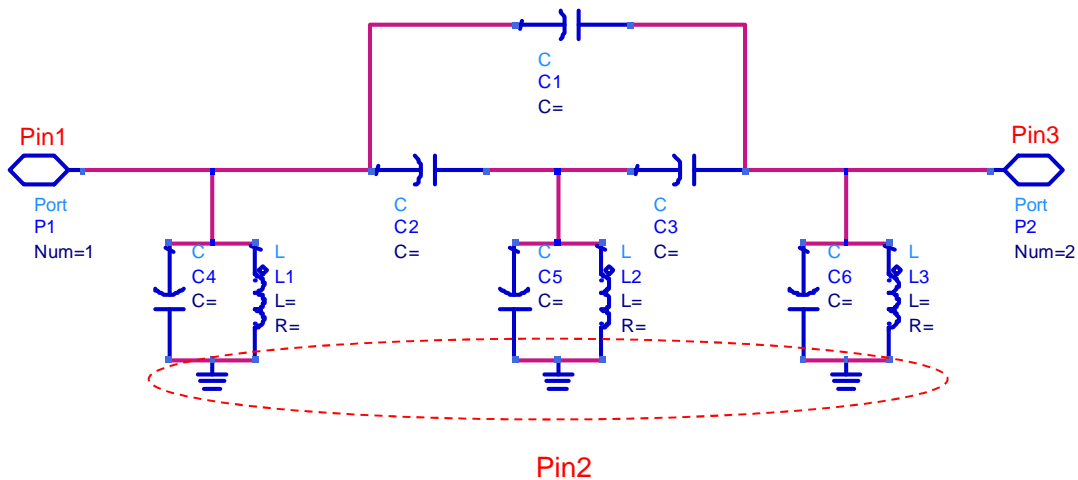
## Tape & Reel Specifications

<http://www.johansontechnology.com/ipcpackaging.html>

## Soldering Profile

<http://www.johansontechnology.com/ipcsoldering-profile>

## Representative Schematic for 2450BP15Q100



Note: If the designer needs to block DC signals a 10-12pF low loss cap is recommended. The following p/n's are recommended:

|                |                |
|----------------|----------------|
| 250R05L100JV4T | 500R07S100JV4T |
| 250R05L110JV4T | 500R07S110JV4T |
| 250R05L120JV4T | 500R07S120JV4T |

<http://www.johansontechnology.com/rf-capacitors/high-q-multi-layer-capacitors-rohs.html>

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