

# High Frequency Ceramic Solutions

UWB Band Pass Filter, EIA 0805, High Rejection

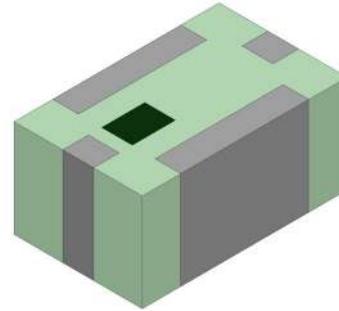
P/N 7240BP15B2000

Detail Specification: 4/29/2020

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## General Specifications

|                         |                     |
|-------------------------|---------------------|
| Part Number             | 7240BP15B2000       |
| Frequency (MHz)         | 6240 - 8240         |
| Impedance (Ohm)         | 50                  |
| Insertion Loss (dB)     | 1.8 typ. (2.5 max.) |
| Return Loss (dB)        | 11 typ. (10 min.)   |
| Group Delay (ns)        | 0.8 typ. (3.0 max.) |
| Group Delay Ripple (ns) | 0.5 typ. (1.0 max.) |
| Power Capacity          | 3W max. (CW)        |



| Frequency (MHz) | Attenuation (dB)  | Operating Temperature  |  |
|-----------------|-------------------|--|--|
| DC - 5200       | 38 typ. (35 min.) | Operating Temperature  | -40 to +85°C                                 |
| 2400 - 2500     | 43 typ. (35 min.) |  |  |
| 5200 - 5860     | 19 typ. (15 min.) | Recommended Storage Conditions and Period for unused T&R Product | +5 to +35°C<br>45 to 75%RH<br>18 months max. |
| 9000 - 9500     | 28 typ. (10 min.) |  |  |
| 9500 - 18000    | 32 typ. (30 min.) |  |  |
|                 |                   | Reel Quantity  | 4,000  |

| P/N Suffix       | Packing Style | Bulk   | Suffix = S | eg. 7240BP15B2000S |
|------------------|---------------|--|------------|--------------------|
|                  |               | T & R  | Suffix = E | eg. 7240BP15B2000E |
| Evaluation Board |               | 7240BP15B2000-EB1SMA (2 Female SMA connectors 50Ω) |            |                    |

For more band-pass filters, go to: <https://www.johansontechnology.com/band-pass-filters>

## Mechanical Specifications

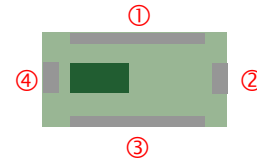
|   | In            | mm          |
|---|---------------|-------------|
| L | 0.079 ± 0.006 | 2.00 ± 0.15 |
| W | 0.049 ± 0.004 | 1.25 ± 0.10 |
| T | 0.037 ± 0.004 | 0.95 ± 0.10 |
| a | 0.049 ± 0.006 | 1.25 ± 0.15 |
| b | 0.012 ± 0.006 | 0.30 ± 0.15 |
| c | 0.010 ± 0.006 | 0.25 ± 0.15 |
| d | 0.014 ± 0.006 | 0.35 ± 0.15 |

(Top) (Side)

Want the mechanical model or layout file of the above? Send us a message at: <https://www.johansontechnology.com/ask-a-question>

## Terminal Configuration

| No. | Function | No. | Function |
|-----|----------|-----|----------|
| 1   | GND      | 3   | GND      |
| 2   | IN/OUT   | 4   | IN/OUT   |



If you would like the measured s-parameters, contact us at:

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

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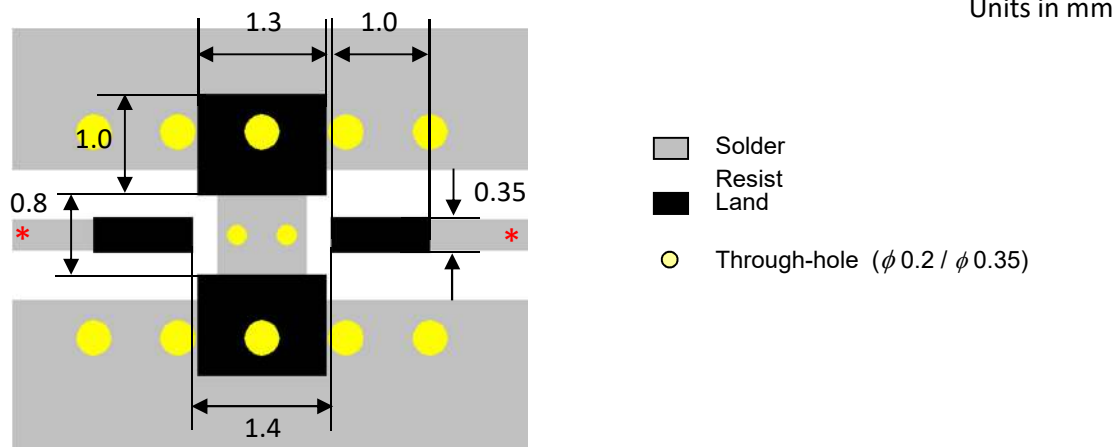
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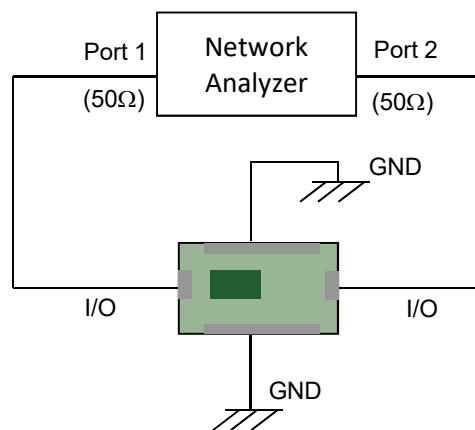
## Mounting Considerations



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

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## Measuring Diagram



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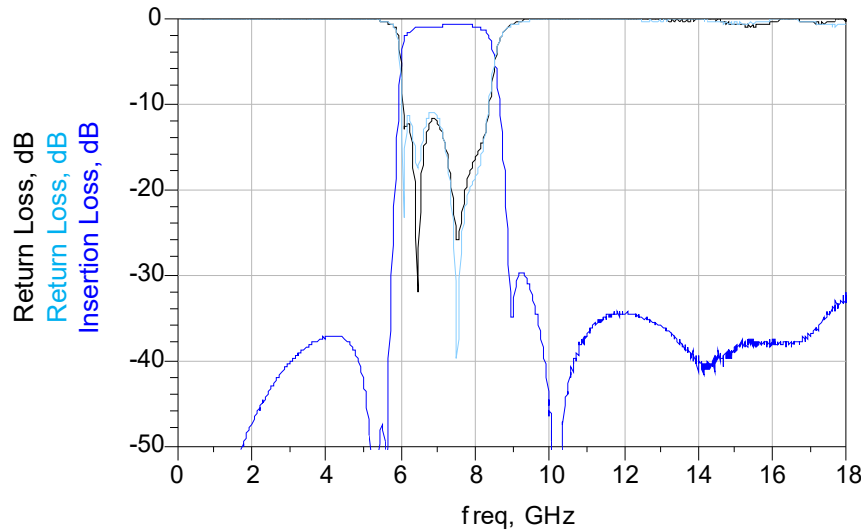
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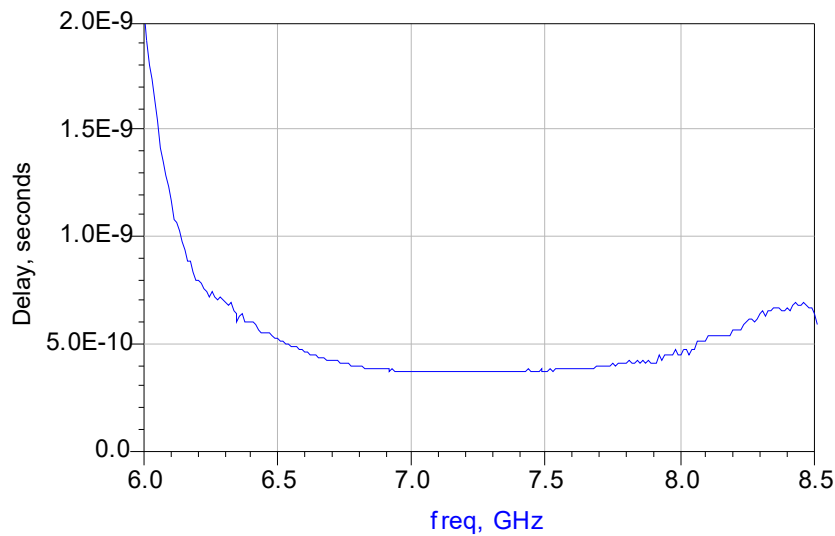
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## Typical Electrical Characteristics (T=25°C)

### Insertion Loss, Return Loss, Harmonic Attenuation



### Group Delay



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## More BPF info such as measured s-parameters and ordering details at:

<https://www.johansontechnology.com/band-pass-filters>

## UWB mini embedded Antennas

<https://www.johansontechnology.com/antennas>

## Soldering Information

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

## MSL Info

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

## Recommended Storage Condition and Max Shelf Life

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

## RoHS Compliance

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

## Layout review services

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

## Antenna layout review, tuning, and characterization services

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

## Packaging information

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

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