

# High Frequency Ceramic Solutions

7GHz Band Pass Filter, EIA 0805, High Rejection,  
AEC-Q200 Qualified

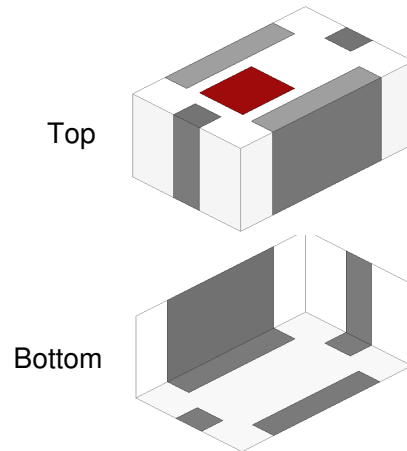
P/N 7000BP15A1600E-AEC

Detail Specification: 10/8/2021

Page 1 of 4

## General Specifications

|                           |                                                                                                                                                                               |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Part Number               | 7000BP15A1600E-AEC                                                                                                                                                            |
| Frequency (MHz)           | 6200 - 7800                                                                                                                                                                   |
| Insertion loss (dB)       | 1.75 typ. (2.0 max.)                                                                                                                                                          |
| Return Loss (dB)          | 12 typ. (10 min.)                                                                                                                                                             |
| Group Delay (ns)          | 0.7 typ. (1.0 max.)                                                                                                                                                           |
| Attenuation (dB)          | 39 typ. (30 min.) @2400 - 3400MHz<br>39 typ. (35 min.) @3400 - 3800MHz<br>35 typ. (30 min.) @4200 - 5400MHz<br>5 typ. (3 min.) @5850MHz<br>30 typ. (25 min.) @8500 - 16000MHz |
| ESD Susceptibility (HBM)  | 2000V min.                                                                                                                                                                    |
| ESD Susceptibility (CDM)  | 500V min.                                                                                                                                                                     |
| Power Capacity (W)        | 3 max. (CW)                                                                                                                                                                   |
| Operating Temperature     | -40 to +105°C                                                                                                                                                                 |
| Reel Quantity (pcs./reel) | 4,000                                                                                                                                                                         |



|                                                                     |                                                       |
|---------------------------------------------------------------------|-------------------------------------------------------|
| Recommended Storage Conditions and Period for unused Product on T&R | +5 to +35°C<br>Humidity 45 - 75% RH<br>18 months max. |
|---------------------------------------------------------------------|-------------------------------------------------------|

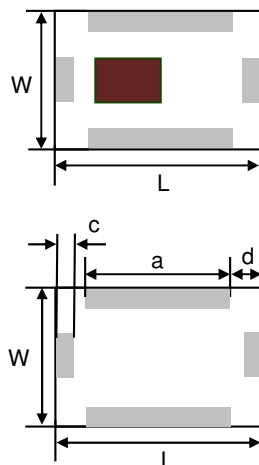
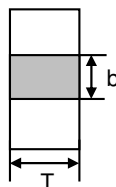
You can download measured s-parameters of this component at: <https://www.johansontechnology.com/band-pass-filters>

## Part Number Explanation

| P/N Suffix | Packaging Style  | Bulk (loose pcs.) | Suffix = S      | E.g. 7000BP15A1600S-AEC   |
|------------|------------------|-------------------|-----------------|---------------------------|
|            |                  | T & R             | Suffix = E      | E.g. 7000BP15A1600E-AEC   |
|            | Evaluation Board | 50Ω SMA           | Suffix = EB1SMA | E.g. 7000BP15A1600-EB1SMA |

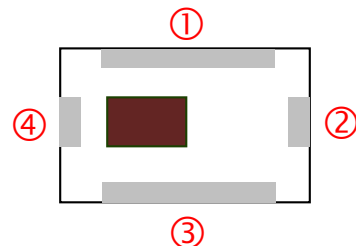
## Mechanical Dimensions

|   | 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 |



## Terminal Configuration

| No. | Function       |
|-----|----------------|
| 1   | GND            |
| 2   | INPUT / OUTPUT |
| 3   | GND            |
| 4   | INPUT / OUTPUT |



Johanson Technology, Inc. reserves the right to make design changes without notice.

All sales are subject to Johanson Technology, Inc. terms and conditions.



Ver. 2.0

<https://www.johansontechnology.com>

4001 Calle Tecate • Camarillo, CA 93012, USA • TEL +1.805.389.1166

2021 Johanson Technology, Inc. All Rights Reserved

## High Frequency Ceramic Solutions

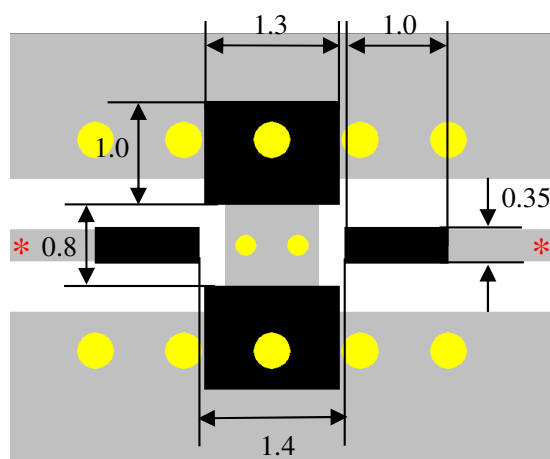
|                                                                        |                        |
|------------------------------------------------------------------------|------------------------|
| 7GHz Band Pass Filter, EIA 0805, High Rejection,<br>AEC-Q200 Qualified | P/N 7000BP15A1600E-AEC |
|------------------------------------------------------------------------|------------------------|

Detail Specification: 10/8/2021 Page 2 of 4

**P/N 7000BP15A1600E-AEC**

Page 2 of 4

## Mounting Considerations



Units in mm

 Solder Resist

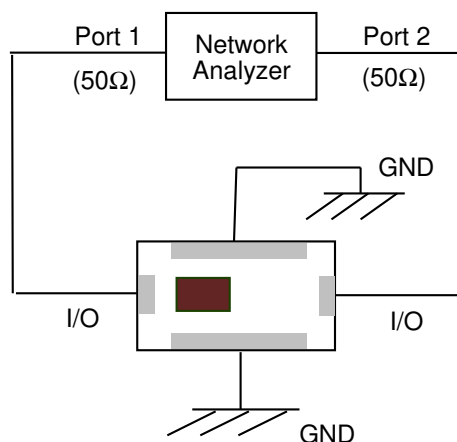
■ Land

- Through-hole ( $\phi 0.2 / \phi$

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

Would you like the layout? Send us a message at: <https://www.johansontechnology.com/ask-a-question>

## Measuring Diagram



Port 1: Filter IN/OUT  
Port 2: Filter IN/OUT

Johanson Technology, Inc. reserves the right to make design changes without notice.

All sales are subject to Johanson Technology, Inc. terms and conditions.

**JOHANSON**  
**TECHNOLOGY** 

Ver. 2.0

<https://www.johansontechnology.com>

4001 Calle Tecate • Camarillo, CA 93012, USA • TEL +1.805.389.1166

2021 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

7GHz Band Pass Filter, EIA 0805, High Rejection,  
AEC-Q200 Qualified

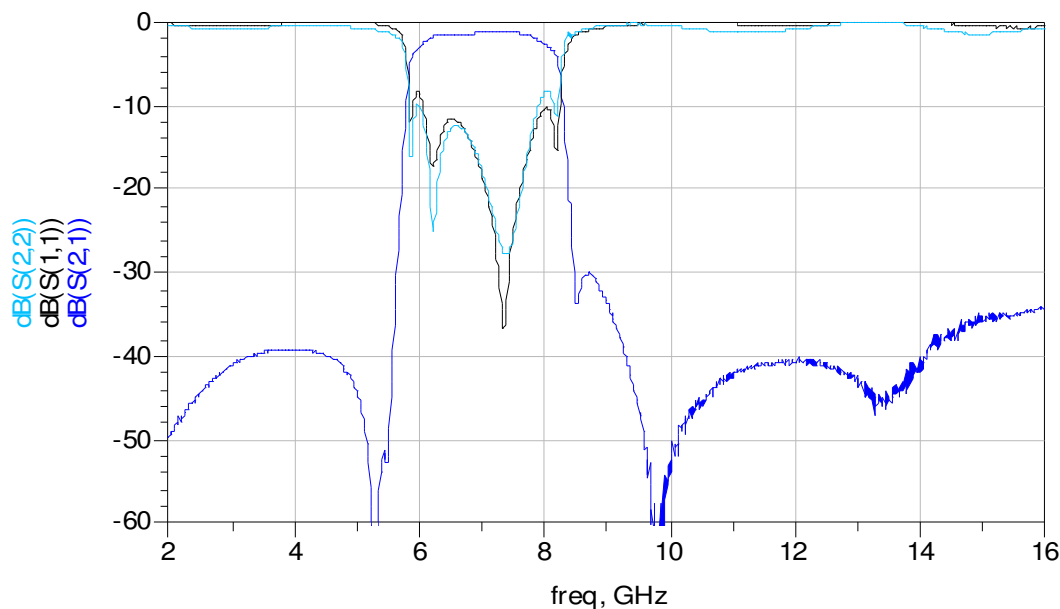
P/N 7000BP15A1600E-AEC

Detail Specification: 10/8/2021

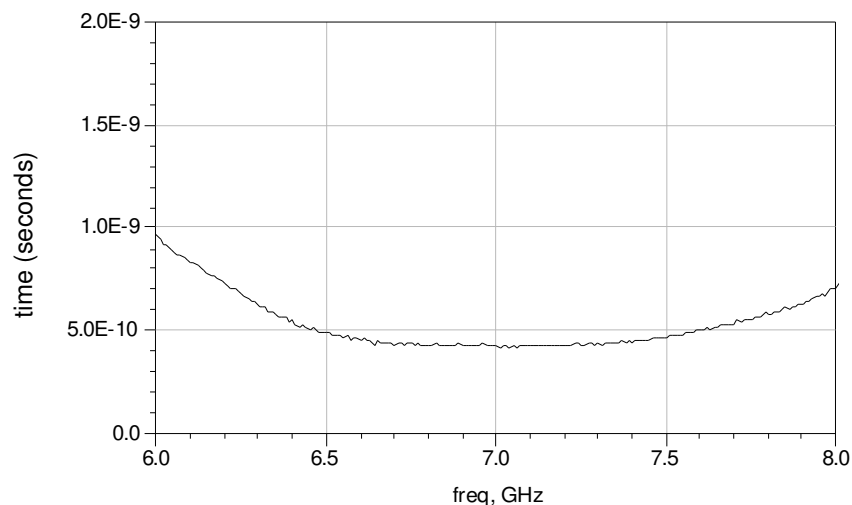
Page 3 of 4

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

### Insertion Loss & Return loss



### Group Delay



Johanson Technology, Inc. reserves the right to make design changes without notice.

All sales are subject to Johanson Technology, Inc. terms and conditions.



Ver. 2.0

<https://www.johansontechnology.com>

4001 Calle Tecate • Camarillo, CA 93012, USA • TEL +1.805.389.1166

2021 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

7GHz Band Pass Filter, EIA 0805, High Rejection,  
AEC-Q200 Qualified

P/N 7000BP15A1600E-AEC

Detail Specification: 10/8/2021

Page 4 of 4

## Application Notes, Layout Files, and more

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

## Packaging information

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

## 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>

## Antenna layout and tuning techniques

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

## Antenna layout review, tuning, and characterization services

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

Johanson Technology, Inc. reserves the right to make design changes without notice.

All sales are subject to Johanson Technology, Inc. terms and conditions.



Ver. 2.0

<https://www.johansontechnology.com>

4001 Calle Tecate • Camarillo, CA 93012, USA • TEL +1.805.389.1166

2021 Johanson Technology, Inc. All Rights Reserved