

# Cavity Bandpass Filter

## ZVBP-2300A+

50Ω 2200 to 2400 MHz



CASE STYLE: QJ2293

### The Big Deal

- Low insertion loss, 0.5 dB typical
- Broad stopband performance up to 8 GHz
- Fast roll-off
- Connectorized package
- Small size

### Product Overview

ZVBP-2300A+ is a 50Ω cavity filter for S band. Frequency band of this filter is used in fixed and mobile communication network applications.

### Key Features

| Feature                              | Advantages                                                                                                           |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Low loss in passband                 | This filter has low loss in passband                                                                                 |
| Sharp rejection                      | This filter has sharp rejection in transition region due to higher order design                                      |
| Broad stopband performance           | This filter has broad stopband performance up to 8 GHz                                                               |
| Connectorized package and small size | Connectorized package is easy to interface with other devices and well suited for test setups. Package size is small |

#### Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.  
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
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50Ω 2200 to 2400 MHz

## ZVBP-2300A+



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Connectors SMA-F Model ZVBP-2300A-S+

### Features

- Low insertion loss, 0.5 dB typical
- Broad stopband performance up to 8 GHz
- Fast roll-off
- Connectorized package
- Small size

### Applications

- Fixed and mobile communication network
- Satellite communication

### Electrical Specifications at 25°C

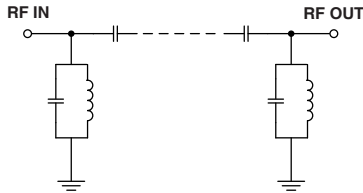
| Parameter        | F#               | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|------------------|------------------|-----------------|------|------|------|------|
| Pass Band        | Center Frequency | -               | -    | 2300 | -    | MHz  |
|                  | Insertion Loss   | F1-F2           | -    | 0.5  | 1.0  | dB   |
|                  | VSWR             | F1-F2           | -    | 1.34 | 1.5  | :1   |
| Stop Band, Lower | Insertion Loss   | DC-F3           | 30   | 40   | -    | dB   |
|                  | VSWR             | DC-F3           | -    | 20   | -    | :1   |
| Stop Band, Upper | Insertion Loss   | F4-F5           | 30   | 40   | -    | dB   |
|                  | VSWR             | F4-F5           | -    | 20   | -    | :1   |

### Maximum Ratings

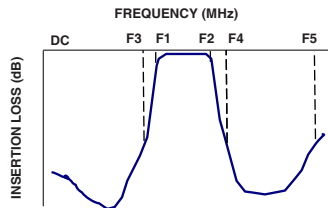
|                       |                |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| RF Power Input        | 15 W           |

Permanent damage may occur if any of these limits are exceeded.

### Functional Schematic



### Typical Frequency Response

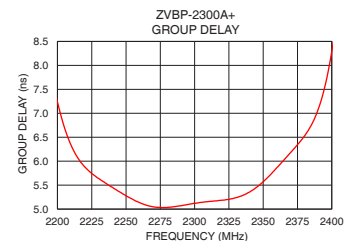
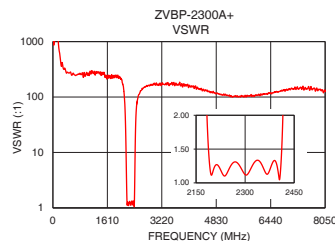
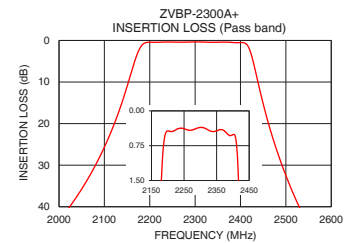
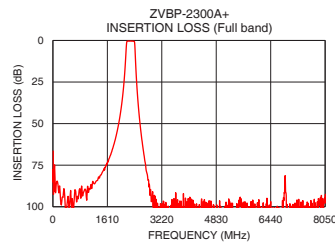


### Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) | Frequency (MHz) | Group Delay (nsec) |
|-----------------|---------------------|-----------|-----------------|--------------------|
| 10              | 86.50               | 1267.87   | 2200            | 7.16               |
| 750             | 95.14               | 153.79    | 2210            | 6.29               |
| 1500            | 78.13               | 200.40    | 2220            | 5.82               |
| 2000            | 43.00               | 205.06    | 2230            | 5.56               |
| 2080            | 29.68               | 152.29    | 2240            | 5.37               |
| 2120            | 20.20               | 88.14     | 2250            | 5.20               |
| 2150            | 10.80               | 26.04     | 2260            | 5.06               |
| 2173            | 3.03                | 4.41      | 2270            | 4.97               |
| 2200            | 0.41                | 1.08      | 2280            | 4.95               |
| 2300            | 0.36                | 1.16      | 2290            | 4.97               |
| 2400            | 0.51                | 1.25      | 2300            | 5.01               |
| 2427            | 3.13                | 4.19      | 2310            | 5.05               |
| 2440            | 8.59                | 14.64     | 2320            | 5.08               |
| 2460            | 17.28               | 44.88     | 2330            | 5.12               |
| 2500            | 30.68               | 85.27     | 2340            | 5.22               |
| 2550            | 43.01               | 110.53    | 2350            | 5.41               |
| 3000            | 98.20               | 163.61    | 2360            | 5.67               |
| 5000            | 110.38              | 128.71    | 2370            | 5.97               |
| 7500            | 101.76              | 168.79    | 2380            | 6.29               |
| 8050            | 100.39              | 146.28    | 2400            | 7.64               |

### +RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



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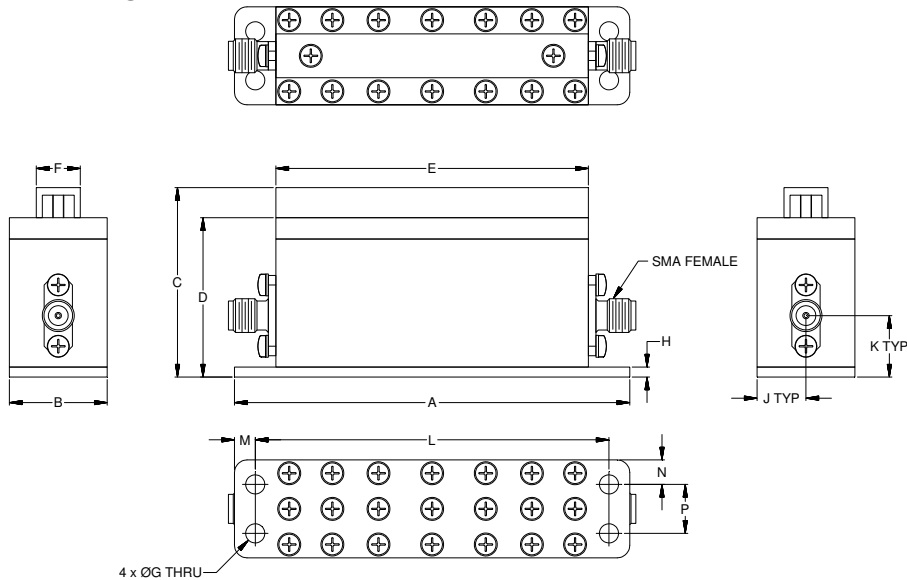
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REV. OR  
M157565  
ZVBP-2300A+  
EDU2353  
URJ  
170310  
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Coaxial Connections

|        |            |
|--------|------------|
| INPUT  | SMA-FEMALE |
| OUTPUT | SMA-FEMALE |

Outline Drawing



Outline Dimensions ( inch  
mm )

|       |       |       |       |       |      |      |       |
|-------|-------|-------|-------|-------|------|------|-------|
| A     | B     | C     | D     | E     | F    | G    | H     |
| 3.10  | .77   | 1.49  | 1.25  | 2.45  | .34  | .150 | .08   |
| 78.81 | 19.50 | 37.75 | 31.75 | 62.30 | 8.75 | 3.81 | 2.00  |
| J     | K     | L     | M     | N     | P    |      | Wt.   |
| .38   | .48   | 2.778 | .16   | .19   | .384 |      | grams |
| 9.75  | 12.25 | 70.55 | 4.13  | 4.87  | 9.75 |      | 120   |

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