

Coaxial

# Diplexer

## ZX75-23-S+

50Ω 9.8 to 2000 MHz  
(9.8-10.2, 650-2000 MHz)



Generic photo used for illustration purposes only  
CASE STYLE: FL905

### The Big Deal

- Low insertion loss
- High Rejection
- Connectorized package

### Product Overview

ZX75-23-S+ is a low-pass + high-pass combination device. Low pass port is designed for 9.8 to 10.2 MHz and high pass port is designed for 650 to 2000 MHz. This diplexer is used to pass IF, pilot carrier or clock synchronizing signal. This diplexer can also be used in various systems including satellite, CATV and multiband radio systems.

### Key Features

| Feature                     | Advantages   |
|-----------------------------|--|
| Low passband insertion loss | Suitable for high performance application.   |
| Extended stopband rejection | Spurious rejection and avoids using additional filters.  |
| Connectorized package       | The connectorized package is easy to interface with other devices and well suited for test setups. |

#### Notes

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50Ω 9.8 to 2000 MHz (9.8-10.2, 650-2000 MHz)

### Maximum Ratings

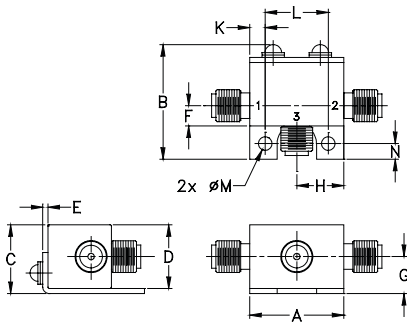
|                       |                |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| RF Power Input        | 400mW at 25°C  |

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

### Pin Connections

|                |   |
|----------------|---|
| HIGH PASS PORT | 1 |
| LOW PASS PORT  | 2 |
| COMMON PORT    | 3 |

### Outline Drawing



### Outline Dimensions (inch/mm)

| A     | B     | C     | D     | E    | F    | G    |
|-------|-------|-------|-------|------|------|------|
| .74   | .90   | .54   | .50   | .04  | .16  | .29  |
| 18.80 | 22.86 | 13.72 | 12.70 | 1.02 | 4.06 | 7.37 |

| H    | J  | K    | L     | M    | N    | wt    |
|------|----|------|-------|------|------|-------|
| .37  | -- | .122 | .496  | .106 | .122 | grams |
| 9.40 | -- | 3.10 | 12.60 | 2.69 | 3.10 | 20.0  |

Note: Please refer to case style drawing for details

### Features

- Low insertion loss
- 50Ω Impedance
- Combination of Low pass and High pass filters
- Connectorized package

### Applications

- Clock synchronizing signal
- Satellite
- CATV



Generic photo used for illustration purposes only

CASE STYLE: FL905

|            |            |
|------------|------------|
| Connectors | Model      |
| SMA        | ZX75-23-S+ |

+RoHS Compliant

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

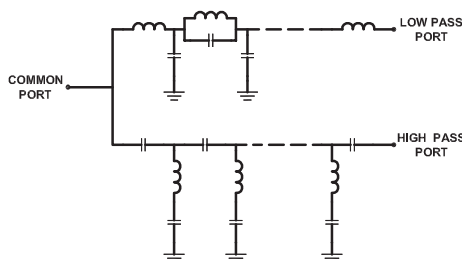
### Electrical Specifications at 25°C

| Parameter           | Port        | Frequency (MHz) | Min.     | Typ. | Max. | Unit |    |
|---------------------|-------------|-----------------|----------|------|------|------|----|
| Pass Band           | Low Pass    | 9.8-10.2        | -        | 0.5  | 1.0  | dB   |    |
|                     |             | 650-2000        | -        | 0.5  | 1.0  |      |    |
|                     | Return Loss | Low Pass        | 9.8-10.2 | 11   | 18   | -    | dB |
|                     |             | High Pass       | 650-2000 | 11   | 18   | -    |    |
| Common              |             | 9.8-10.2        | 11       | 18   | -    |      |    |
| Stop Band Isolation | Low Pass    | 50-2700         | 20       | 36   | -    | dB   |    |
|                     |             | 650-2000        | -        | 52   | -    |      |    |
|                     | High Pass   | DC-270          | 20       | 31   | -    | dB   |    |
|                     |             | 9.8-10.2        | -        | 90   | -    |      |    |

### Typical Performance Data at 25°C

| FREQUENCY (MHz) | INSERTION LOSS (dB) |                |             | RETURN LOSS (dB) |                |
|-----------------|---------------------|----------------|-------------|------------------|----------------|
|                 | Low Pass Port       | High Pass Port | Common Port | Low Pass Port    | High Pass Port |
| 0.5             | 0.34                | 93.34          | 28.34       | 28.42            | 0.00           |
| 9.8             | 0.48                | 93.68          | 19.95       | 19.16            | 0.00           |
| 10.2            | 0.49                | 95.02          | 20.18       | 19.38            | 0.00           |
| 20.0            | 1.17                | 98.30          | 14.16       | 15.32            | 0.00           |
| 30.0            | 11.08               | 92.74          | 1.20        | 1.84             | 0.00           |
| 40.0            | 25.01               | 90.28          | 0.39        | 0.78             | 0.00           |
| 50.0            | 36.55               | 86.20          | 0.25        | 0.51             | 0.00           |
| 150.0           | 55.68               | 59.20          | 0.06        | 0.09             | 0.03           |
| 270.0           | 57.07               | 31.52          | 0.09        | 0.05             | 0.13           |
| 350.0           | 57.55               | 18.64          | 0.22        | 0.04             | 0.32           |
| 400.0           | 58.29               | 11.80          | 0.57        | 0.04             | 0.71           |
| 450.0           | 60.23               | 6.09           | 1.76        | 0.04             | 1.96           |
| 480.0           | 62.23               | 3.57           | 3.40        | 0.04             | 3.63           |
| 500.0           | 63.69               | 2.37           | 5.05        | 0.04             | 5.31           |
| 650.0           | 62.66               | 0.31           | 24.49       | 0.04             | 26.69          |
| 750.0           | 61.76               | 0.29           | 18.54       | 0.04             | 19.44          |
| 1000.0          | 60.49               | 0.24           | 18.81       | 0.06             | 19.65          |
| 1250.0          | 59.18               | 0.20           | 21.26       | 0.07             | 22.03          |
| 1500.0          | 58.18               | 0.18           | 24.37       | 0.08             | 25.09          |
| 2000.0          | 55.65               | 0.24           | 29.14       | 0.11             | 29.69          |
| 2200.0          | 53.76               | 0.46           | 36.26       | 0.12             | 25.03          |
| 2700.0          | 52.48               | 0.23           | 21.59       | 0.31             | 21.42          |

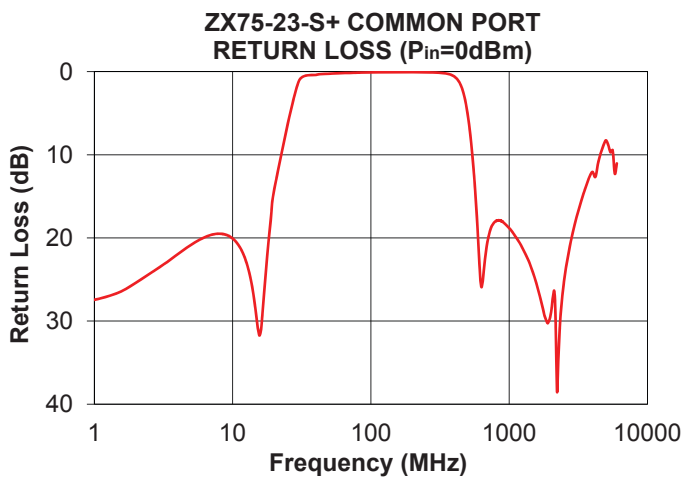
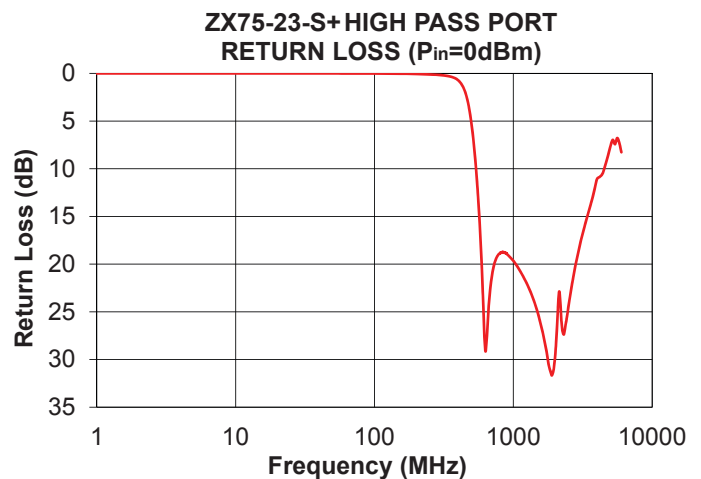
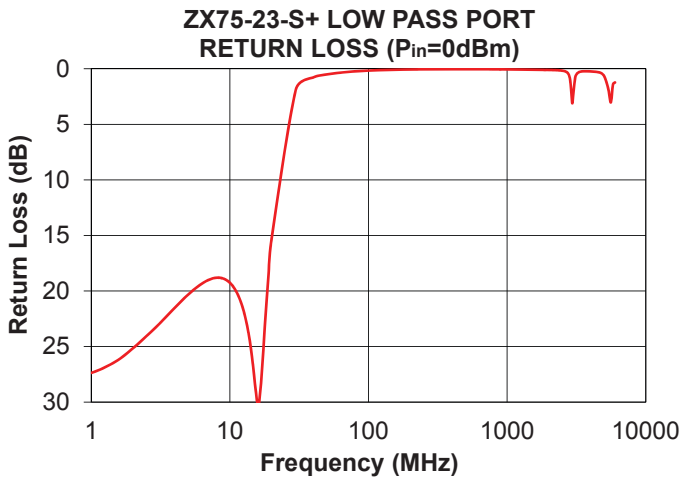
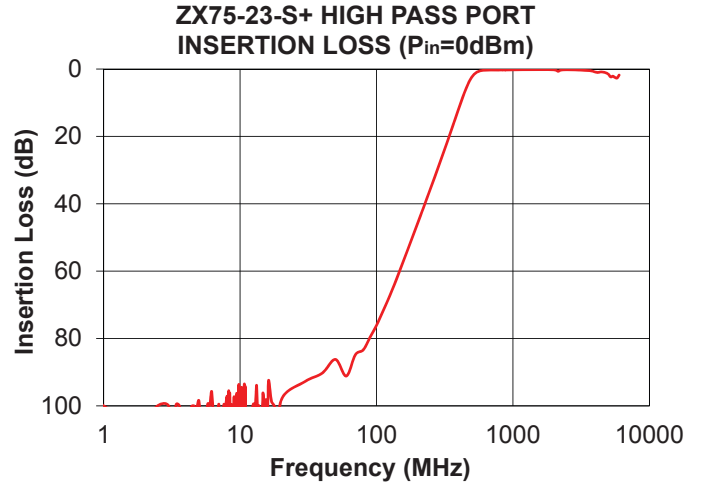
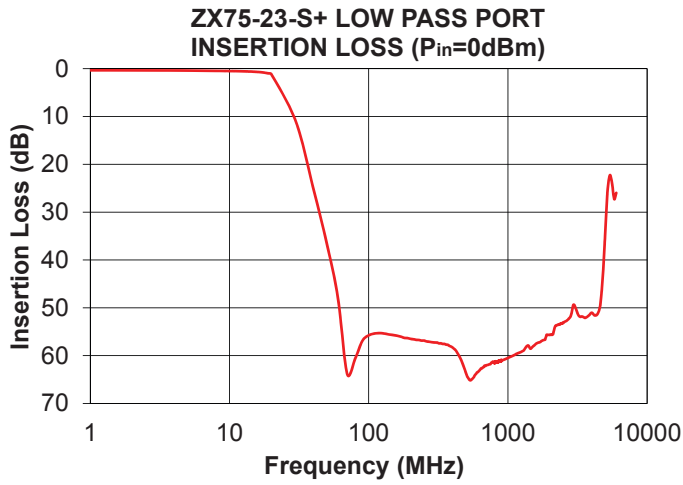
### Functional Schematic



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