

## NCC1215C

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

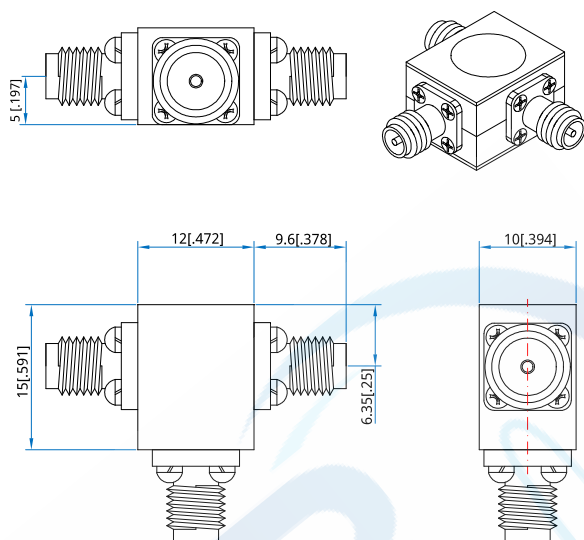
#### Description

NCC1215C series Coaxial Circulators cover frequency range 9~16.5GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 9300~9500          | 200                | 0.40            | 20.0                   | 1.25           | 30                   | SMA       | -30~+75             |
| 10500~12500        | 2000               | 0.50            | 18.0                   | 1.3            | 30                   | SMA       | -30~+75             |
| 10700~12800        | 2100               | 0.50            | 18.0                   | 1.3            | 30                   | SMA       | -30~+75             |
| 12700~14900        | 2200               | 0.50            | 18.0                   | 1.3            | 30                   | SMA       | -30~+75             |
| 14500~16500        | 2000               | 0.50            | 18.0                   | 1.3            | 30                   | SMA       | -30~+75             |

#### Outline Drawings



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size\*1: 12\*15\*10mm  
0.472\*0.591\*0.394in

[1] Exclude connectors

#### Connector Naming Rules:

S - SMA Female

#### Direction Naming Rules:

- 1 - Clockwise
- 2 - Anticlockwise

#### How To Order

**NCC1215C-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC1215C series Circulator, 9.3~9.5GHz, 30W, SMA female, Clockwise, specify NCC1215C-9300-9500-30-S-1.

Customization is available upon request.

# NCC1220C

## High Power, High Isolation

### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

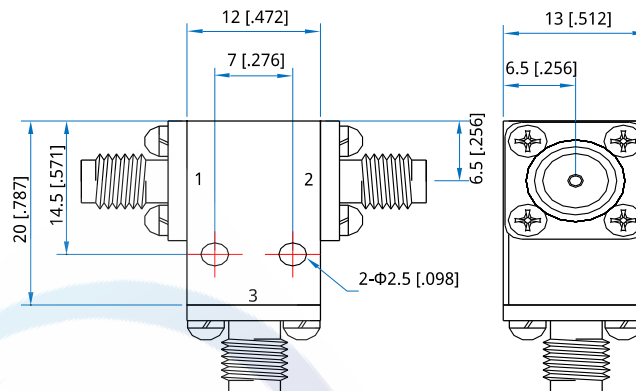
### Description

NCC1220C series Coaxial Circulators cover frequency range 9~16.5GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.N

### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 9300~9500          | 200                | 0.30            | 23.0                   | 1.25           | 30                   | SMA       | -10~+60             |
| 10500~12500        | 2000               | 0.40            | 20.0                   | 1.25           | 30                   | SMA       | -10~+60             |
| 10700~12800        | 2100               | 0.40            | 20.0                   | 1.25           | 30                   | SMA       | -10~+60             |
| 12700~14900        | 2200               | 0.50            | 19.0                   | 1.30           | 30                   | SMA       | -10~+60             |
| 14500~16500        | 2000               | 0.40            | 20.0                   | 1.25           | 30                   | SMA       | -10~+60             |

### Outline Drawings



Unit: mm [inch]

Tolerance: ±0.2mm [±0.008in]

### Mechanical

Size\*1: 12\*20\*13mm  
0.472\*0.787\*0.512in

Mounting: 2-Φ2.5mm through-hole

[1] Exclude connectors

### Connector Naming Rules:

S - SMA Female

### How To Order

**NCC1220C-W-X-Y-Z**

W: Start frequency in MHz

X: Stop frequency in MHz

Y: Average power in W

Z: Connector type

Examples:

To order a NCC1220C series Circulator, 9.3~9.5GHz, 30W, SMA female, specify NCC1220C-9300-9500-30-S.

Customization is available upon request.

## NCC1317C

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

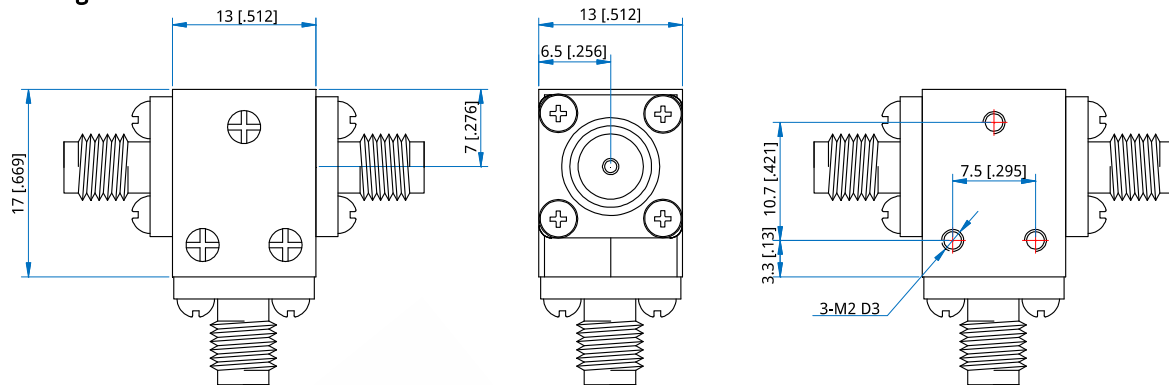
#### Description

NCC1317C series Coaxial Circulators cover frequency range 7~13GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 7000~13000         | 6000               | 0.60            | 16.0                   | 1.40           | 100                  | SMA       | -55~+85             |

#### Outline Drawings



Outline A

Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size<sup>\*1</sup>: 13\*17\*13mm  
0.512\*0.669\*0.512in  
Mounting: 3-M2, depth 3mm

[1] Exclude connectors

#### Connector Naming Rules:

S - SMA Female (Outline A)

#### Direction Naming Rules:

- 1 - Clockwise
- 2 - Anticlockwise

#### How To Order

##### NCC1317C-V-W-X-Y-Z

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC1317C series Circulator, 7~13GHz, 100W, SMA female, Clockwise, specify NCC1317C-7000-13000-K1-S-1.

Customization is available upon request.

## NCC1319C

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

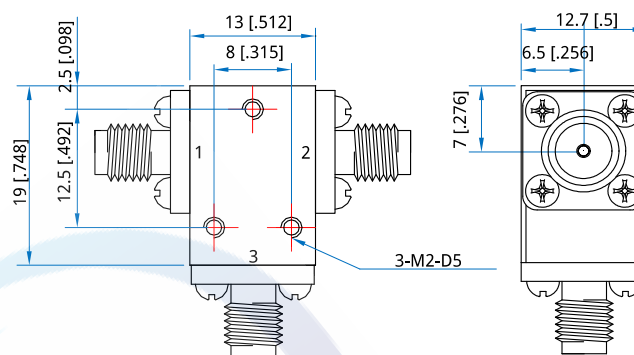
#### Description

NCC1319C series Coaxial Circulators cover frequency range 7~13GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 7000~9000          | 2000               | 0.40            | 20.0                   | 1.25           | 30 max.              | SMA       | -30~+75             |
| 7000~13000         | 6000               | 0.70            | 14.0                   | 1.60           | 30 max.              | SMA       | 0~+60               |
| 8000~12000         | 4000               | 0.50            | 18.0                   | 1.30           | 30 max.              | SMA       | -10~+60             |
| 9000~10200         | 1200               | 0.40            | 20.0                   | 1.25           | 30 max.              | SMA       | -10~+60             |
| 9100~9700          | 600                | 0.40            | 20.0                   | 1.25           | 30 max.              | SMA       | -30~+75             |
| 10000~11000        | 1000               | 0.30            | 23.0                   | 1.20           | 30 max.              | SMA       | -10~+60             |
| 10700~12700        | 2000               | 0.40            | 20.0                   | 1.20           | 30 max.              | SMA       | -10~+60             |

#### Outline Drawings



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size\*1: 13\*19\*12.7mm  
0.512\*0.748\*0.5in  
Mounting: 3-M2, depth 5mm

[1] Exclude connectors

#### Connector Naming Rules:

S - SMA Female

#### Direction Naming Rules:

- 1 - Clockwise
- 2 - Anticlockwise

#### How To Order

##### NCC1319C-V-W-X-Y-Z

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC1319C series Circulator, 8~12GHz, 30W, SMA female, Clockwise, specify NCC1319C-8000-12000-30-S-1. Customization is available upon request.

## NCC1523C

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

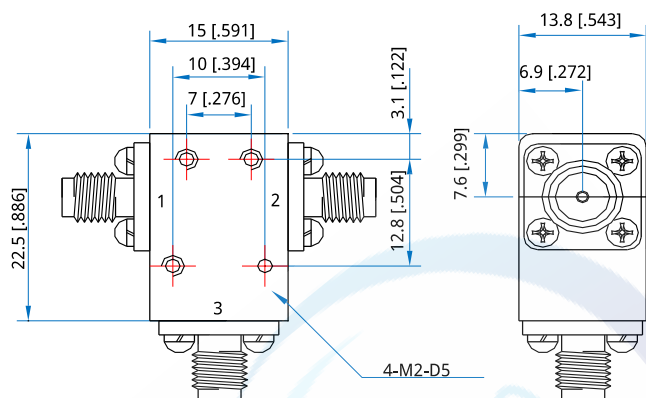
#### Description

NCC1523C series Coaxial Circulators cover frequency range 3.6~7.2GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 3600~4200          | 600                | 0.50            | 18.0                   | 1.30           | 60                   | SMA       | -10~+60             |
| 4000~5000          | 1000               | 0.50            | 18.0                   | 1.30           | 60                   | SMA       | -10~+60             |
| 4500~5500          | 1000               | 0.40            | 20.0                   | 1.25           | 60                   | SMA       | -10~+60             |
| 5000~6000          | 1000               | 0.40            | 20.0                   | 1.25           | 60                   | SMA       | -10~+60             |
| 5700~5900          | 200                | 0.40            | 20.0                   | 1.25           | 60                   | SMA       | -10~+60             |
| 5800~7200          | 1400               | 0.50            | 18.0                   | 1.35           | 60                   | SMA       | -10~+60             |

#### Outline Drawings



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size<sup>\*1</sup>: 15\*22.5\*13.8mm  
0.591\*0.886\*0.543in  
Mounting: 4-M2, depth 5mm

[1] Exclude connectors

#### Connector Naming Rules:

S - SMA Female

#### Direction Naming Rules:

- 1 - Clockwise
- 2 - Anticlockwise

#### How To Order

**NCC1523C-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC1523C series Circulator, 3.6~4.2GHz, 60W, SMA female, Clockwise, specify NCC1523C-3600-4200-60-S-1.

Customization is available upon request.

## NCC1620B

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

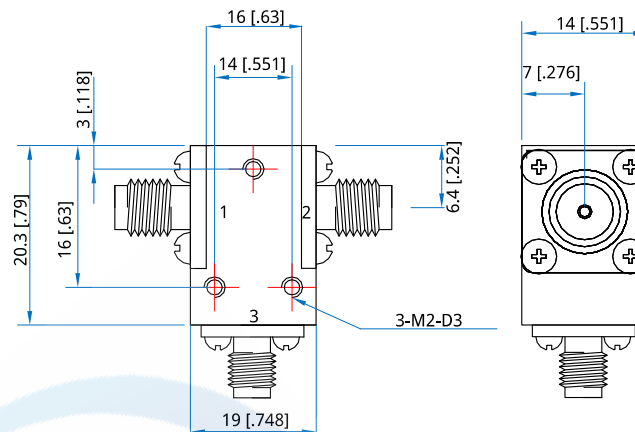
#### Description

NCC1620B series Coaxial Circulators cover frequency range 6~18GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 6000~18000         | 12000              | 1.50            | 10.0                   | 1.90           | 30                   | SMA       | 0~+60               |
| 8000~18000         | 10000              | 1.00            | 14.0                   | 1.50           | 30                   | SMA       | 0~+60               |

#### Outline Drawings



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size<sup>\*1</sup>: 16\*20.3\*14mm  
0.63\*0.79\*0.551in

Mounting: 3-M2, depth 3mm

[1] Exclude connectors

#### Connector Naming Rules:

S - SMA Female

#### Direction Naming Rules:

- 1 - Clockwise
- 2 - Anticlockwise

#### How To Order

**NCC1620B-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC1620B series Circulator, 6~18GHz, 20W, SMA female, Clockwise, specify NCC1620B-6000-18000-20-S-1.

Customization is available upon request.

## NCC1623C

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

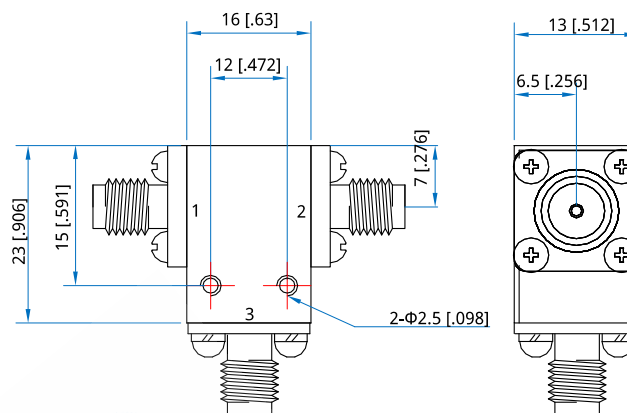
#### Description

NCC1623C series Coaxial Circulators cover frequency range 5725~5850MHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 5725~5850          | 125                | 0.3             | 23.0                   | 1.20           | 100                  | SMA       | -20~+80             |

#### Outline Drawings



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size<sup>\*1</sup>: 16\*23\*13mm

0.63\*0.906\*0.512in

Mounting: 2-Φ2.5mm through-hole

[1] Exclude connectors

#### Connector Naming Rules:

S - SMA Female

#### Direction Naming Rules:

1 - Clockwise

2 - Anticlockwise

#### How To Order

**NCC1623C-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC1623C series Circulator, 5725~5850MHz, 100W, SMA female, Clockwise, specify NCC1623C-5725-5850-K1-S-1.

Customization is available upon request.

**NCC-18000-26500-5-K-1**  
18~26.5GHz

- Features:

  - \* Broadband
  - \* High Power
  - \* Low Insertion Loss
- Applications:

  - \* Wireless
  - \* Radar
  - \* Laboratory Test

**Electrical**

|                 |            |
|-----------------|------------|
| Frequency:      | 18~26.5GHz |
| Insertion Loss: | 0.7dB max. |
| Isolation:      | 16dB min.  |
| VSWR:           | 1.4 max.   |
| Average Power:  | 5W         |

**Mechanical**

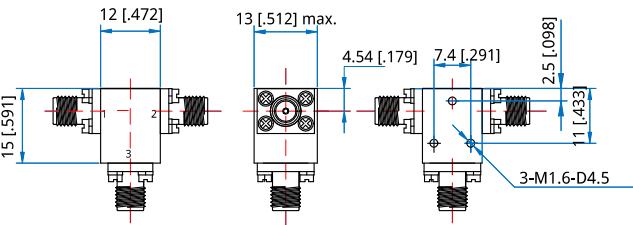
|                      |                                   |
|----------------------|-----------------------------------|
| Size <sup>*1</sup> : | 12*15*13mm<br>0.472*0.591*0.512in |
| RF Connectors:       | 2.92mm Female                     |
| Mounting:            | 3-M1.6, depth 4.5mm               |
| Direction:           | Clockwise                         |

[1] Exclude connectors.

**Environmental**

|              |           |
|--------------|-----------|
| Temperature: | -30~+70°C |
|--------------|-----------|

**Outline Drawings**



Unit: mm [in]  
Tolerance: ±0.15mm [±0.006in]

**How To Order**

**NCC-18000-26500-5-K-1**

Customization is available upon request.

## NCC-2000-4000-K5-N-1

2~4GHz, 500W

### Features:

- \* Broadband
- \* High Power
- \* Low Insertion Loss

### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

### Electrical

|                 |            |
|-----------------|------------|
| Frequency:      | 2~4GHz     |
| Insertion Loss: | 0.6dB max. |
| Isolation:      | 15dB min.  |
| VSWR:           | 1.5 max.   |
| Average Power:  | 500W       |

### Mechanical

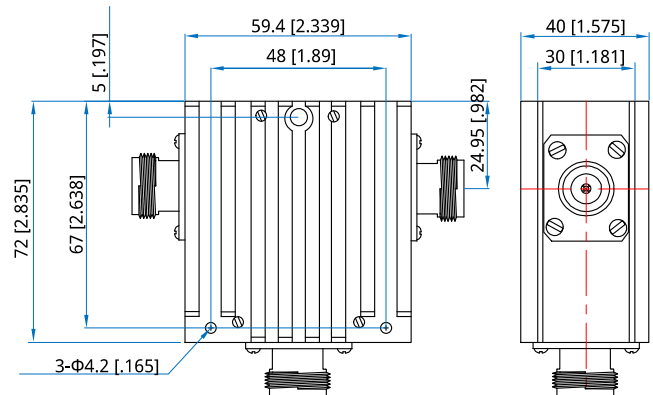
|                      |                                     |
|----------------------|-------------------------------------|
| Size <sup>*1</sup> : | 59.4*72*40mm<br>2.339*2.835*1.575in |
| RF Connectors:       | N Female                            |
| Mounting:            | 3-Φ4.2mm through-hole               |
| Cooling:             | Forced air                          |
| Direction:           | Clockwise                           |

[1] Exclude connectors.

### Environmental

|                            |           |
|----------------------------|-----------|
| Operating Temperature:     | -20~+60°C |
| Non-operating Temperature: | -55~+85°C |

### Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

### How To Order

**NCC-2000-4000-K5-N-1**

Customization is available upon request.

## NCC2025B

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

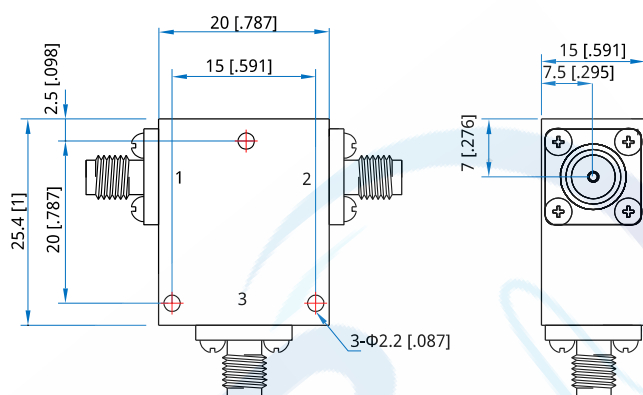
#### Description

NCC2025B series Coaxial Circulators cover frequency range 1.3~4GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 1300~4000          | 100                | 0.30            | 23.0                   | 1.20           | 100                  | SMA       | -30~+70             |
| 1700~1900          | 200                | 0.40            | 20.0                   | 1.25           | 100                  | SMA       | -30~+70             |
| 1900~2200          | 300                | 0.40            | 20.0                   | 1.25           | 100                  | SMA       | -30~+70             |
| 2400~2500          | 100                | 0.25            | 25.0                   | 1.15           | 100                  | SMA       | -30~+70             |
| 2500~2700          | 200                | 0.30            | 23.0                   | 1.20           | 100                  | SMA       | -30~+70             |
| 2700~3100          | 400                | 0.30            | 20.0                   | 1.25           | 100                  | SMA       | -30~+70             |
| 3100~3400          | 300                | 0.30            | 20.0                   | 1.20           | 100                  | SMA       | -30~+70             |
| 3400~3600          | 200                | 0.30            | 20.0                   | 1.20           | 100                  | SMA       | -30~+70             |
| 3600~4000          | 400                | 0.30            | 20.0                   | 1.25           | 100                  | SMA       | -30~+70             |

#### Outline Drawings



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size\*1: 20\*25.4\*15mm  
0.787\*1\*0.591in

Mounting: 3-Φ2.2mm through-hole

[1] Exclude connectors

#### Connector Naming Rules:

S - SMA Female

#### Direction Naming Rules:

- 1 - Clockwise
- 2 - Anticlockwise

#### How To Order

**NCC2025B-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC2025B series Circulator, 1700~1900MHz, 100W, SMA female, Clockwise, specify NCC2025B-1700-1900-K1-S-1.

Customization is available upon request.

## NCC2025X

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

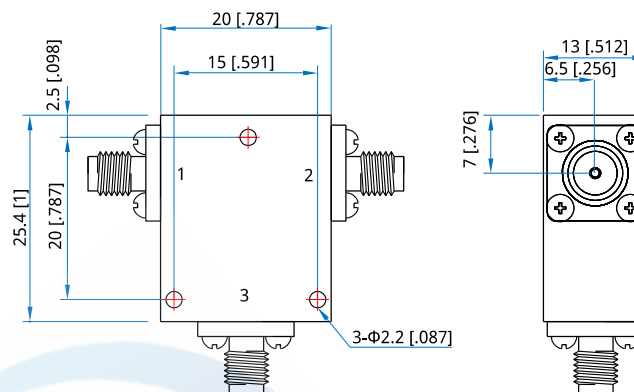
#### Description

NCC2025X series Coaxial Circulators cover frequency range 2.3~2.5GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 2300~2500          | 200                | 0.4             | 20                     | 1.25           | 100                  | SMA       | -30~+75             |
| 2400~2483          | 83                 | 0.3             | 25                     | 1.2            | 100                  | SMA       | -20~+85             |
| 2400~2500          | 100                | 0.3             | 23                     | 1.2            | 100                  | SMA       | -30~+75             |

#### Outline Drawings



Unit: mm [inch]

Tolerance: ±0.2mm [±0.008in]

#### Mechanical

Size\*1: 20\*25.4\*13mm

0.787\*1\*0.512in

Mounting: 3-Φ2.2mm through-hole

[1] Exclude connectors

#### Connector Naming Rules:

S - SMA Female

#### Direction Naming Rules:

1 - Clockwise

2 - Anticlockwise

#### How To Order

**NCC2025X-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC2025X series Circulator, 2400~2483MHz, 100W, SMA female, Clockwise, specify NCC2025X-2400-2483-K1-S-1.

Customization is available upon request.

## NCC2123B

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

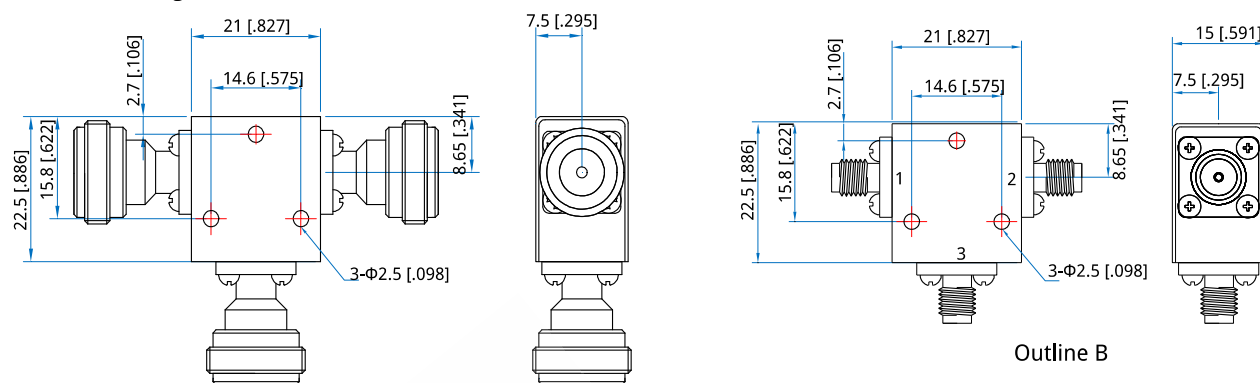
#### Description

NCC2123B series Coaxial Circulators cover frequency range 4~8GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

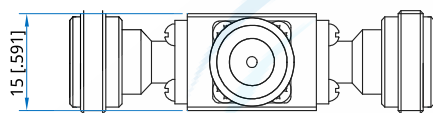
| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 4000~8000          | 4000               | 0.60            | 18.0                   | 1.35           | 50                   | SMA, N    | -10~+60             |

#### Outline Drawings



Outline A

Outline B



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size<sup>\*1</sup>: 21\*22.5\*15mm  
0.827\*0.886\*0.591in  
Mounting: 3-Φ2.5mm through-hole

[1] Exclude connectors

#### Connector Naming Rules:

N - N Female (Outline A)  
S - SMA Female (Outline B)

#### Direction Naming Rules:

- 1 - Clockwise
- 2 - Anticlockwise

#### How To Order

##### NCC2123B-V-W-X-Y-Z

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

Examples:

To order a NCC2123B series Circulator, 4~8GHz, 50W, SMA female, Clockwise, specify NCC2123B-4000-8000-50-S-1.

Customization is available upon request.

**NCC-24250-33400-5-K-1**  
24.25~33.4GHz, 5W

- Features:

  - \* Broadband
  - \* High Power
  - \* Low Insertion Loss
- Applications:

  - \* Wireless
  - \* Radar
  - \* Laboratory Test

**Electrical**

|                 |               |
|-----------------|---------------|
| Frequency:      | 24.25~33.4GHz |
| Insertion Loss: | 1.6dB max.    |
| Isolation:      | 14dB min.     |
| VSWR:           | 1.6 max.      |
| Average Power:  | 5W            |

**Mechanical**

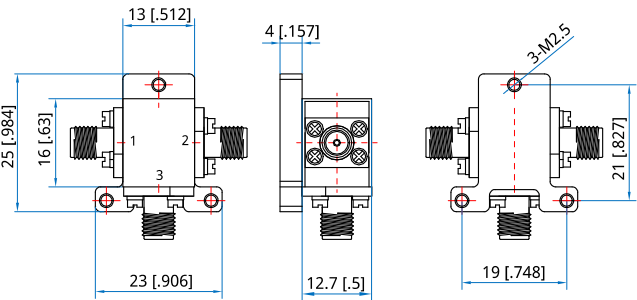
|                      |                                     |
|----------------------|-------------------------------------|
| Size <sup>*1</sup> : | 13*25*16.7mm<br>0.512*0.984*0.657in |
| RF Connectors:       | 2.92mm Female                       |
| Mounting:            | 3-M2.5 through-hole                 |

[1] Exclude connectors.

**Environmental**

|              |           |
|--------------|-----------|
| Temperature: | -40~+70°C |
|--------------|-----------|

**Outline Drawings**



Unit: mm [in]  
Tolerance: ±0.2mm [±0.008in]

**How To Order**

**NCC-24250-33400-5-K-1**

Customization is available upon request.

## NCC2528B

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

#### Description

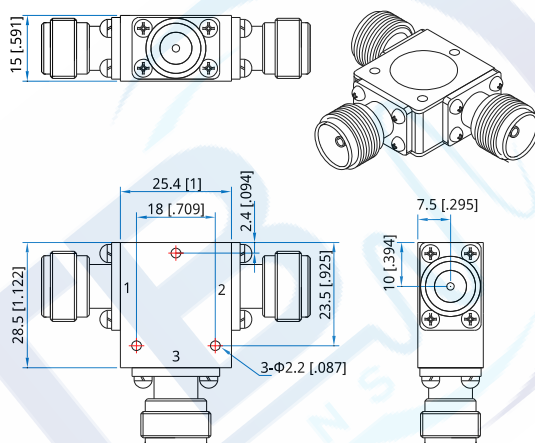
NCC2528B series Coaxial Circulators cover frequency range 800~4000MHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

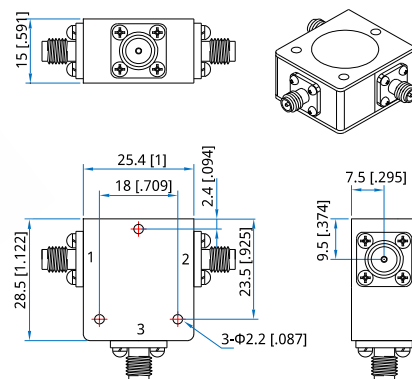
| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power*1<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|------------------------|-----------|---------------------|
| 800~1300           | 70                 | 0.30            | 23.0                   | 1.20           | 10~200                 | SMA, N    | -30~+70             |
| 820~880            | 60                 | 0.30            | 23.0                   | 1.20           | 10~200                 | SMA, N    | -30~+70             |
| 920~960            | 40                 | 0.30            | 23.0                   | 1.20           | 10~200                 | SMA, N    | -30~+70             |
| 1200~1400          | 200                | 0.30            | 23.0                   | 1.20           | 10~200                 | SMA, N    | -30~+70             |
| 1300~4000          | 100                | 0.30            | 23.0                   | 1.20           | 10~200                 | SMA, N    | -30~+70             |
| 1700~1900          | 200                | 0.40            | 20.0                   | 1.25           | 10~200                 | SMA, N    | -30~+70             |
| 1900~2200          | 300                | 0.40            | 20.0                   | 1.25           | 10~200                 | SMA, N    | -30~+70             |
| 2200~2500          | 300                | 0.35            | 20.0                   | 1.20           | 10~200                 | SMA, N    | -30~+70             |
| 2500~2700          | 200                | 0.30            | 23.0                   | 1.20           | 10~200                 | SMA, N    | -30~+70             |
| 2700~3100          | 400                | 0.30            | 20.0                   | 1.25           | 10~200                 | SMA, N    | -30~+70             |
| 3100~3400          | 300                | 0.30            | 20.0                   | 1.20           | 10~200                 | SMA, N    | -30~+70             |
| 3400~3600          | 200                | 0.30            | 20.0                   | 1.20           | 10~200                 | SMA, N    | -30~+70             |
| 3600~4000          | 400                | 0.30            | 20.0                   | 1.25           | 10~200                 | SMA, N    | -30~+70             |

[1] The connector is SMA, and the maximum average power can only reach 100W

#### Outline Drawings



Outline A



Outline B

Unit: mm [inch]

Tolerance: ±0.2mm [±0.008in]



## Coaxial Circulators

### Mechanical

---

Size<sup>\*2</sup>: 25.4\*28.5\*15mm  
1\*1.122\*0.591in

Mounting: 3-Φ2.2mm through-hole

[2] Exclude connectors

### Connector Naming Rules:

N - N Female (Outline A)  
S - SMA Female (Outline B)

### Direction Naming Rules:

1 - Clockwise  
2 - Anticlockwise

### How To Order

**NCC2528B-V-W-X-Y-Z**

V: Start frequency in MHz  
W: Stop frequency in MHz  
X: Average power in W  
Y: Connector type  
Z: Direction type

### Examples:

To order a NCC2528B series Circulator, 820~880MHz, 100W, SMA female, Clockwise, specify NCC2528B-820-880-K1-S-1.

Customization is available upon request.

## NCC2528C

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

#### Description

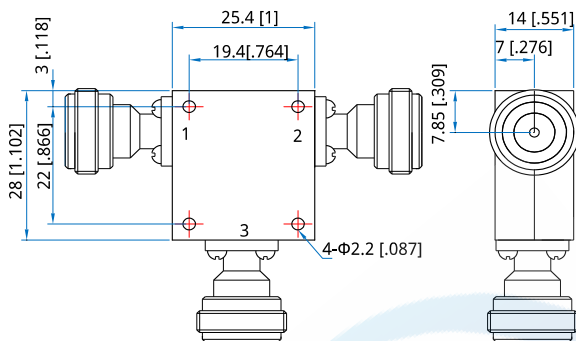
NCC2528C series Coaxial Circulators cover frequency range 2.7~6.2GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power* <sup>1</sup><br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|------------------------------------|-----------|---------------------|
| 2700~6200          | 3500               | 0.80            | 16.0                   | 1.40           | 60                                 | SMA, N    | 0~+60               |
| 3000~6000          | 3000               | 0.50            | 18.0                   | 1.30           | 100                                | SMA, N    | -30~+75             |
| 3000~6000          | 500                | 0.40            | 20.0                   | 1.25           | 100, 150                           | SMA, N    | 0~+60               |
| 5000~6000          | 1000               | 0.40            | 20.0                   | 1.25           | 100, 150                           | SMA, N    | 0~+60               |

[1] The connector is SMA, and the maximum average power can only reach 100W

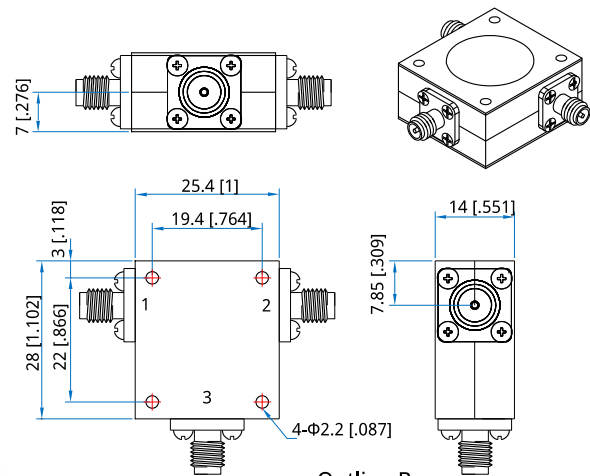
#### Outline Drawings



Outline A

Unit: mm [inch]

Tolerance: ±0.2mm [±0.008in]



Outline B

#### Mechanical

Size\*<sup>2</sup>: 25.4\*28\*14mm

1\*1.102\*0.551in

Mounting: 4-Φ2.2mm through-hole

[2] Exclude connectors

#### Connector Naming Rules:

N - N Female (Outline A)

S - SMA Female (Outline B)

#### Direction Naming Rules:

1 - Clockwise

2 - Anticlockwise

#### How To Order

**NCC2528C-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC2528C series Circulator, 2700~6200MHz, 100W, SMA female, Clockwise, specify NCC2528C-2700-6200-K1-S-1.

Customization is available upon request.

## NCC2528X

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

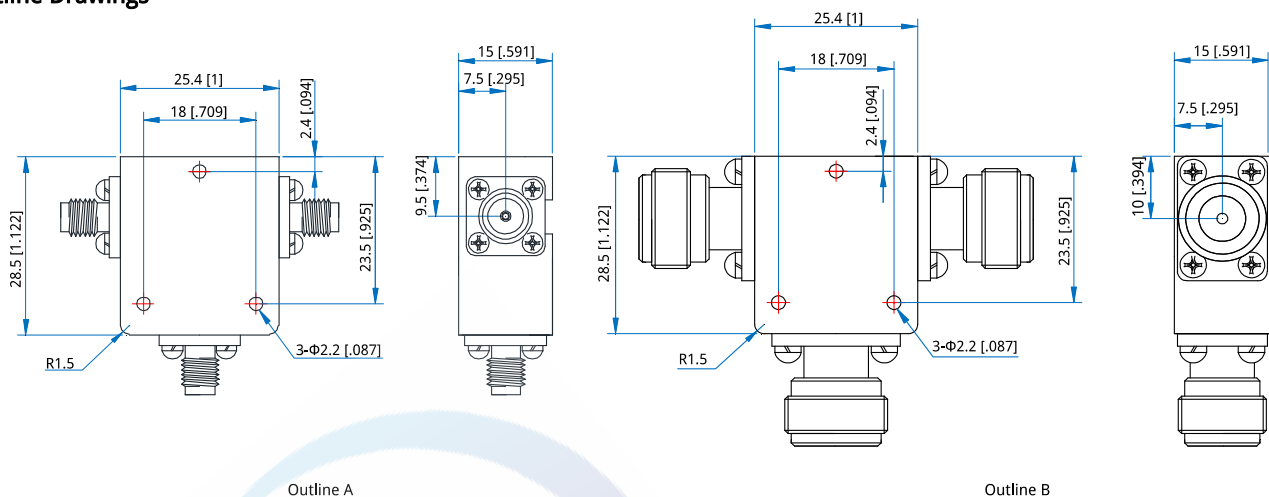
#### Description

NCC2528X series Coaxial Circulators cover frequency range 1.2~2.5GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 1200~1400          | 200                | 0.40            | 20.0                   | 1.25           | 100                  | SMA       | -30~+75             |
| 2400~2500          | 100                | 0.50            | 20.0                   | 1.25           | 100                  | N         | -30~+70             |

#### Outline Drawings



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size<sup>\*1</sup>: 25.4\*28.5\*15mm

1\*1.122\*0.591in

Mounting: 3-Φ2.2mm through-hole

[1] Exclude connectors

#### Connector Naming Rules:

S - SMA Female (Outline A)

N - N Female (Outline B)

#### Direction Naming Rules:

1 - Clockwise

2 - Anticlockwise

#### How To Order

**NCC2528X-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC2528X series Circulator, 1200~1400MHz, 100W, SMA female, Clockwise, specify NCC2528X-1200-1400-K1-S-1.

Customization is available upon request.

# NCC-26500-40000-5-K-1

26.5~40GHz, 5W

- Features:

  - \* Broadband
  - \* High Power
  - \* Low Insertion Loss
- Applications:

  - \* Wireless
  - \* Radar
  - \* Laboratory Test

## Electrical

|                 |            |
|-----------------|------------|
| Frequency:      | 26.5~40GHz |
| Insertion Loss: | 1.6dB max. |
| Isolation:      | 14dB min.  |
| VSWR:           | 1.6 max.   |
| Average Power:  | 5W         |

## Mechanical

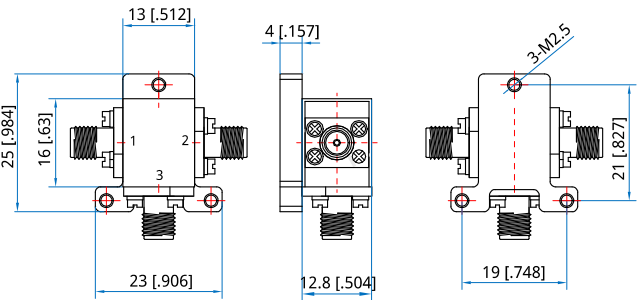
|                      |                                     |
|----------------------|-------------------------------------|
| Size <sup>*1</sup> : | 13*25*16.8mm<br>0.512*0.984*0.661in |
| RF Connectors:       | 2.92mm Female                       |
| Mounting:            | 3-M2.5 through-hole                 |
| Direction:           | Clockwise                           |

[1] Exclude connectors.

## Environmental

|              |                             |
|--------------|-----------------------------|
| Temperature: | -30~+70°C (1.8dB/12dB/1.80) |
|--------------|-----------------------------|

## Outline Drawings



Unit: mm [in]  
Tolerance: ±0.2mm [±0.008in]

## How To Order

**NCC-26500-40000-5-K-1**

Customization is available upon request.

## NCC3030B

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

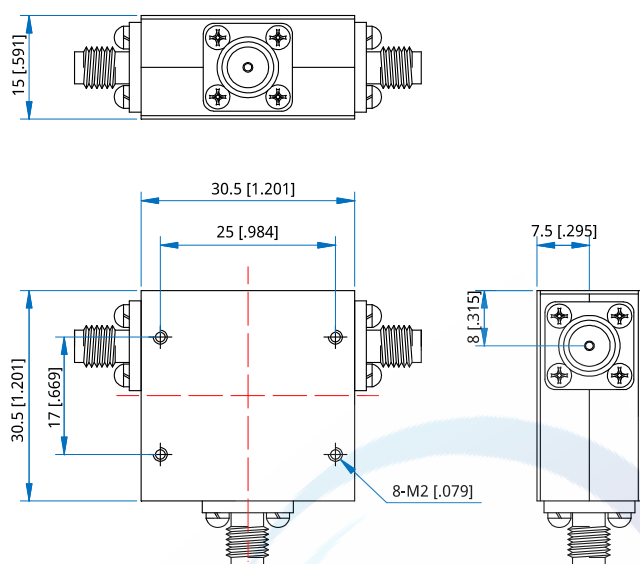
#### Description

NCC3030B series Drop-In Circulators cover frequency range 2~6GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | Insertion Loss<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Temperature<br>(°C) |
|--------------------|--------------------|-----------------------------|------------------------|----------------|----------------------|---------------------|
| 2000~6000          | 4000               | 1.7                         | 12                     | 1.6            | 20                   | -40~+70             |

#### Outline Drawings



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size<sup>\*1</sup>: 30.5\*30.5\*15mm  
1.201\*1.201\*0.591in

RF Connectors: SMA Female

Mounting: 8-M2mm through-hole

[1] Exclude connectors

#### Connector Naming Rules:

S - SMA Female

#### Direction Naming Rules:

- 1 - Clockwise
- 2 - Anticlockwise

#### How To Order

**NCC3030B-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC3030B series Circulator, 2~6GHz, 20W, SMA Female, Clockwise, specify NCC3030B-2000-6000-20-S-1.

Customization is available upon request.

## NCC3033X

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

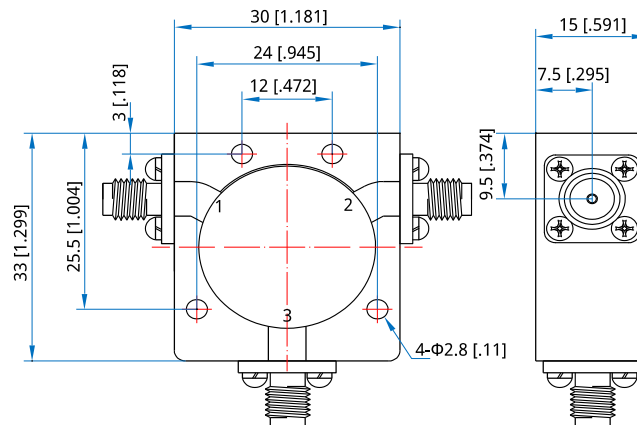
- \* Wireless
- \* Radar
- \* Laboratory Test

#### Description

NCC3033X series Coaxial Circulators cover frequency range 700~3000MHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W Max.) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|---------------------------|-----------|---------------------|
| 700~1300           | 100                | 0.30            | 23.0                   | 1.20           | 100                       | SMA       | -30~+70             |
| 700~1300           | 200                | 0.40            | 20.0                   | 1.25           | 100                       | SMA       | -30~+70             |
| 700~900            | 200                | 0.40            | 20.0                   | 1.25           | 100                       | SMA       | -30~+70             |
| 800~1000           | 200                | 0.40            | 20.0                   | 1.25           | 100                       | SMA       | -30~+70             |
| 890~960            | 70                 | 0.25            | 25.0                   | 1.15           | 100                       | SMA       | -30~+70             |
| 950~1450           | 500                | 0.60            | 15.0                   | 1.45           | 100                       | SMA       | -30~+70             |
| 960~1215           | 255                | 0.30            | 21.0                   | 1.20           | 100                       | SMA       | -30~+70             |
| 960~1260           | 300                | 0.45            | 20.0                   | 1.25           | 100                       | SMA       | -30~+70             |
| 1030~1090          | 60                 | 0.25            | 25.0                   | 1.15           | 100                       | SMA       | -30~+70             |
| 1290~1310          | 20                 | 0.25            | 25.0                   | 1.15           | 100                       | SMA       | -30~+70             |
| 1300~3000          | 200                | 0.30            | 23.0                   | 1.20           | 100                       | SMA       | -30~+70             |
| 1300~3000          | 300                | 0.45            | 18.0                   | 1.30           | 100                       | SMA       | -30~+70             |
| 1350~1850          | 500                | 0.60            | 15.0                   | 1.45           | 100                       | SMA       | -30~+70             |
| 1400~1700          | 300                | 0.45            | 20.0                   | 1.25           | 100                       | SMA       | -30~+70             |
| 1700~2300          | 600                | 0.50            | 20.0                   | 1.25           | 100                       | SMA       | -30~+70             |
| 1900~2200          | 300                | 0.40            | 20.0                   | 1.25           | 100                       | SMA       | -30~+70             |
| 2100~2700          | 600                | 0.50            | 18.0                   | 1.35           | 100                       | SMA       | -30~+70             |
| 2200~2400          | 200                | 0.30            | 23.0                   | 1.20           | 100                       | SMA       | -30~+70             |
| 2300~2700          | 400                | 0.40            | 20.0                   | 1.25           | 100                       | SMA       | -30~+70             |
| 2500~2700          | 200                | 0.30            | 23.0                   | 1.20           | 100                       | SMA       | -30~+70             |
| 2700~2900          | 200                | 0.30            | 23.0                   | 1.20           | 100                       | SMA       | -30~+70             |
| 2800~3000          | 200                | 0.30            | 23.0                   | 1.20           | 100                       | SMA       | -30~+70             |



Unit: mm [inch]      Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

## Mechanical

Size\*1: 30\*33\*15mm  
1.181\*1.299\*0.591in

Mounting: 4- $\Phi$ 2.8mm through-hole

[1] Exclude connectors

## Connector Naming Rules:

S - SMA Female

## Direction Naming Rules:

- 1 - Clockwise
- 2 - Anticlockwise

## How To Order

**NCC3033X-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

## Examples:

To order a NCC3033X series Circulator, 700~900MHz, 100W, SMA female, Clockwise, specify NCC3033X-700-900-K1-S-1.

Customization is available upon request.

# **NCC-32000-38000-10-K-1** 32~38GHz, 10W

- Features:

  - \* Broadband
  - \* High Power
  - \* Low Insertion Loss
- Applications:

  - \* Wireless
  - \* Radar
  - \* Laboratory Test

## Electrical

|                 |            |
|-----------------|------------|
| Frequency:      | 32~38GHz   |
| Insertion Loss: | 1.2dB max. |
| Isolation:      | 15dB min.  |
| VSWR:           | 1.5 max.   |
| Average Power:  | 10W        |

## Mechanical

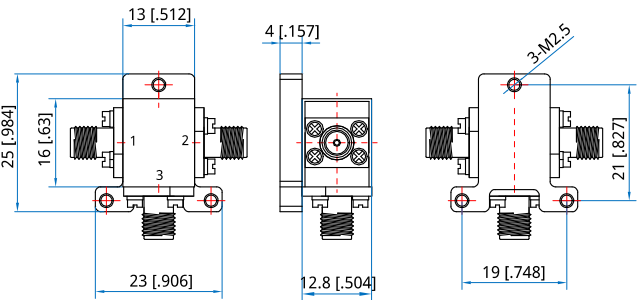
|                      |                                     |
|----------------------|-------------------------------------|
| Size <sup>*1</sup> : | 13*25*16.8mm<br>0.512*0.984*0.661in |
| RF Connectors:       | 2.92mm Female                       |
| Mounting:            | 3-M2.5 through-hole                 |
| Direction:           | Clockwise                           |

[1] Exclude connectors.

## Environmental

|              |           |
|--------------|-----------|
| Temperature: | -30~+70°C |
|--------------|-----------|

## Outline Drawings



Unit: mm [in]  
 Tolerance: ±0.15mm [±0.006in]

## How To Order

**NCC-32000-38000-10-K-1**

Customization is available upon request.

## NCC3232X

### High Power, High Isolation

**Features:**

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

**Applications:**

- \* Wireless
- \* Radar
- \* Laboratory Test

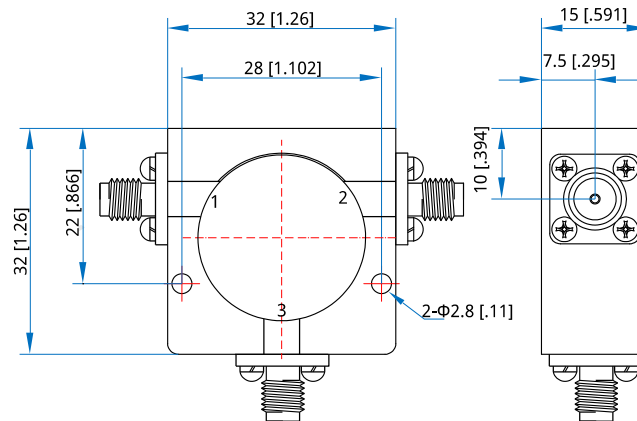
### Description

NCC3232X series Coaxial Circulators cover frequency range 700~3000MHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power* <sup>1</sup><br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|------------------------------------|-----------|---------------------|
| 700~1300           | 100                | 0.30            | 23.0                   | 1.20           | 100~200                            | SMA, N    | -30~+70             |
| 700~1300           | 200                | 0.40            | 20.0                   | 1.25           | 100~200                            | SMA, N    | -30~+70             |
| 700~900            | 200                | 0.40            | 20.0                   | 1.25           | 100~200                            | SMA, N    | -30~+70             |
| 800~1000           | 200                | 0.40            | 20.0                   | 1.25           | 100~200                            | SMA, N    | -30~+70             |
| 890~960            | 70                 | 0.25            | 25.0                   | 1.15           | 100~200                            | SMA, N    | -30~+70             |
| 950~1450           | 500                | 0.60            | 15.0                   | 1.45           | 100~200                            | SMA, N    | -30~+70             |
| 960~1215           | 255                | 0.30            | 21.0                   | 1.20           | 100~200                            | SMA, N    | -30~+70             |
| 960~1260           | 300                | 0.45            | 20.0                   | 1.25           | 100~200                            | SMA, N    | -30~+70             |
| 1030~1090          | 60                 | 0.25            | 25.0                   | 1.15           | 100~200                            | SMA, N    | -30~+70             |
| 1290~1310          | 20                 | 0.25            | 25.0                   | 1.15           | 100~200                            | SMA, N    | -30~+70             |
| 1300~3000          | 200                | 0.30            | 23.0                   | 1.20           | 100~200                            | SMA, N    | -30~+70             |
| 1300~3000          | 300                | 0.45            | 18.0                   | 1.30           | 100~200                            | SMA, N    | -30~+70             |
| 1350~1850          | 500                | 0.60            | 15.0                   | 1.45           | 100~200                            | SMA, N    | -30~+70             |
| 1400~1700          | 300                | 0.45            | 20.0                   | 1.25           | 100~200                            | SMA, N    | -30~+70             |
| 1700~2300          | 600                | 0.50            | 20.0                   | 1.25           | 100~200                            | SMA, N    | -30~+70             |
| 1900~2200          | 300                | 0.40            | 20.0                   | 1.25           | 100~200                            | SMA, N    | -30~+70             |
| 2100~2700          | 600                | 0.50            | 18.0                   | 1.35           | 100~200                            | SMA, N    | -30~+70             |
| 2200~2400          | 200                | 0.30            | 23.0                   | 1.20           | 100~200                            | SMA, N    | -30~+70             |
| 2300~2700          | 400                | 0.40            | 20.0                   | 1.25           | 100~200                            | SMA, N    | -30~+70             |
| 2500~2700          | 200                | 0.30            | 23.0                   | 1.20           | 100~200                            | SMA, N    | -30~+70             |
| 2700~2900          | 200                | 0.30            | 23.0                   | 1.20           | 100~200                            | SMA, N    | -30~+70             |
| 2800~3000          | 200                | 0.30            | 23.0                   | 1.20           | 100~200                            | SMA, N    | -30~+70             |

[1] The connector is SMA, and the maximum average power can only reach 100W



Unit: mm [inch]      Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

## Mechanical

Size<sup>\*2</sup>: 32\*32\*15mm  
1.26\*1.26\*0.591in  
Mounting: 2- $\Phi$ 2.8mm through-hole

[2] Exclude connectors

## Connector Naming Rules:

S - SMA Female

## Direction Naming Rules:

1 - Clockwise  
2 - Anticlockwise

## How To Order

**NCC3232X-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

## Examples:

To order a NCC3232X series Circulator, 700~1300MHz, 100W, SMA female, Clockwise, specify NCC3232X-700-1300-K1-S-1.

Customization is available upon request.

## NCC3234A

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

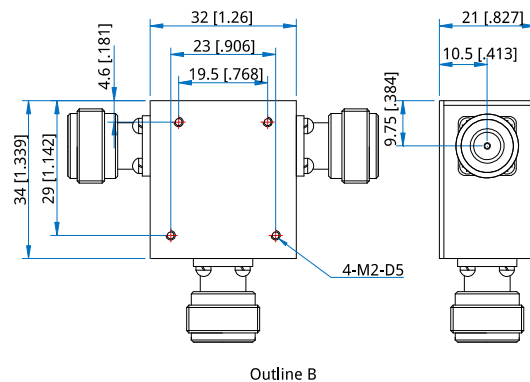
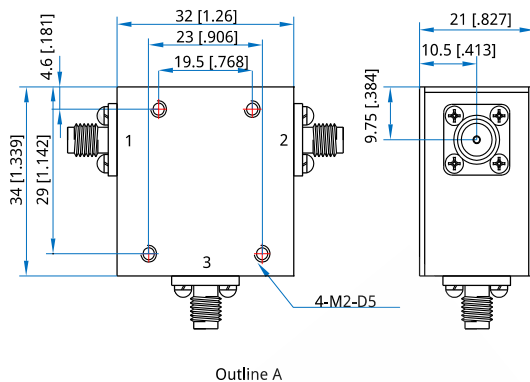
#### Description

NCC3234A series Coaxial Circulators cover frequency range 2~4GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 2000~4000          | 2000               | 0.60            | 17                     | 1.35           | 100                  | SMA, N    | 0~+60               |

#### Outline Drawings



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size<sup>\*1</sup>: 32\*34\*21mm

1.26\*1.339\*0.827in

Mounting: 4-M2, depth 5mm

[1] Exclude connectors

#### Connector Naming Rules:

S - SMA Female (Outline A)

N - N Female (Outline B)

#### Direction Naming Rules:

1 - Clockwise

2 - Anticlockwise

#### How To Order

**NCC3234A-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

Examples:

To order a NCC3234A series Circulator, 2000~4000MHz, 100W, SMA female, Clockwise, specify NCC3234A-2000-4000-K1-S-1.

Customization is available upon request.

## NCC3434E

### High Power, High Isolation

**Features:**

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

**Applications:**

- \* Wireless
- \* Radar
- \* Laboratory Test

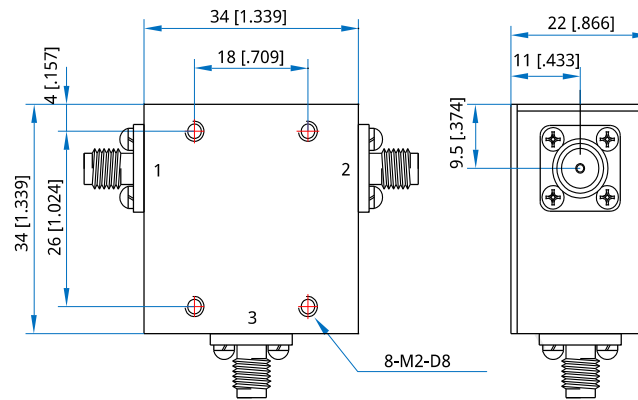
### Description

NCC3434E series Coaxial Circulators cover frequency range 700~3000MHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power*1<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|------------------------|-----------|---------------------|
| 700~1300           | 100                | 0.30            | 23.0                   | 1.20           | 100~200                | SMA, N    | -30~+70             |
| 700~1300           | 200                | 0.40            | 20.0                   | 1.25           | 100~200                | SMA, N    | -30~+70             |
| 700~900            | 200                | 0.40            | 20.0                   | 1.25           | 100~200                | SMA, N    | -30~+70             |
| 800~1000           | 200                | 0.40            | 20.0                   | 1.25           | 100~200                | SMA, N    | -30~+70             |
| 890~960            | 70                 | 0.25            | 25.0                   | 1.15           | 100~200                | SMA, N    | -30~+70             |
| 950~1450           | 500                | 0.60            | 15.0                   | 1.45           | 100~200                | SMA, N    | -30~+70             |
| 960~1215           | 255                | 0.30            | 21.0                   | 1.20           | 100~200                | SMA, N    | -30~+70             |
| 960~1260           | 300                | 0.45            | 20.0                   | 1.25           | 100~200                | SMA, N    | -30~+70             |
| 1030~1090          | 60                 | 0.25            | 25.0                   | 1.15           | 100~200                | SMA, N    | -30~+70             |
| 1290~1310          | 20                 | 0.25            | 25.0                   | 1.15           | 100~200                | SMA, N    | -30~+70             |
| 1300~3000          | 200                | 0.30            | 23.0                   | 1.20           | 100~200                | SMA, N    | -30~+70             |
| 1300~3000          | 300                | 0.45            | 18.0                   | 1.30           | 100~200                | SMA, N    | -30~+70             |
| 1350~1850          | 500                | 0.60            | 15.0                   | 1.45           | 100~200                | SMA, N    | -30~+70             |
| 1400~1700          | 300                | 0.45            | 20.0                   | 1.25           | 100~200                | SMA, N    | -30~+70             |
| 1700~2300          | 600                | 0.50            | 20.0                   | 1.25           | 100~200                | SMA, N    | -30~+70             |
| 1900~2200          | 300                | 0.40            | 20.0                   | 1.25           | 100~200                | SMA, N    | -30~+70             |
| 2100~2700          | 600                | 0.50            | 18.0                   | 1.35           | 100~200                | SMA, N    | -30~+70             |
| 2200~2400          | 200                | 0.30            | 23.0                   | 1.20           | 100~200                | SMA, N    | -30~+70             |
| 2300~2700          | 400                | 0.40            | 20.0                   | 1.25           | 100~200                | SMA, N    | -30~+70             |
| 2500~2700          | 200                | 0.30            | 23.0                   | 1.20           | 100~200                | SMA, N    | -30~+70             |
| 2700~2900          | 200                | 0.30            | 23.0                   | 1.20           | 100~200                | SMA, N    | -30~+70             |
| 2800~3000          | 200                | 0.30            | 23.0                   | 1.20           | 100~200                | SMA, N    | -30~+70             |

[1] The connector is SMA, and the maximum average power can only reach 100W



Unit: mm [inch]      Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

## Mechanical

Size\*2: 34\*34\*22mm  
1.339\*1.339\*0.866in

Mounting: 8-M2, depth 8mm

[2] Exclude connectors

## Connector Naming Rules:

S - SMA Female

## Direction Naming Rules:

1 - Clockwise

2 - Anticlockwise

## How To Order

**NCC3434E-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

## Examples:

To order a NCC3434E series Circulator, 700~900MHz, 100W, SMA female, Clockwise, specify NCC3434E-700-900-K1-S-1.

Customization is available upon request.

## NCC3538X

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

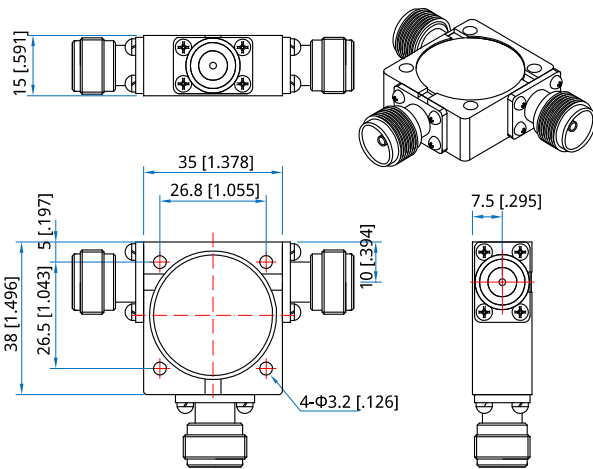
#### Description

NCC3538X series Coaxial Circulators cover frequency range 300~1850MHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

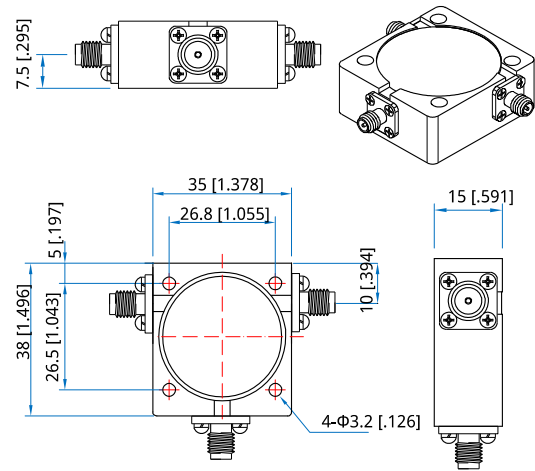
#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power*1<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|------------------------|-----------|---------------------|
| 300-350            | 50                 | 0.70            | 18.0                   | 1.35           | 100~300                | SMA, N    | -30~+70             |
| 300-400            | 20                 | 0.40            | 20.0                   | 1.25           | 100~300                | SMA, N    | -30~+70             |
| 350-370            | 20                 | 0.40            | 23.0                   | 1.20           | 100~300                | SMA, N    | -30~+70             |
| 361-366            | 5                  | 0.40            | 23.0                   | 1.20           | 100~300                | SMA, N    | -30~+70             |
| 380-460            | 80                 | 0.70            | 17.0                   | 1.35           | 100                    | SMA, N    | -30~+70             |
| 400-470            | 70                 | 0.40            | 20.0                   | 1.25           | 100~300                | SMA, N    | -30~+70             |
| 400-600            | 20                 | 0.30            | 23.0                   | 1.20           | 100~300                | SMA, N    | -30~+70             |
| 400-600            | 50                 | 0.40            | 20.0                   | 1.25           | 100~300                | SMA, N    | -30~+70             |
| 470-570            | 100                | 0.40            | 20.0                   | 1.25           | 100~300                | SMA, N    | -30~+70             |
| 500-700            | 200                | 0.70            | 18.0                   | 1.30           | 100~300                | SMA, N    | -30~+70             |
| 600-800            | 30                 | 0.25            | 25.0                   | 1.15           | 100~300                | SMA, N    | -30~+70             |
| 600-800            | 100                | 0.30            | 23.0                   | 1.20           | 100~300                | SMA, N    | -30~+70             |
| 600-800            | 200                | 0.45            | 19.0                   | 1.25           | 100~300                | SMA, N    | -30~+70             |
| 700-900            | 200                | 0.40            | 20.0                   | 1.25           | 100                    | N         | -30~+75             |
| 700-1000           | 30                 | 0.25            | 25.0                   | 1.15           | 100~300                | SMA, N    | -30~+70             |
| 700-1000           | 100                | 0.30            | 23.0                   | 1.20           | 100~300                | SMA, N    | -30~+70             |
| 700-1000           | 200                | 0.50            | 18.0                   | 1.30           | 100~300                | SMA, N    | -30~+70             |
| 950-1450           | 500                | 0.60            | 18.0                   | 1.30           | 100~300                | SMA, N    | -30~+70             |
| 960-1200           | 240                | 0.40            | 20.0                   | 1.25           | 100                    | N         | -30~+75             |
| 960-1215           | 255                | 0.40            | 20.0                   | 1.25           | 100~300                | SMA, N    | -30~+70             |
| 960-1250           | 290                | 0.50            | 18.0                   | 1.30           | 150                    | N         | -30~+75             |
| 960-1260           | 300                | 0.45            | 20.0                   | 1.25           | 100~300                | SMA, N    | -30~+70             |
| 1000-1500          | 500                | 0.60            | 18.0                   | 1.30           | 100~300                | SMA, N    | -30~+70             |
| 1020-1040          | 20                 | 0.25            | 25.0                   | 1.15           | 100~300                | SMA, N    | -30~+70             |
| 1160-1610          | 450                | 0.50            | 20.0                   | 1.25           | 100~300                | SMA, N    | -30~+70             |
| 1290-1310          | 20                 | 0.25            | 25.0                   | 1.15           | 100~300                | SMA, N    | -30~+70             |
| 1350-1850          | 500                | 0.50            | 20.0                   | 1.25           | 100~300                | SMA, N    | -30~+70             |

[1] The connector is SMA, and the maximum average power can only reach 100W



Outline A



Outline B

Unit: mm [inch]      Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

## Mechanical

Size<sup>\*2</sup>: 35\*38\*15mm

1.378\*1.496\*0.591in

Mounting: 4-Φ3.2mm through-hole

[2] Exclude connectors

## Connector Naming Rules:

N - N Female (Outline A)

S - SMA Female (Outline B)

## Direction Naming Rules:

1 - Clockwise

2 - Anticlockwise

## How To Order

**NCC3538X-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

## Examples:

To order a NCC3538X series Circulator, 310~340MHz, 100W, N female, Clockwise, specify NCC3538X-310-340-K1-N-1.

Customization is available upon request.

# NCC-4000-8000-K3-N-1

4~8GHz, 300W

- Features:

  - \* Broadband
  - \* High Power
  - \* Low Insertion Loss
- Applications:

  - \* Wireless
  - \* Radar
  - \* Laboratory Test

## Electrical

|                 |            |
|-----------------|------------|
| Frequency:      | 4~8GHz     |
| Insertion Loss: | 0.6dB max. |
| Isolation:      | 15dB min.  |
| VSWR:           | 1.5 max.   |
| Average Power:  | 300W       |

## Mechanical

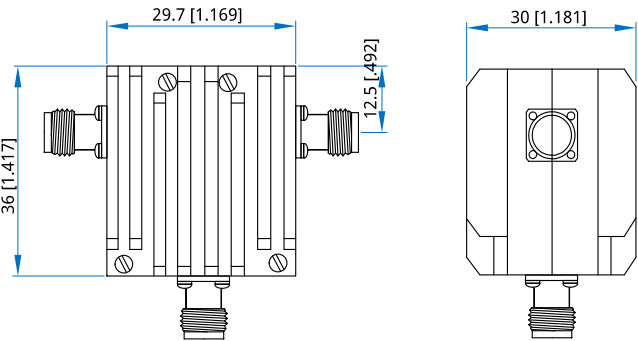
|                |                                     |
|----------------|-------------------------------------|
| Size*1:        | 29.7*36*30mm<br>1.169*1.417*1.181in |
| RF Connectors: | N Female                            |
| Cooling:       | Forced air                          |
| Direction:     | Clockwise                           |

[1] Exclude connectors.

## Environmental

|                            |           |
|----------------------------|-----------|
| Operating Temperature:     | -20~+60°C |
| Non-operating Temperature: | -55~+85°C |

## Outline Drawings



Unit: mm [in]  
Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

## How To Order

**NCC-4000-8000-K3-N-1**

Customization is available upon request.

## NCC4040A

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

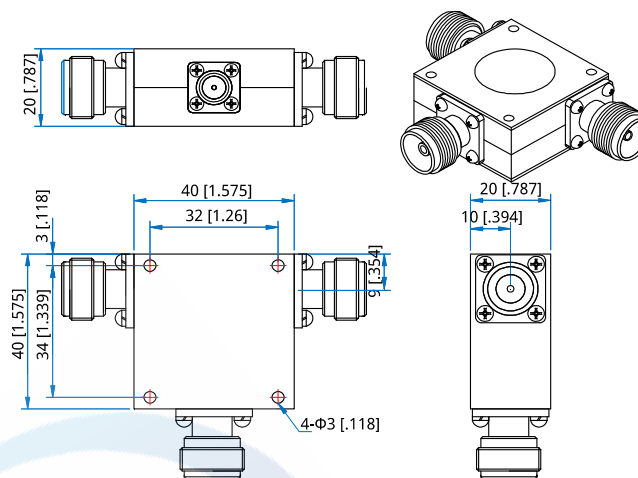
#### Description

NCC4040A series Coaxial Circulators cover frequency range 1.8~3.6GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 1800-3600          | 1800               | 0.70            | 17.0                   | 1.35           | 100                  | N         | 0~+60               |

#### Outline Drawings



Unit: mm [inch]

Tolerance: ±0.2mm [±0.008in]

#### Mechanical

Size\*1: 40\*40\*20mm

1.575\*1.575\*0.787in

Mounting: 4-Φ3mm through-hole

[1] Exclude connectors

#### Connector Naming Rules:

N - N Female

#### Direction Naming Rules:

1 - Clockwise

2 - Anticlockwise

#### How To Order

**NCC4040A-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC4040A series Circulator, 1800~3600MHz, 100W, N female, Clockwise, specify NCC4040A-1800-3600-K1-N-1.

Customization is available upon request.

## NCC4149A

High Power, High Isolation

### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

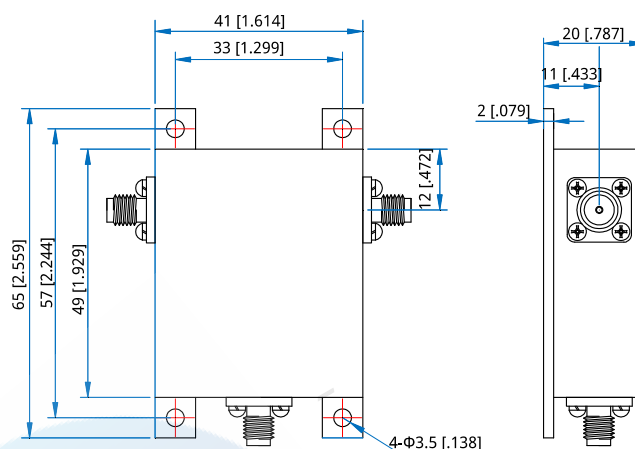
### Description

NCC4149A series Coaxial Circulators cover frequency range 0.6~1GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

## Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 600-1000           | 400                | 1.0             | 16.0                   | 1.4            | 100                  | SMA       | -40~+60             |

## Outline Drawings



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

## Mechanical

Size<sup>\*1</sup>: 41\*49\*20mm

$$1.614 \times 1.929 \times 0.787 \text{ in}$$

Mounting: 4- $\Phi$ 3.5mm through-hole

[1] Exclude connectors

### Connector Naming Rules:

S - SMA Female

### Direction Naming Rules:

1 - Clockwise

2 - Anticlockwise

## How To Order

NCC4149A-V-W-X-Y-Z

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

Examples:

To order a NCC4149A series Circulator, 600~1000MHz, 100W, SMA female, Clockwise, specify NCC4149A-600-1000-K1-S-1.

Customization is available upon request.

## NCC4550X

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

#### Description

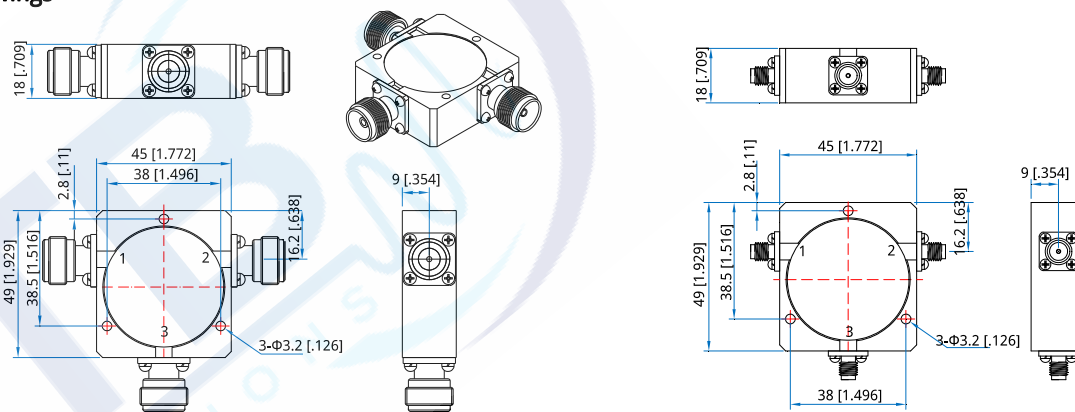
NCC4550X series Coaxial Circulators cover frequency range 300~1100MHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power*1<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|------------------------|-----------|---------------------|
| 300~420            | 20                 | 0.30            | 23.0                   | 1.20           | 100~400                | SMA, N    | -30~+70             |
| 300~420            | 30                 | 0.40            | 20.0                   | 1.25           | 100~400                | SMA, N    | -30~+70             |
| 300~420            | 120                | 0.60            | 18.0                   | 1.30           | 100~400                | SMA, N    | -30~+70             |
| 350~470            | 120                | 0.70            | 15.0                   | 1.50           | 100                    | SMA       | -30~+70             |
| 361~366            | 5                  | 0.20            | 30.0                   | 1.15           | 100~400                | SMA, N    | -30~+70             |
| 400~470            | 70                 | 0.40            | 20.0                   | 1.25           | 100~400                | SMA, N    | -30~+70             |
| 400~500            | 30                 | 0.30            | 23.0                   | 1.20           | 100~400                | SMA, N    | -30~+70             |
| 400~500            | 100                | 0.40            | 20.0                   | 1.25           | 100~400                | SMA, N    | -30~+70             |
| 500~700            | 50                 | 0.40            | 20.0                   | 1.25           | 100~400                | SMA, N    | -30~+70             |
| 500~700            | 150                | 0.50            | 18.0                   | 1.30           | 100~400                | SMA, N    | -30~+70             |
| 500~700            | 200                | 0.60            | 17.0                   | 1.35           | 100                    | SMA, N    | -30~+75             |
| 600~900            | 300                | 0.80            | 15.0                   | 1.50           | 100                    | SMA       | -30~+75             |
| 610~900            | 290                | 0.80            | 15.0                   | 1.50           | 100                    | SMA       | -30~+75             |
| 700~900            | 200                | 0.40            | 20.0                   | 1.25           | 100~400                | SMA, N    | -30~+70             |
| 700~1000           | 300                | 0.50            | 18.0                   | 1.30           | 100~400                | SMA, N    | -30~+70             |
| 800~1000           | 200                | 0.40            | 20.0                   | 1.20           | 100~400                | SMA, N    | -30~+70             |
| 800~1100           | 300                | 0.50            | 18.0                   | 1.30           | 100~400                | SMA, N    | -30~+70             |

[1] The connector is SMA, and the maximum average power can only reach 100W

#### Outline Drawings



Outline A

Outline B

Unit: mm [inch]

Tolerance: ±0.2mm [±0.008in]



## Coaxial Circulators

### Mechanical

---

Size<sup>\*2</sup>: 45\*49\*18mm  
1.772\*1.929\*0.709in

Mounting: 3-Φ3.2mm through-hole

[2] Exclude connectors

### Connector Naming Rules:

N - N Female (Outline A)  
S - SMA Female (Outline B)

### Direction Naming Rules:

1 - Clockwise  
2 - Anticlockwise

### How To Order

**NCC4550X-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

### Examples:

To order a NCC4550X series Circulator, 300~400MHz, 200W, N female, Clockwise, specify NCC4550X-300-400-K2-N-1.

Customization is available upon request.

**NCC-5000-10000-10-S-1**  
5~10GHz

- Features:

  - \* Broadband
  - \* High Power
  - \* Low Insertion Loss
- Applications:

  - \* Wireless
  - \* Radar
  - \* Laboratory Test

**Electrical**

|                 |            |
|-----------------|------------|
| Frequency:      | 5~10GHz    |
| Insertion Loss: | 0.6dB max. |
| Isolation:      | 17dB min.  |
| VSWR:           | 1.35 max.  |
| Average Power:  | 10W        |

**Mechanical**

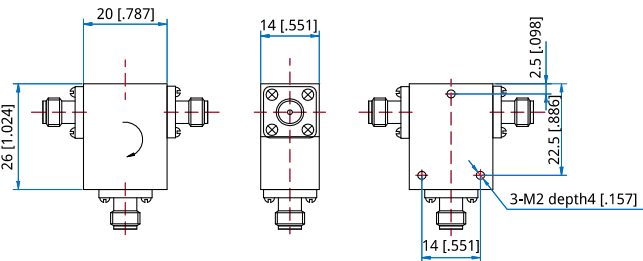
|                      |                                   |
|----------------------|-----------------------------------|
| Size <sup>*1</sup> : | 26*20*14mm<br>1.024*0.787*0.551in |
| RF Connectors:       | SMA Female                        |
| Mounting:            | 3-M2, depth 4mm                   |

[1] Exclude connectors.

**Environmental**

|              |           |
|--------------|-----------|
| Temperature: | -30~+70°C |
|--------------|-----------|

**Outline Drawings**



Unit: mm [in]  
Tolerance: ±0.2mm [±0.008in]

**How To Order**

**NCC-5000-10000-10-S-1**

Customization is available upon request.

## NCC5028B

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

#### Description

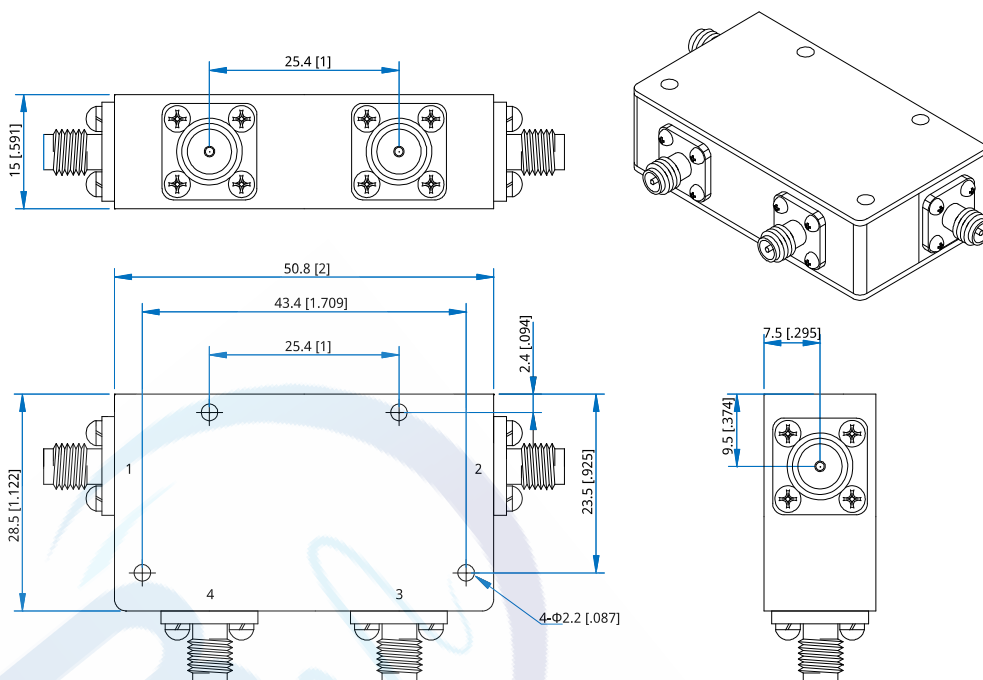
NCC5028B series Coaxial Circulators cover frequency range 2600~3200MHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power* <sup>1</sup><br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|------------------------------------|-----------|---------------------|
| 2600~3200          | 600                | 1               | 35                     | 1.35           | 100                                | SMA       | -40~+75             |

[1] The connector is SMA, and the maximum average power can only reach 100W

#### Outline Drawings



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size\*<sup>2</sup>: 50.8\*28.5\*15mm

2\*1.122\*0.591in

Mounting: 4-Φ2.2mm through-hole

[2] Exclude connectors

#### Connector Naming Rules:

S - SMA Female

#### Direction Naming Rules:

1 - Clockwise

2 - Anticlockwise



## Coaxial Circulators

### How To Order

#### **NCC5028B-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC5028B series Circulator, 2600~3200MHz, 100W, SMA female, Clockwise, specify NCC5028B-2600~3200-K1-S-1.

Customization is available upon request.



## NCC5050A

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

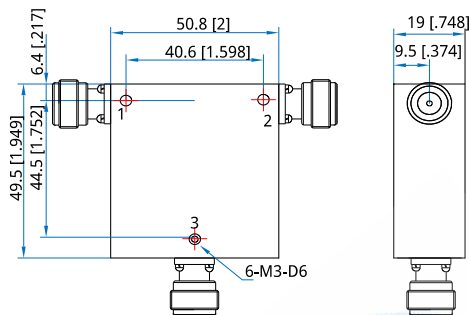
#### Description

NCC5050A series Coaxial Circulators cover frequency range 1.3~3GHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

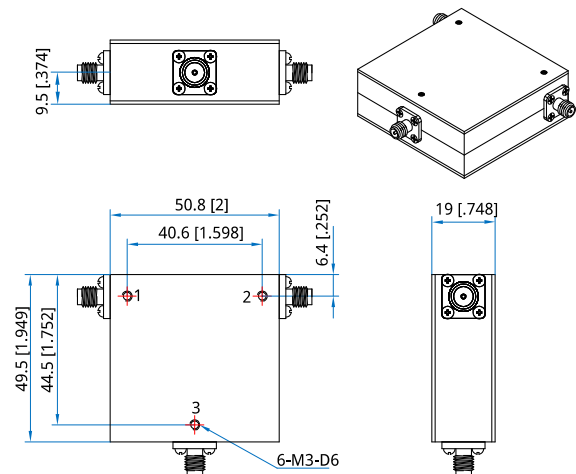
#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 1500~3000          | 1500               | 0.70            | 17.0                   | 1.40           | 10~100               | SMA, N    | 0~+60               |
| 1300~2700          | 1400               | 0.70            | 16.0                   | 1.50           | 100                  | SMA       | 0~+60               |

#### Outline Drawings



Outline A



Outline B

Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size\*1: 50.8\*49.5\*19mm  
2\*1.949\*0.748in

Mounting: 6-M3, depth 6mm

[1] Exclude connectors

#### Connector Naming Rules:

N - N Female (Outline A)

S - SMA Female (Outline B)

#### Direction Naming Rules:

1 - Clockwise

2 - Anticlockwise

#### How To Order

**NCC5050A-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC5050A series Circulator, 1500~3000MHz, 100W, N female, Clockwise, specify NCC5050A-1500-3000-K1-N-1.

Customization is available upon request.

**NCC5258E**

## High Power, High Isolation

### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

### Description

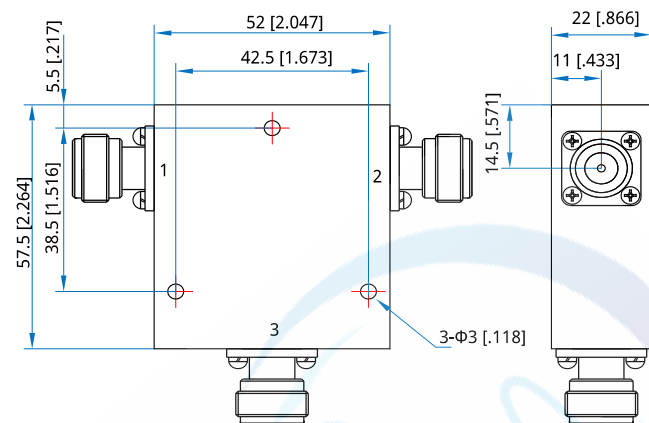
NCC5258E series Coaxial Circulators cover frequency range 160~330MHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

## Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power*1<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|------------------------|-----------|---------------------|
| 160~200            | 10                 | 0.70            | 18.0                   | 1.30           | 100~400                | SMA, N    | -30~+70             |
| 192~232            | 40                 | 0.60            | 18.0                   | 1.30           | 100~400                | SMA, N    | -30~+70             |
| 200~220            | 20                 | 0.40            | 20.0                   | 1.25           | 100~400                | SMA, N    | -30~+70             |
| 220~240            | 20                 | 0.40            | 20.0                   | 1.25           | 100~400                | SMA, N    | -30~+70             |
| 260~330            | 10                 | 0.20            | 23.0                   | 1.20           | 100~400                | SMA, N    | -30~+70             |
| 260~330            | 70                 | 0.40            | 20.0                   | 1.25           | 100~400                | SMA, N    | -30~+70             |

[1] The connector is SMA, and the maximum average power can only reach 100W

## Outline Drawings



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

## Mechanical

Size\*2: 52\*57.5\*22mm  
2.047\*2.264\*0.866in

Mounting: 3- $\Phi$ 3mm through-hole

[2] Exclude connectors

### Connector Naming Rules:

N - N Female

### Direction Naming Rules:

- 1 - Clockwise  
2 - Anticlockwise

## How To Order

NCC5258E-V-W-X-Y-Z

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

Examples:

To order a NCC5258E series Circulator, 200~220MHz, 100W, N female, Clockwise, specify NCC5258E-200-220-K1-N-1.

Customization is available upon request.

## NCC6060E

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

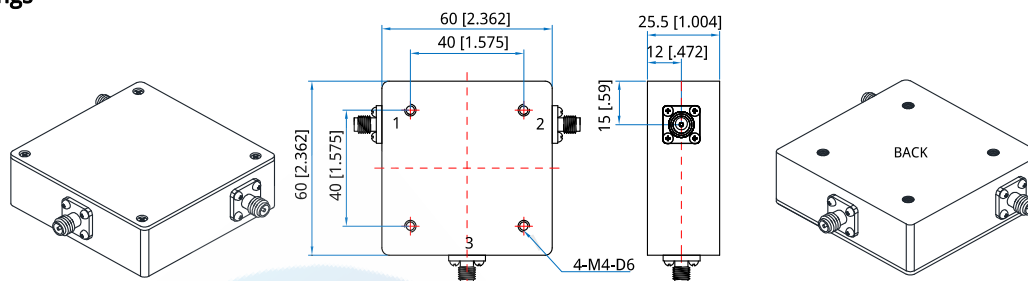
#### Description

NCC6060E series Coaxial Circulators cover frequency range 62~400MHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 62~66              | 4                  | 0.60            | 20.0                   | 1.25           | 100                  | SMA       | -20~+70             |
| 116~138            | 22                 | 0.50            | 20.0                   | 1.25           | 50, 100              | SMA       | -20~+70             |
| 130~180            | 50                 | 0.70            | 17.0                   | 1.35           | 100                  | SMA       | 0~+60               |
| 136~174            | 38                 | 0.60            | 20.0                   | 1.25           | 100                  | SMA       | -20~+70             |
| 150~170            | 20                 | 0.50            | 20.0                   | 1.25           | 100                  | SMA       | -20~+70             |
| 170~230            | 60                 | 0.60            | 20.0                   | 1.25           | 100                  | SMA       | -20~+70             |

#### Outline Drawings



Outline A

Unit: mm [inch]

Tolerance: ±0.2mm [±0.008in]

#### Mechanical

Size\*1: 60\*60\*25.5mm  
2.362\*2.362\*1.004in

Mounting: 4-M4, depth 6mm

[1] Exclude connectors

#### Connector Naming Rules:

S - SMA Female (Outline A)

#### Direction Naming Rules:

- 1 - Clockwise
- 2 - Anticlockwise

#### How To Order

**NCC6060E-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC6060E series Circulator, 62~66MHz, 100W, SMA female, Clockwise, specify NCC6060E-62-66-K1-S-1.

Customization is available upon request.

## NCC6466E

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

#### Description

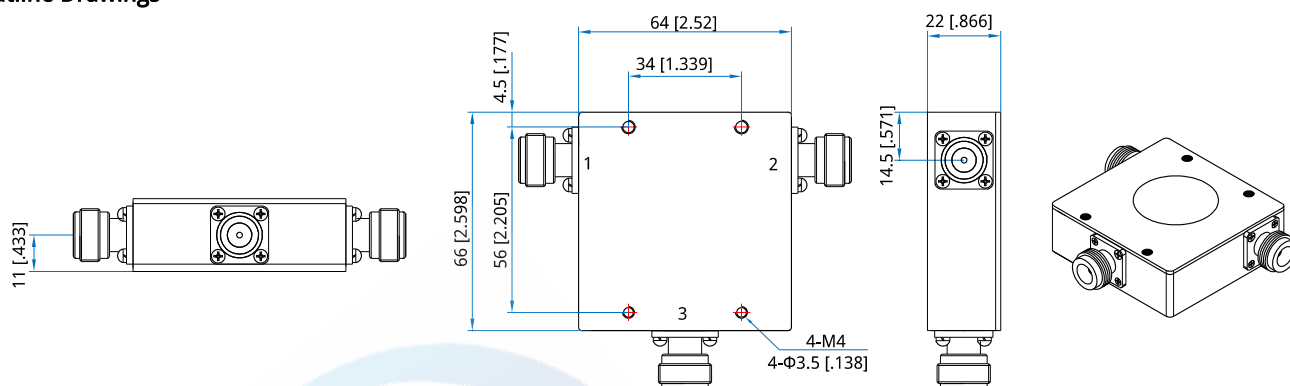
NCC6466E series Coaxial Circulators cover frequency range 70~200MHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power*1<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|------------------------|-----------|---------------------|
| 130~160            | 2                  | 0.50            | 20.0                   | 1.25           | 10~500                 | SMA, N    | -20~+70             |
| 130~160            | 5                  | 0.60            | 18.0                   | 1.30           | 10~500                 | SMA, N    | -20~+70             |
| 150~180            | 30                 | 0.60            | 18.0                   | 1.30           | 10~500                 | SMA, N    | -20~+70             |
| 160~200            | 10                 | 0.40            | 23.0                   | 1.20           | 10~500                 | SMA, N    | -20~+70             |
| 160~200            | 30                 | 0.50            | 20.0                   | 1.25           | 10~500                 | SMA, N    | -20~+70             |
| 160~190            | 30                 | 0.50            | 10.0                   | 1.25           | 10~500                 | SMA, N    | -20~+70             |

[1] The connector is SMA, and the maximum average power can only reach 100W

#### Outline Drawings



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size\*2: 64\*66\*22mm

2.52\*2.598\*0.866in

Mounting: 4-Φ3.5mm through-hole

4-M4

[2] Exclude connectors

#### Connector Naming Rules:

N - N Female

Examples:

To order a NCC6466E series Circulator, 70~90MHz, 100W, N female, Clockwise, specify NCC6466E-70-90-K1-N-1.

Customization is available upon request.

#### Direction Naming Rules:

1 - Clockwise

2 - Anticlockwise

#### How To Order

**NCC6466E-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

Z: Direction type

Examples:

To order a NCC6466E series Circulator, 70~90MHz, 100W, N female, Clockwise, specify NCC6466E-70-90-K1-N-1.

Customization is available upon request.

## NCC6466H

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

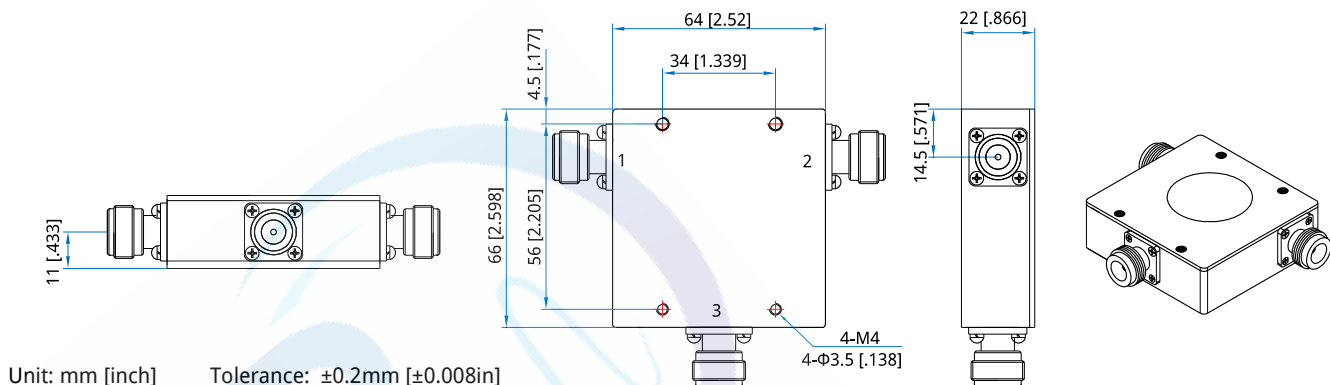
#### Description

NCC6466H series Coaxial Circulators cover frequency range 20~400MHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 20~30              | 0                  | 2.00            | 18.0                   | 1.30           | 10~100               | SMA, N    | -20~+70             |
| 30~80              | 0                  | 1.20            | 20.0                   | 1.25           | 10~100               | SMA, N    | -20~+70             |
| 30~80              | 5                  | 1.80            | 18.0                   | 1.30           | 10~100               | SMA, N    | -20~+70             |
| 88~108             | 20                 | 0.60            | 20.0                   | 1.25           | 10~100               | SMA, N    | -20~+70             |
| 100~140            | 40                 | 1.20            | 18.0                   | 1.30           | 10~100               | SMA, N    | -20~+70             |
| 108~118            | 10                 | 0.50            | 20.0                   | 1.20           | 10~100               | SMA, N    | -20~+70             |
| 116~138            | 22                 | 0.60            | 20.0                   | 1.25           | 10~100               | SMA, N    | -20~+70             |
| 130~180            | 50                 | 0.60            | 20.0                   | 1.25           | 10~100               | SMA, N    | -20~+70             |
| 136~174            | 38                 | 0.50            | 20.0                   | 1.25           | 10~100               | SMA, N    | -20~+70             |
| 150~170            | 20                 | 0.40            | 20.0                   | 1.20           | 10~100               | SMA, N    | -20~+70             |
| 170~230            | 60                 | 0.60            | 20.0                   | 1.25           | 10~100               | SMA, N    | -20~+70             |
| 225~400            | 175                | 0.80            | 18.0                   | 1.30           | 10~100               | SMA, N    | -20~+70             |

#### Outline Drawings



#### Mechanical

Size\*1: 64\*66\*22mm  
2.52\*2.598\*0.866in  
Mounting: 4-Φ3.5mm through-hole  
4-M4

[1] Exclude connectors

#### Connector Naming Rules:

N - N Female

#### Direction Naming Rules:

- 1 - Clockwise
- 2 - Anticlockwise

#### How To Order

##### NCC6466H-V-W-X-Y-Z

V: Start frequency in MHz  
W: Stop frequency in MHz  
X: Average power in W  
Y: Connector type  
Z: Direction type

#### Examples:

To order a NCC6466H series Circulator, 55~75MHz, 100W, N female, clockwise, specify NCC6466H-55-75-K1-N-1.

Customization is available upon request.

## NCC6466K

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

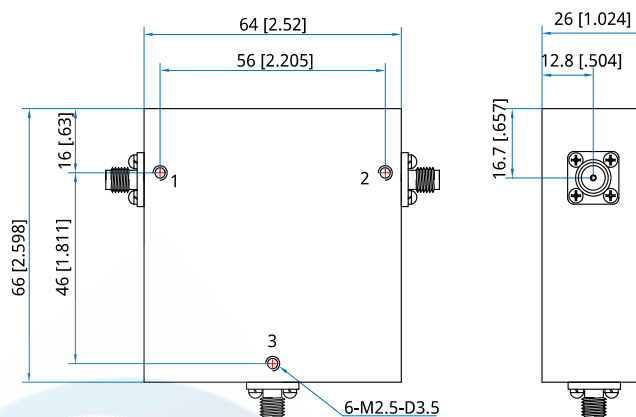
#### Description

NCC6466K series Coaxial Circulators cover frequency range 950~2000MHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 950~2000           | 1050               | 0.65            | 16.0                   | 1.40           | 10~100               | SMA, N    | -10~+60             |
| 1000~2000          | 1000               | 0.60            | 17.0                   | 1.40           | 10~100               | SMA, N    | -10~+60             |

#### Outline Drawings



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size\*1: 64\*66\*26mm

2.52\*2.598\*1.024in

Mounting: 6-M2.5, depth 3.5mm

[1] Exclude connectors

#### Connector Naming Rules:

S - SMA Female

#### Direction Naming Rules:

- 1 - Clockwise
- 2 - Anticlockwise

#### How To Order

**NCC6466K-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC6466K series Circulator, 1~2GHz, 100W, SMA female, clockwise, specify NCC6466K-1000-2000-K1-S-1.

Customization is available upon request.

## NCC8080E

### High Power, High Isolation

#### Features:

- \* High Power
- \* High Isolation
- \* Low Insertion Loss
- \* Low VSWR

#### Applications:

- \* Wireless
- \* Radar
- \* Laboratory Test

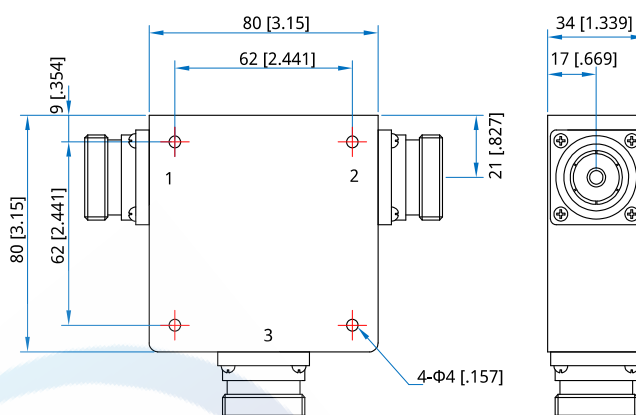
#### Description

NCC8080E series Coaxial Circulators cover frequency range 150~890MHz. High power, high isolation and low insertion loss make it ideal for a lot of applications like amplifiers, transceivers, etc.

#### Specifications

| Frequency<br>(MHz) | Bandwidth<br>(MHz) | IL<br>(dB Max.) | Isolation<br>(dB Min.) | VSWR<br>(Max.) | Average Power<br>(W) | Connector | Temperature<br>(°C) |
|--------------------|--------------------|-----------------|------------------------|----------------|----------------------|-----------|---------------------|
| 150~180            | 30                 | 0.60            | 19.0                   | 1.25           | 100~1000             | 7/16 DIN  | -30~+75             |
| 160~190            | 30                 | 0.50            | 20.0                   | 1.25           | 100~1000             | 7/16 DIN  | -30~+75             |
| 810~890            | 80                 | 0.50            | 25.0                   | 1.25           | 100~1000             | 7/16 DIN  | -30~+75             |

#### Outline Drawings



Unit: mm [inch]

Tolerance:  $\pm 0.2\text{mm}$  [ $\pm 0.008\text{in}$ ]

#### Mechanical

Size<sup>\*1</sup>: 80\*80\*34mm

3.15\*3.15\*1.339in

Mounting: 4-Φ4mm through-hole

[1] Exclude connectors

#### Connector Naming Rules:

7 - 7/16 DIN Female

#### Direction Naming Rules:

1 - Clockwise

2 - Anticlockwise

#### How To Order

**NCC8080E-V-W-X-Y-Z**

V: Start frequency in MHz

W: Stop frequency in MHz

X: Average power in W

Y: Connector type

Z: Direction type

#### Examples:

To order a NCC8080E series Circulator, 160~190MHz, 1000W, 7/16 DIN female, Clockwise, specify NCC8080E-160-190-1K-7-1.

Customization is available upon request.