### Released

# X-band Circulator Model No. NJC3901D

**NSSHNBO** 

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|                                 | Title:                |       |        |
|---------------------------------|-----------------------|-------|--------|
| Nisshinbo Micro Devices Inc.    | Datasheet of NJC3901D |       |        |
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#### ■ GENERAL DESCRIPTION

NJC3901D is a waveguide type circulator, designed for X-band Marine Radar.



#### ■ ABSOLUTE MAXIMUM RATINGS

| PARAMETERS            | MINIMUM | MAXIMUM | UNITS |
|-----------------------|---------|---------|-------|
| Frequency range       | 9.3     | 9.5     | GHz   |
| Peak power            | -       | 5       | kW    |
| Average power         | -       | 5       | W     |
| Storage temperature   | -40     | +100    | ĉ     |
| Operating temperature | -30     | +70     | °C    |
| Pulse width           | -       | 1.0     | μs    |
| Duty                  | -       | 0.001   | -     |

#### ELECTRICAL CHARACTERISTICS

|                  | TEST CONDITIONS |             | CODE | LIMIT   |         |       |
|------------------|-----------------|-------------|------|---------|---------|-------|
| PARAMETERS       |                 |             | CODE | MINIMUM | MAXIMUM | UNITS |
| High power input | port①→②         | f=9.4GHz;   | -    | -       | 5       | kW    |
|                  |                 | Po=5kW;     |      |         |         |       |
|                  |                 | tp=1.0µs;   |      |         |         |       |
|                  |                 | fp=1000pps; |      |         |         |       |
|                  | port①           | f=9.3GHz    | σ    | -       | 1.2     | -     |
| V.S.W.R.         | port2           | f=9.4GHz    |      | -       | 1.2     | -     |
|                  | port3           | f=9.5GHz    |      | -       | 1.2     | -     |
| Insertion loss   | port①→②         | f=9.3GHz    | Li   | -       | 0.5     | dB    |
|                  | port②→③         | f=9.4GHz    |      | -       | 0.5     | dB    |
|                  | port③→①         | f=9.5GHz    |      | -       | 0.5     | dB    |
| Isolation        | port②→①         | f=9.3GHz    |      | 25      | -       | dB    |
|                  | port③→②         | f=9.4GHz    | -    | 25      | -       | dB    |
|                  | port①→③         | f=9.5GHz    |      | 25      | -       | dB    |

Note: V.S.W.R., Insertion loss, and Isolation are measured under the conditions, frequency 8.8 to 10.8GHz input signal 0.1mW.

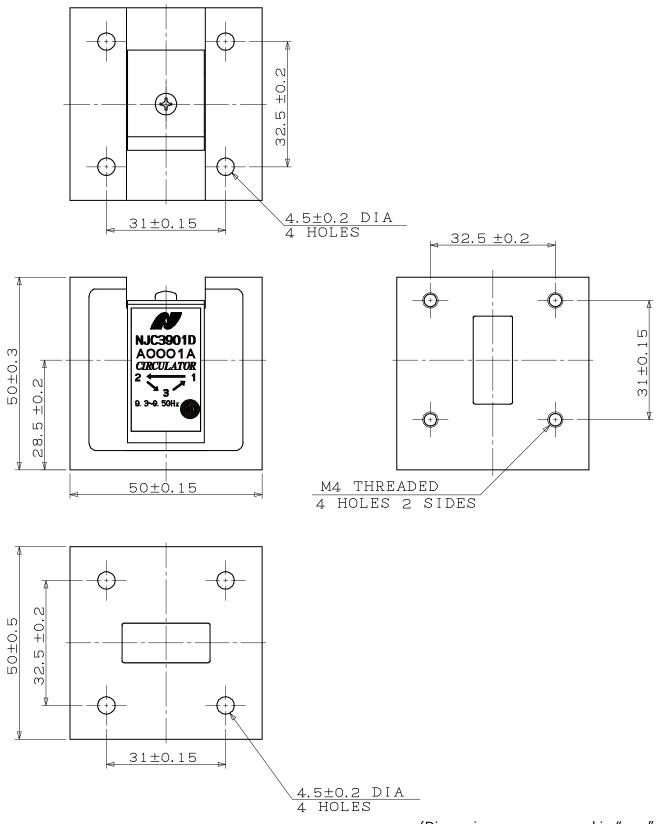
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#### OUTLINE



(Dimensions are expressed in "mm".)

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