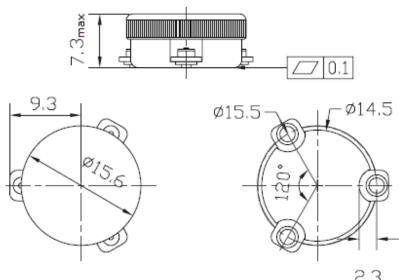


## **Features**

- Microwave Circulators and Isolators for base station
- Metal Package for Surface Mounted Technology (SMT)
- Lead-free Production and RoHS Compliance

# **Package Dimensions**



|              | Top View, Laser Marking |  |     |     |               |                   |  |
|--------------|-------------------------|--|-----|-----|---------------|-------------------|--|
| Marking      | "ND":                   | Manufacturer's mark  |     |     | " <b>C</b> ": | Circulator        |  |
| 0 ****       | "9028L":                | Part number  |     |     |               | Conduct Direction |  |
| 2.50-2.70GHz | "1"                     | IN   | "O" | OUT | "L"           | LOAD              |  |
| NDC9028L     |                         | 2.500-2.700GHz: operating Frequency Range  Lot number (the first two numbers of years and the last two numbers of weeks) |     |     |               |                   |  |
| L            | " <b>*</b> ":           |  |     |     |               |                   |  |

# **Maximum Ratings**

| Rating                      | Value        | Unit       |    |
|-----------------------------|--------------|------------|----|
| Average Power               | $P_{AVG}$    | 80         | W  |
| Peak Power                  | $P_{PX}$     | 200        | W  |
| Operating Temperature Range | $T_{A}$      | -40 ~ +90  | °C |
| Storage Temperature Range   | $T_{ m stg}$ | -55 ~ +125 | °C |



#### **Electrical Characteristics**

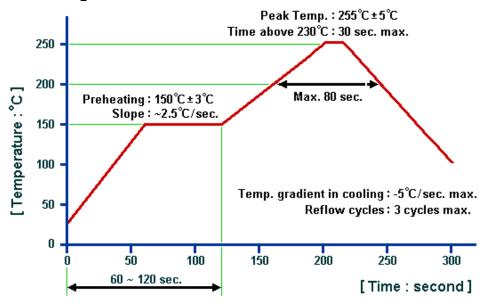
 $\begin{array}{ll} \mbox{Reference temperature:} & T_{\mbox{A}} = 25 \ ^{\circ} \mbox{C} \\ \mbox{Terminating source impedance:} & Z_{\mbox{S}} = 50 \ \Omega \\ \mbox{Terminating load impedance:} & Z_{\mbox{L}} = 50 \ \Omega \\ \end{array}$ 

| Characteristic                                 |                | Min.  | Тур. | Max.  | Unit |
|--|----------------|-------|------|-------|------|
| Center frequency                               | f <sub>C</sub> | 2.500 |      | 2.700 | GHz  |
| Insertion attenuation                          | IL             | _     |      | 0.25  | dB   |
| Isolation                                      | ISO            | 20    |      | _     | dB   |
| Input Return Loss                              | RL             | 21    |      |       | dB   |
| Output Return Loss                             | RL             | 21    |      |       | dB   |
| Impedance                                      |                |       | 50   |       | Ω    |
| Input impedance, real                          |                | 45    | 50   | 55    | Ω    |
| Intermodulation distortion (2X15W, 1MHz space) | IMD            | 65    |      |       | dBc  |
| 2nd Harmonic                                   |                | 15    |      |       | dB   |
| 3rd Harmonic                                   |                | 5     |      |       | dB   |
| Group Delay                                    |                |       |      | 2     | ns   |
| Group Delay variation                          |                |       |      | 0.2   | ns   |

<sup>®</sup> RoHS Compliant

# Electrostatic Sensitive Device

## **Recommended Soldering Profile**



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Our liability is only assumed for the circulator and isolator component(s) per se, not for applications, processes and circuits implemented within components or assemblies.

For questions on technology, prices and delivery, please contact our sales offices or e-mail winnsky@winnsky.com