

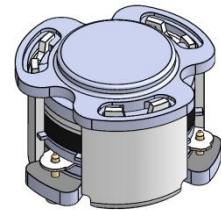


## DP2331C

### ENG PART: DP-7.0CM-2570T2620-CW

2570MHz to 2620MHz Single-Junction Surface Mount Circulator

| REV. | DESCRIPTION                                     | REVISOR | DATE      | APPROVED |
|------|---|---------|-----------|----------|
| A    | Same as REV.1                                   | ZZ.Zhu  | 2023/1/16 | Nick     |
| B    | Updated Co-planarity from $\pm 0.1$ to $+0.1/0$ | ZC.Wu   | 2024/3/6  | Nick     |
| C    | Updated Co-planarity from $+0.1/0$ to $\pm 0.1$ | ZC.Wu   | 2024/9/29 | Nick     |

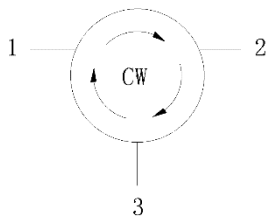


#### Applications:

- Wireless Infrastructure
- Power Amplifier

#### Features:

- Operating frequency range: 2570MHz to 2620MHz
- Operating temperature range:  $-40^{\circ}\text{C}$  to  $+110^{\circ}\text{C}$
- Storage temperature range:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- Small surface-mount package delivered on T&R
- BeO free & RoHS compliant



Block Diagram



**Electrical Specifications:**

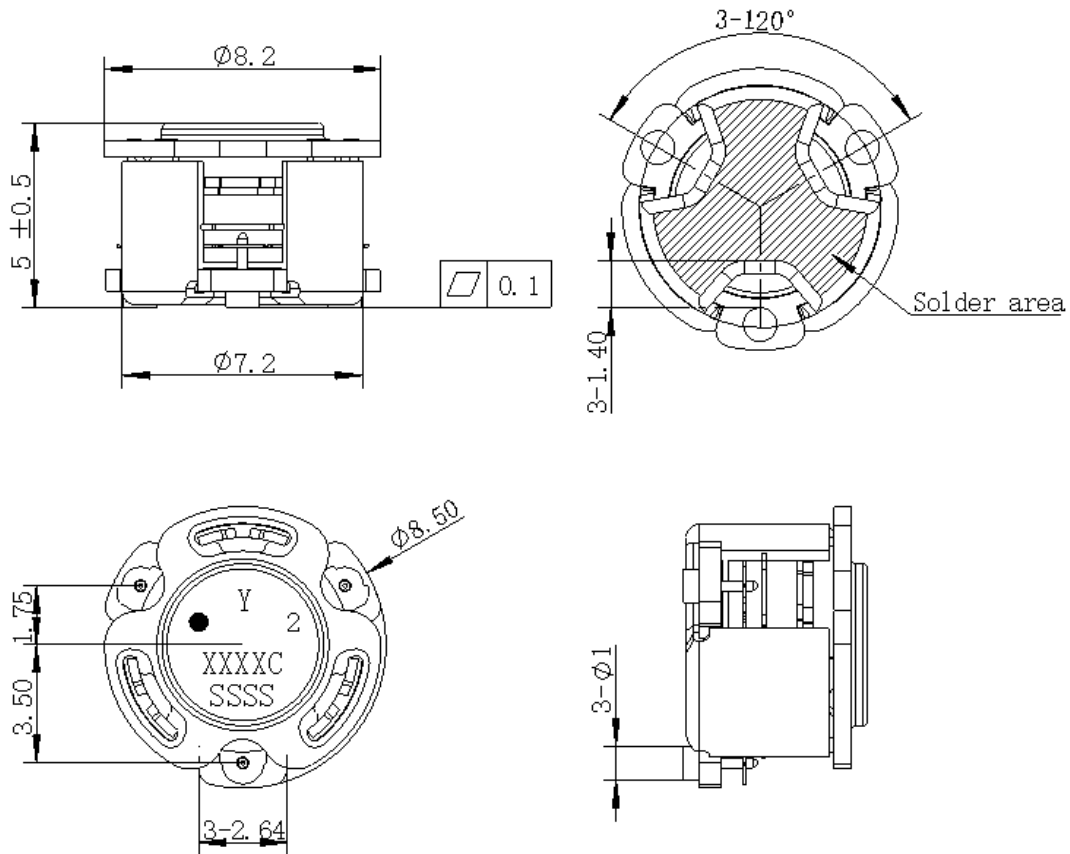
| ITEM                        | SPECIFICATION   |          |
|-----------------------------|---|----------|
| Frequency                   | 2570~2620   | MHz      |
| Direction                   | CW  |          |
| Impedance                   | Typ: 50   | $\Omega$ |
| Insertion Loss (Max.)       | 0.35  | dB       |
| Isolation (Min.)            | 20  | dB       |
| Return Loss (Min.)          | 22  | dB       |
| 3rd IMD (Max.)              | -65@2x10W CW tones, 1MHz spacing                                    | dBc      |
| 5th IMD (Max.)              | -70   |          |
| Harmonics                   | 60 @2 x TX 20W CW,<br>60@3 x TX 20W CW,                             | dBc      |
| Attenuation                 | 20@2xTX<br>10@3xTX<br>5 @NxTX                                       | dB       |
| Group delay                 | 0.4~2.0   | ns       |
| Reciprocity                 | -0.05~+0.05 @Delta(S21 / S32) within any 10 °C<br>temperature range | dB       |
|                             | -1~+1 @Delta(S21 / S32) within any 10 °C<br>temperature range       | Deg      |
| Power FWD/REV/PEAK          | 30/30/150   | W        |
| Resonance out ofband        | 2370~2820   | MHz      |
| Input Impedance (Real)      | +48~+52   | $\Omega$ |
| Input Impedance (Imaginary) | -3j~+3j   | $\Omega$ |
| Termination/Attenuator      | /-  | W/dB     |

Notes:

1. Exposure to maximum rating conditions for extended periods may reduce device reliability. There is no damage to device with only one parameter set at the limit and all other parameters set at or below their nominal value. Exceeding any of the limits listed here may result in permanent damage to the device.
2. Performance is guaranteed under the conditions listed in this table and over the operating temperature range.
3. If there's conflict between the impedance and S-parameter, prioritize the impedance requirements or check with E///.



### Mechanical Specifications:



Unit: Millimeters

#### Notes:

1. The housing and pins are silver-plated.
2. Tolerance  $\pm 0.2$ mm unless otherwise specified.
3. Co-planarity Specification: 0.1mm maximum.
4. PartNumber, Lot Code, and Port Designation are printed on the top side of device
5. The "Y" show on the label represents the producing year, when printing the producing year, A stands for 2022, B for 2023, C for 2024, and soon (reference DP's file WDPT PD-003).
6. The **XXXXC** on the label represents the last five digits of the PartNumber.
7. The SSSS on the label represents the serial number
8. The black dot on the label represents the input port



Packaging Style:

| ITEM | W    | A0   | B0   | C0   | K0   | D    | E    | F     | F2   | P    | P0   | P2   | T     |
|------|------|------|------|------|------|------|------|-------|------|------|------|------|-------|
| DIM  | 32   | Φ7.4 | 9.2  | 2.7  | 6.0  | Φ1.5 | 1.75 | 14.2  | 28.4 | 20   | 4    | 2    | 0.5   |
| TOLE | ±0.2 | ±0.2 | ±0.2 | ±0.2 | ±0.2 | +0.1 | ±0.1 | ±0.15 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.05 |

