

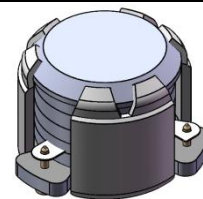


## DP0953C

### ENG PART:DP-7CM-3600T3800-CW

3600MHz to 3800MHz Single-Junction Surface Mount Circulator

| REV. | DESCRIPTION                  | REVISOR | DATE      | APPROVED |
|------|------------------------------|---------|-----------|----------|
| A    | Creating datasheet           | ZC.Wu   | 2022/3/9  | Nick     |
| B    | Update the packaging drawing | ZC.Wu   | 2022/9/9  | Nick     |
| C    | Update the label             | ZC.Wu   | 2022/12/7 | Nick     |

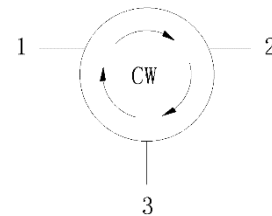


#### Applications:

- Wireless Infrastructure
- Power Amplifier

#### Features:

- Operating frequency range: 3600MHz to 3800MHz
- Operating temperature range: -40°C to +110°C
- Storage temperature range: -65°C to +150°C
- Small surface-mount package delivered on T&R
- BeOfree&RoHS compliant



Block Diagram



**Electrical Specifications:**

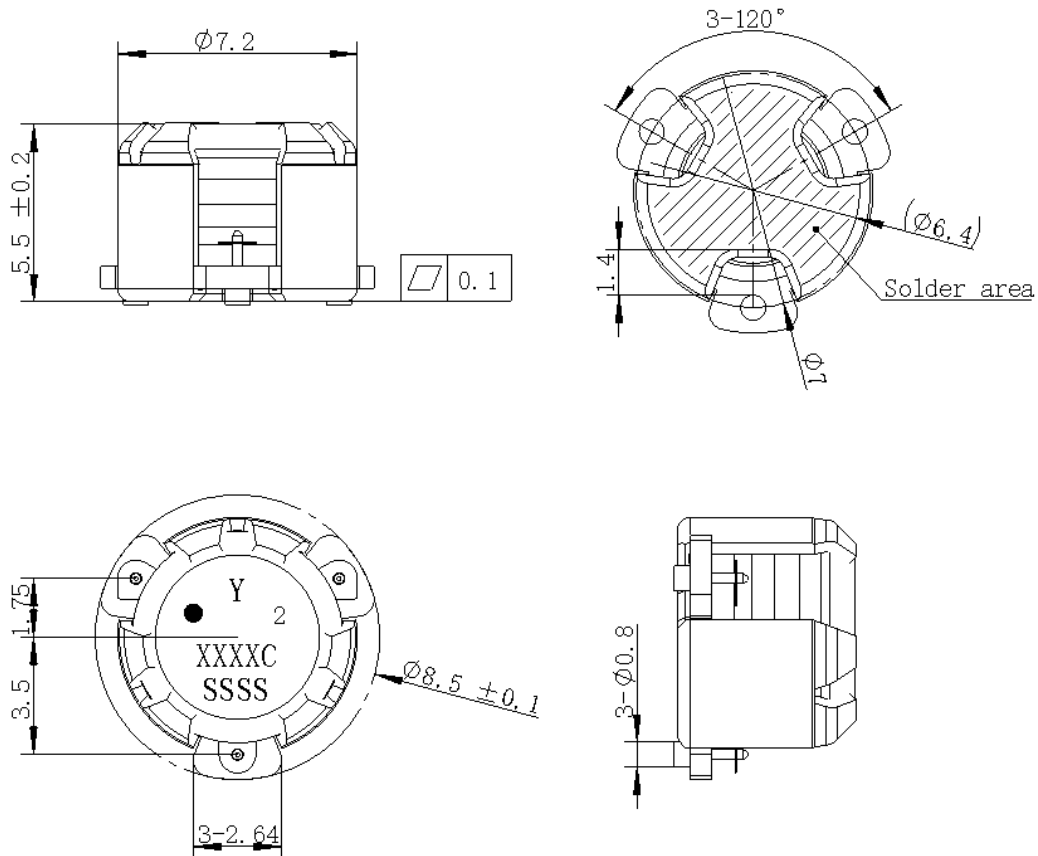
| ITEM                            | SPECIFICATION   |          |
|---------------------------------|---|----------|
| Frequency                       | 3600~3800   | MHz      |
| Direction                       | CW  |          |
| Impedance                       | Typ: 50   | $\Omega$ |
| Insertion Loss (Max.)           | 0.23@25°C $\pm$ 10°C<br>0.27@-40~+110°C                           | dB       |
| Isolation (Min.)                | 21  | dB       |
| Return Loss (Min.)              | 22  | dB       |
| 3rd IMD (Max.)                  | -60   | dBc      |
| Group delay                     | 2   | ns       |
| 2nd harmonic suppression        | 20@25°C<br>15@-40~+110°C  | dBc      |
| 3rd harmonic suppression        | 10@25°C<br>8@-40~+110°C   | dBc      |
| Extend Frequency                | 3400-4000   | MHz      |
| Isolation of extend frequency   | 14  | dB       |
| Power FWD/REV/PEAK              | 25/-/200  | W        |
| Resonance point of out off band | 3200MHz-4000MHz   | W/dB     |
| Input Impedance ,real           | 47~53 @3600 MHz<br>47~53 @3700 MHz<br>47~53 @3800 MHz             | $\Omega$ |
| Input Impedance ,imaginary      | -5j ~+2j @3600 MHz<br>-3.5j ~+2j @3700 MHz<br>-1j~+4.5j @3800 MHz | $\Omega$ |

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. Performance will not degrade by > 10% (Insertion loss > 20%) with the operating temperature up to 130 °C.



### 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. Part Number, 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 so on (reference DP's file WDPT PD-003).
6. The **XXXXC** on the label represents the last five digits of the Part Number
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  | 24   | Φ7.4 | 9.2  | 2.7  | 6.0  | Φ1.5 | 1.75 | 11.5  | -    | 16   | 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 |

