

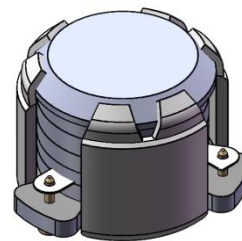


DP0524C

ENG PART: DP-7.0CM-2300T2400-CCW

2300MHz to 2400MHz Single-Junction Surface Mount Circulator

| REV. | DESCRIPTION | REVISOR | DATE | APPROVED |
|------|---|---------|------------|----------|
| A | Creating datasheet | ZC.Wu | 2021/2/25 | Nick |
| B | Pin size change from 1.0 to 0.7 | ZC.Wu | 2021/8/31 | Nick |
| C | Updated spec. | ZC.Wu | 2021/9/24 | Nick |
| D | Update the packaging drawing | ZC.Wu | 2022/2/17 | Nick |
| E | Pin size change from 0.7 to 1.0 | ZC.Wu | 2022/2/20 | Nick |
| F | Update the label | ZC.Wu | 2023/7/4 | Nick |
| G | Updated Co-planarity from ± 0.1 to $+0.1/0$ | ZC.Wu | 2023/12/24 | Nick |
| H | Updated Co-planarity from $+0.1/0$ to ± 0.1 | ZC.Wu | 2024/9/5 | Nick |

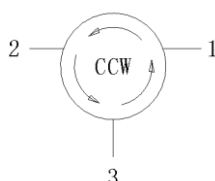


Applications:

- Wireless Infrastructure
- Power Amplifier

Features:

- Operating frequency range: 2300MHz to 2400MHz
- Operating temperature range: -40°C to $+110^{\circ}\text{C}$
- Storage temperature range: -40°C to $+125^{\circ}\text{C}$
- Small surface-mount package delivered on T&R
- BeO free & RoHS compliant





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Block Diagram

**Electrical Specifications:**

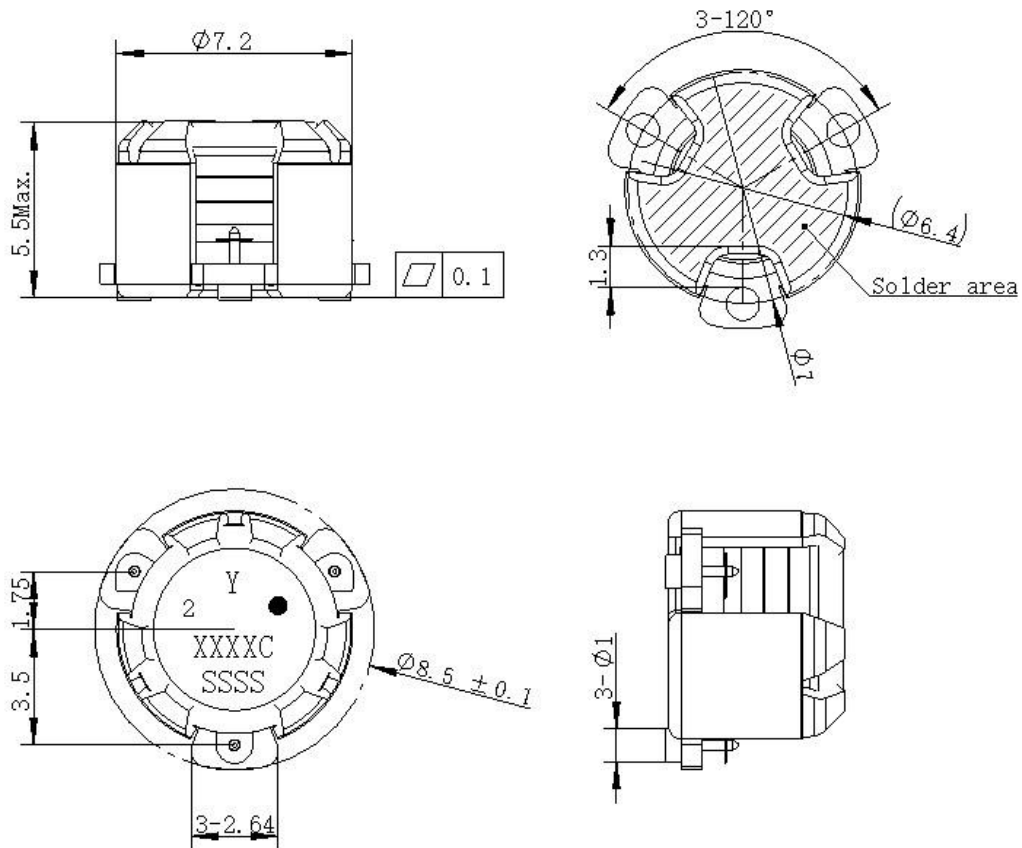
| ITEM | SPECIFICATION | |
|--------------------------|---|----------|
| Frequency | 2300~2400 | MHz |
| Direction | CCW | |
| Impedance | Typ: 50 | Ω |
| Insertion Loss (Max.) | 0.3@25 \pm 5 $^{\circ}$ C | dB |
| | 0.35@-40~+110 $^{\circ}$ C 0.5 Type @ Ericsson PCB | |
| Isolation (Min.) | 20 20 Type @ Ericsson PCB | dB |
| Return Loss (Min.) | 22 22 Type @ Ericsson PCB | dB |
| 3rd IMD (Max.) | -60@2x5W CW tones, 1MHz spacing -55@2x10W CW tones, 1MHz spacing | dBc |
| Harmonics | 2 x TX : 60 @ 20W CW , 3 x TX : 60 @ 20W CW , | dBc |
| 2nd harmonic attenuation | -15 | dB |
| 3rd harmonic attenuation | -5 | dB |
| Return Loss (S11) | @ Ericsson PCB: Real: 48~52; Imag: -3~+3j; | Ω |
| Group delay | 0.4~2.0 | ns |
| Reciprocity | -0.05~+0.05 @Delta(S21 / S32) within any 10 $^{\circ}$ C temperature range | dB |
| | -1~+1 @Delta(S21 / S32) within any 10 $^{\circ}$ C temperature range | Deg |
| Power FWD/REV/PEAK | 30/30/150 | W |
| Resonance out of band | 2100~2600 | MHz |
| 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.



Mechanical Specifications:



Unit: Millimeters

Notes:

1. The housing and pins are silver-plated.
2. Tolerance ± 0.2 mm unless otherwise specified.
3. Co-planarity Specification: 0.1 mm 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 | 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 |

