

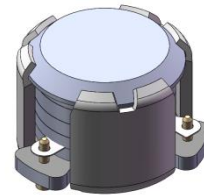


## DP0940C

### 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   | 2022/3/25 | Nick     |

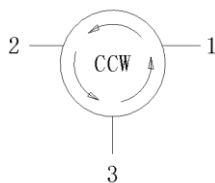


#### Applications:

- Wireless Infrastructure
- Power Amplifier

#### Features:

- Operating frequency range: 2300MHz to 2400MHz
- Operating temperature range: -40°C to +110°C
- Storage temperature range: -40°C to +125°C
- Small surface-mount package delivered on T&R
- BeOfree&RoHS compliant



Block Diagram

**Electrical Specifications:**

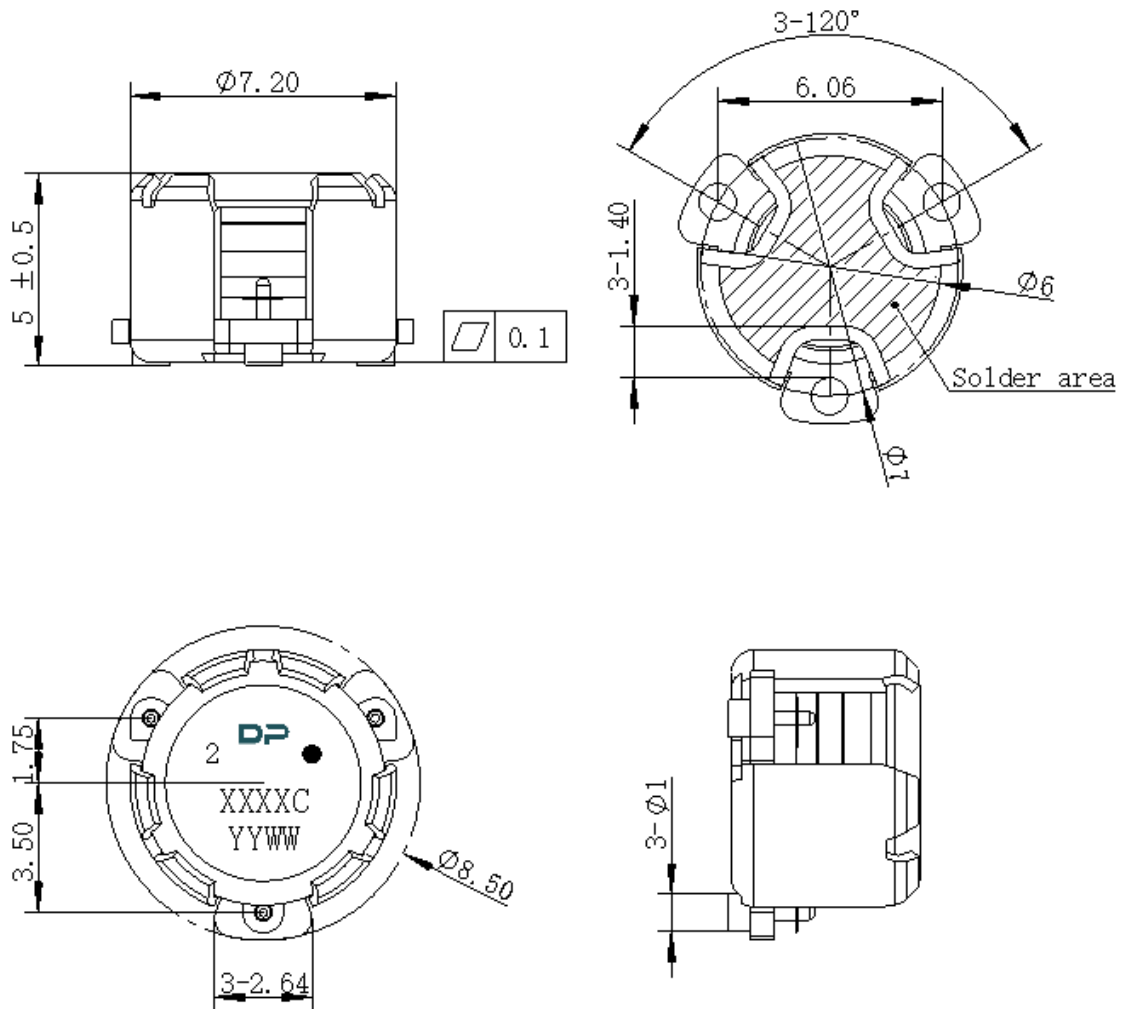
| ITEM                        | SPECIFICATION   |          |
|-----------------------------|---|----------|
| Frequency                   | 2300~2400   | MHz      |
| Direction                   | CCW   |          |
| Impedance                   | Typ: 50   | $\Omega$ |
| Insertion Loss (Max.)       | 0.35@-40~+110 $^{\circ}$ C<br>0.65 @ Ericsson PCB, total backend              | dB       |
| Isolation (Min.)            | 20  | dB       |
| Return Loss (Min.)          | 22<br>15@2100-2600MHz   | dB       |
| 3rd IMD (Max.)              | -55@2x5W CW tones, 1MHz spacing   | dBc      |
| 5th IMD (Max.)              | -60   |          |
| 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 $^{\circ}$ C<br>temperature range | dB       |
|                             | -1~+1 @Delta(S21 / S32) within any 10 $^{\circ}$ C<br>temperature range       | Deg      |
| Power FWD/REV/PEAK          | 30/30/150   | W        |
| Resonance out of band       | 2100~2600   | MHz      |
| Input Impedance (Real)      | 47~53   | $\Omega$ |
| Input Impedance (Imaginary) | -3j~+3j   | $\Omega$ |
| Output Impedance            | 50 Typ.   | $\Omega$ |
| 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.



Mechanical Specifications:



Unit: Millimeters

Notes:

1. The housing and pins are silver-plated.
2. Tolerance  $\pm 0.2\text{mm}$  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 **XXXXC** on the label represents the last five digits of the Part Number.
6. Date code is in format **YYWW**
7. 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 |

