

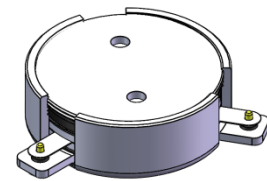


DP3593C

ENG PART:DP-28.4CM-1805T2170-CW

1805MHz to 2170MHz Single-Junction Surface Mount Circulator

| REV. | DESCRIPTION | REVISOR | DATE | APPROVED |
|------|-------------------|---------|------------|----------|
| A | Release datasheet | ZC.Wu | 2024/11/20 | Nick |

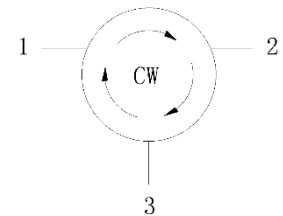


Applications:

- Wireless Infrastructure
- Power Amplifier

Features:

- Operating frequency range: 1805 to1880MHz&2110 to 2170MHz
- Operating temperature range: -40°C to +125°C
- Storage temperature range: -65°C to +150°C
- Small surface-mount package delivered on T&R
- BeOfree&RoHS compliant



Block Diagram

**Electrical Specifications:**

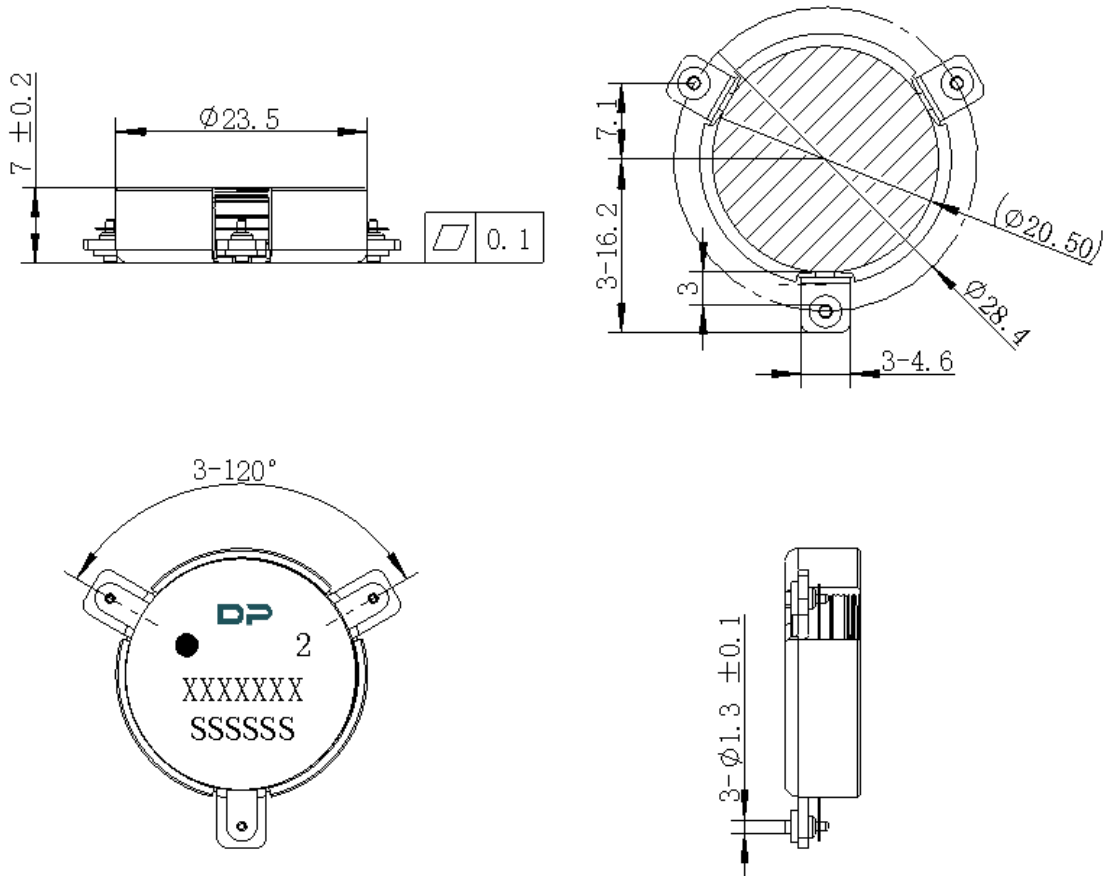
| ITEM | SPECIFICATION | |
|---|--|------------|
| Frequency | 1805~2170 | MHz |
| Operating Frequency | 1805~1880 & 2110~2170 | MHz |
| Direction | CW | |
| Impedance | Typ: 50 | Ω |
| Insertion Loss (Max.) | 0.23@1805~1880MHz & 2110~2170MHz | dB |
| Isolation (Min.) | 20@1805-2170MHz 23@1805~1880MHz & 2110~2170MHz | dB |
| Return Loss (Min) | 23@0~125°C (1805~1880MHz & 2110~2170MHz) 20@-40~0°C (1805~1880MHz & 2110~2170MHz) | dB |
| 3rd IMD (Max.) | -69@2x75W (1805~1880MHz & 2110~2170MHz) | dBc |
| 5rd IMD (Max.) | -79@2x75W (1805~1880MHz & 2110~2170MHz) | dBc |
| Group delay | 2.8 | ns |
| Harmonics | 0@2x f 150W CW -10@3x f 150W CW -10@4x f 150W CW -35@5x f 150W CW -25@6x f 150W CW -25@7x f 150W CW | dBm |
| Out of band attenuation | 10@2x f 10@3x f@1805~1880MHz 5@3x f@2110~2170MHz 5@nx f (n=order of in- band frequency multiple) | dB |
| Group delay | 2.8 | ns |
| Deviation from nominal delay | ± 0.05 | ns |
| Power FWD/REV/PEAK | 200/100/1500 | W |
| Max voltage rating | 1080 | V |
| Impedance control (the reference point at Isolator Pad) , real | - | Ω |
| Impedance control (the reference point at Isolator Pad) , imaginary | - | j Ω |

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 $\pm 0.2\text{mm}$ 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 **XXXXC** on the label represents the last five digits of the PartNumber.
6. Date code is in format **YYWW**
7. The black dot on the label represents the input port