



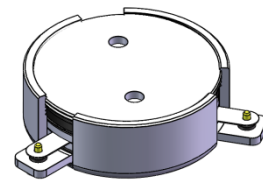
DP0560C

1310MHz to 1510MHz Single-Junction Surface Mount Circulator

| REV. | DESCRIPTION | REVISOR | DATE | APPROVED |
|------|--|---------|-----------|----------|
| A | Creating datasheet | ZC.Wu | 2021/7/15 | Nick |
| B | Change the insertion loss spec. and the frequency of resonance point | ZC.Wu | 2021/7/21 | Nick |
| C | The Pin size changed from 1.2 to 1.3 | ZC.Wu | 2021/7/23 | Nick |

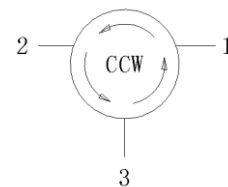
Applications:

- Wireless Infrastructure
- Power Amplifier



Features:

- Operating frequency range: 1310MHz to 1510MHz
- Operating temperature range: -40°C to +120°C
- Storage temperature range: -55°C to +150°C
- Small surface-mount package delivered on T&R
- BeOfree&RoHS compliant



Block Diagram



Electrical Specifications:

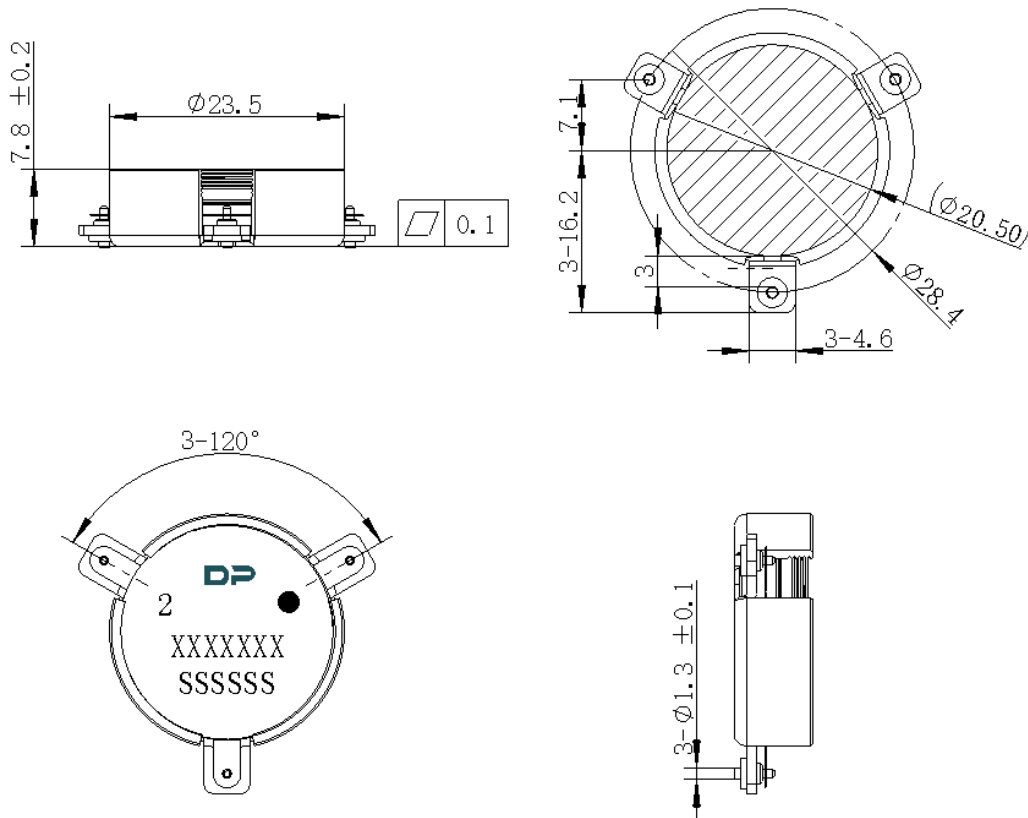
| ITEM | SPECIFICATION | |
|---|---|------------|
| Frequency | 1310~1510 | MHz |
| Direction | CCW | |
| Impedance | Typ: 50 | Ω |
| Insertion Loss (Max.) | 0.25@25 \pm 5 $^{\circ}$ C 0.30@-40~+120 $^{\circ}$ C | dB |
| Isolation (Min.) | 22 10@1170MHz~1650MHz | dB |
| Return Loss (Min.) | 22 2@1800MHz~2000MHz | dB |
| FWD 3rd IMD (Max.) | -65@2x80W, Spacing 1MHz | dBc |
| Extend frequency | 1170~1650 | MHz |
| Group delay | 2 | ns |
| Ripple of group delay in extend frequency | 2 | ns |
| 2nd harmonic suppression | 15 | dBc |
| 3rd harmonic suppression | 10 | dBc |
| Power FWD/REV/PEAK | 200/-/1600 | W |
| Input Impedance ,real | +49 ~+55 @1310MHz 52 Typ. @1310MHz +45 ~+51 @1410MHz 48 Typ. @1410MHz +47 ~+53 @1510MHz 50 Typ. @1510MHz | Ω |
| Input Impedance ,Imaginary | -5 ~+1 @1310MHz -2 Typ. @1310MHz -1 ~+5 @1410MHz &1510MHz +2Typ. @1410MHz &1510MHz | j Ω |
| output Impedance ,real | 45~55 | Ω |
| output Impedance ,imaginary | -5~+5 | j Ω |
| Resonance point out-off-band | 1110 MHz to 1710 MHz | |

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 an operating temperature of up to 130 $^{\circ}$ C.



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: 0.1mm maximum.
4. Part Number, Lot Code, and Port Designation are printed on the top side of device.
5. The **XXXXXXX** on the label represents the part number
6. The **SSSSSS** on the label represents the serial number
7. The black dots represent the input ports



Packaging Style:

| ITEM | W | A0 | B0 | K0 | D | E | F | F2 | P | P0 | P2 | T |
|------|------|-------|------|------|------|------|-------|------|------|------|------|-------|
| DM | 56 | Φ24.2 | - | 8.4 | Φ1.5 | 1.75 | 26.25 | 52.5 | 40 | 4 | 2 | 0.5 |
| TOLE | ±0.3 | ±0.2 | ±0.2 | -0.2 | +0.1 | ±0.1 | ±0.15 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.05 |

