



DP2993C

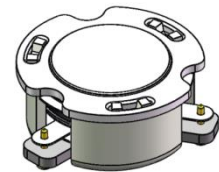
ENG PART: DP-15.5CM-3800T4200-CW

3800MHz to 4200MHz Single-Junction Surface Mount Circulator

REV.	DESCRIPTION	REVISOR	DATE	APPROVED
A	Creating datasheet	ZZ.Zhu	2024/1/19	Nick

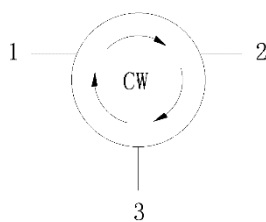
Applications:

- Wireless Infrastructure
- Power Amplifier



Features:

- Operating frequency range: 3800MHz to 4200MHz
- Operating temperature range: -40°C to +125°C
- Storage temperature range: -55°C to +150°C
- Small surface-mount package delivered on T&R
- BeO free & RoHS compliant



Block Diagram

**Electrical Specifications:**

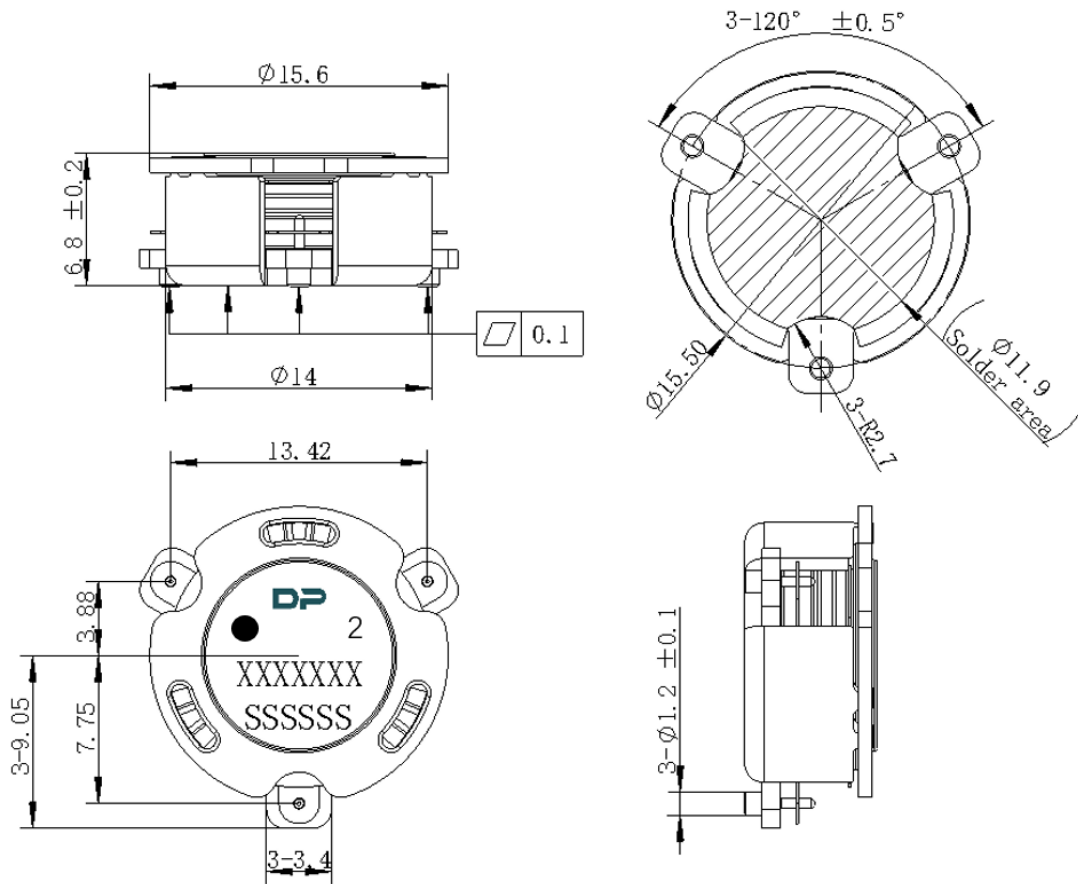
ITEM	SPECIFICATION	
Frequency	3800~4200	MHz
Extend frequency	3650-4350	MHz
Direction	CW	
Impedance	Typ: 50	Ω
Insertion Loss (Max.)	0.30@25±5°C 0.35@-40~+125°C	dB
Isolation (Min.)	Typ: 25 22 14@3650MHz~4350 MHz	dB
Return Loss (Min.)	22	dB
3rd IMD (Max.)	-60(Typ -65)	dBc
Group delay	2.0	ns
Ripple of group delay in extend frequency	2	ns
2nd harmonic suppression	10	dBc
3rd harmonic suppression	5	dBc
Power FWD/REV/PEAK	100/-/1000	W
Termination/Attenuator	-	W/dB
Input Impedance ,real	+45~+53 (Typ. 49) @3800MHz +46~+54 (Typ. 50) @4000MHz +47~+55 (Typ. 51) @4200MHz	Ω
Input Impedance ,imaginary	-7j~+1j (Typ. -3j) @3800MHz -1j~+7j (Typ. +3j) @4000MHz -3j~+5j (Typ. +1j) @4200MHz	Ω
Output Impedance ,real	50±6	Ω
Output Impedance ,imaginary	±7j	Ω
Resonance point of out-off-band	3450~4550MHz	

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 °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: 0.1 mm 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 dot on the label represents the input port



Packaging Style:

ITEM	W	A0	B0	K0	D	E	F	F2	P	P0	P2	T
DIM	32	17.8	Φ15.6	7.2	Φ1.5	1.75	14.2	28.5	24	4	2	0.5
TOL.E	±0.3	±0.2	±0.2	±0.2	+0.1	±0.1	±0.15	±0.1	±0.1	±0.1	±0.1	±0.05

