

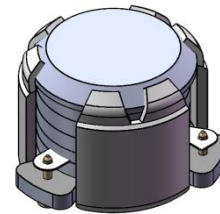


DP0523C

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

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

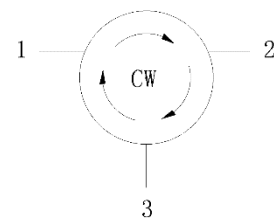


Applications:

- 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



Block Diagram



Electrical Specifications:

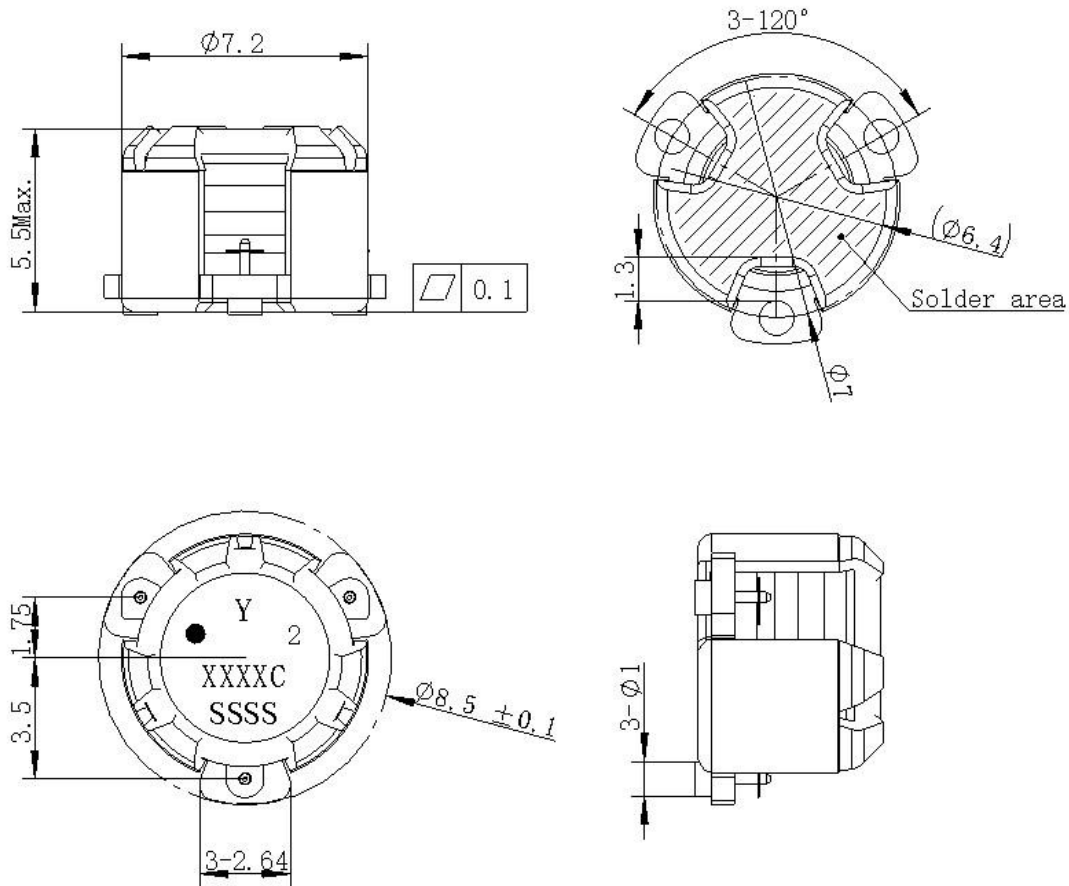
ITEM	SPECIFICATION	
Frequency	2300~2400	MHz
Direction	CW	
Impedance	Typ: 50	Ω
Insertion Loss (Max.)	0.3@25 \pm 5 $^{\circ}$ C 0.35@-40~+110 $^{\circ}$ C 0.5 Type @ Ericsson PCB	dB
Isolation (Min.)	20 20 Type @ Ericsson PCB	dB
Return Loss (Min.)	22 22 Type @ Ericsson PCB	dB
3rd IMD (Max.)	-60@2x5W CW 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: 0.1mm 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

