

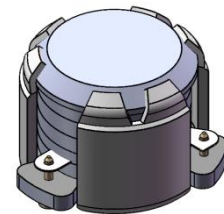


## DP0939C

### 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	2022/3/25	Nick
B	Update the label	ZZ.Zhu	2023/8/1	Nick
C	Updated Co-planarity from $\pm 0.1$ to $+0.1/0$	ZC.Wu	2024/3/5	Nick
D	Updated Co-planarity from $+0.1/0$ to $\pm 0.1$	ZC.Wu	2024/9/29	Nick

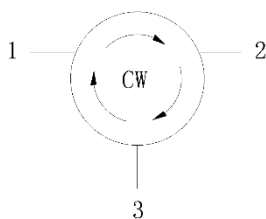


#### Applications:

- Wireless Infrastructure
- Power Amplifier

#### Features:

- Operating frequency range: 2300MHz to 2400MHz
- Operating temperature range:  $-40^{\circ}\text{C}$  to  $+110^{\circ}\text{C}$
- Storage temperature range:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- Small surface-mount package delivered on T&R
- BeO free & RoHS compliant



Block Diagram

**Electrical Specifications:**

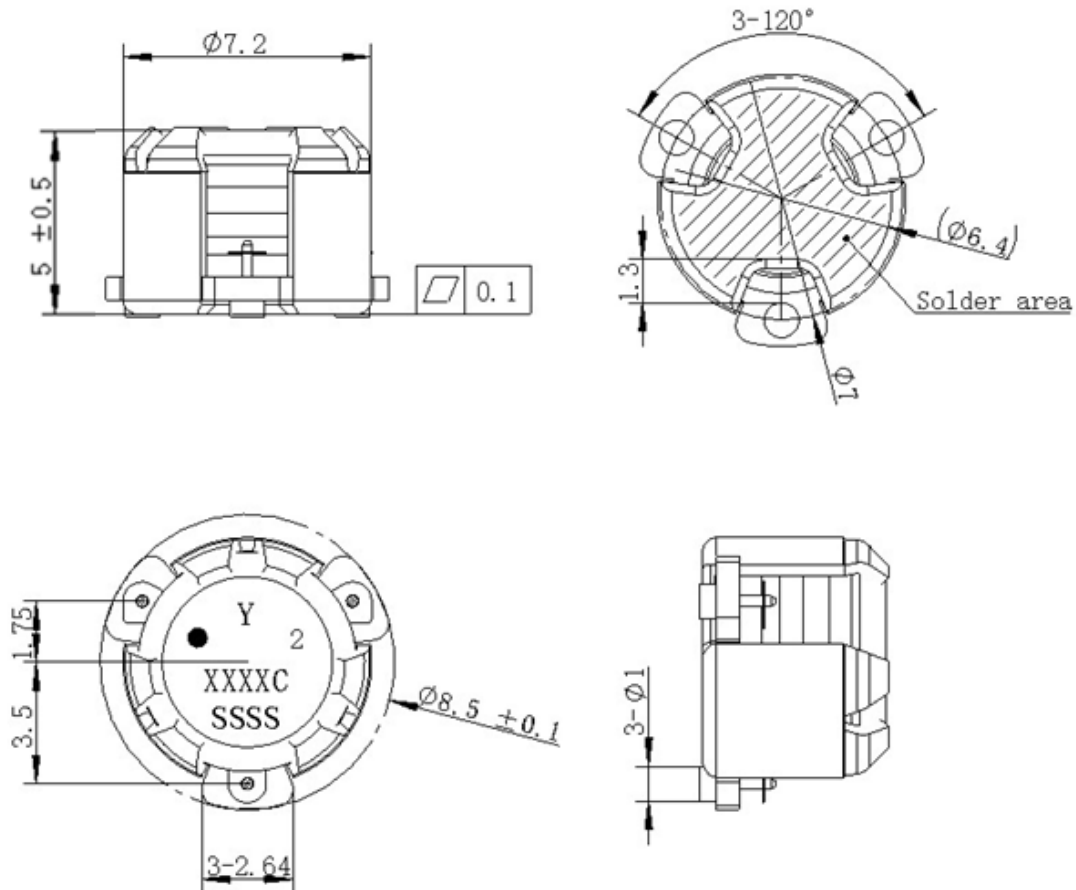
ITEM	SPECIFICATION	
Frequency	2300~2400	MHz
Direction	CW	
Impedance	Typ: 50	$\Omega$
Insertion Loss (Max.)	0.35@-40~+110 $^{\circ}$ C 0.65 @ Ericsson PCB, total backend	dB
Isolation (Min.)	20	dB
Return Loss (Min.)	22 15@2100-2600MHz	dB
3rd IMD (Max.)	-55@2x5W CW tones, 1MHz spacing	dBc
5th IMD (Max.)	-60	
Harmonics	60 @2 x TX 20W CW, 60@3 x TX 20W CW,	dBc
Attenuation	20@2xTX 10@3xTX 5 @NxTX	dB
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 ofband	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  $\pm 0.2$ 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 soon (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

