

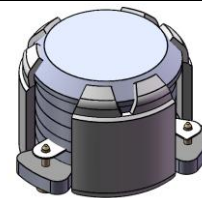


**DP0399C**

**ENG PART:DP-7CM-2496T2690-CW**

2496MHz to 2690MHz Single-Junction Surface Mount Circulator

REV.	DESCRIPTION	REVISOR	DATE	APPROVE D
A	Creating datasheet	ZC.Wu	2021/01/11	Nick
B	Update the pin size from 0.7 to 0.6	ZC.Wu	2021/01/26	Nick
C	1.Pin size changed from 0.6 to 0.8; 2.Update the spec.	ZC.Wu	2021/11/15	Nick
D	1.Isolation of extend frequency change from 14 to12;2.Update the packaging drawing	ZC.Wu	2022/5/16	Nick
E	Update the label	ZC.Wu	2022/12/7	Nick

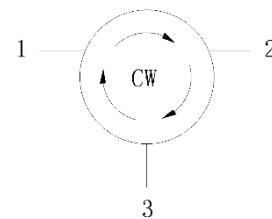


**Applications:**

- Wireless Infrastructure
- Power Amplifier

**Features:**

- Operating frequency range: 2496MHz to 2690MHz
- Operating temperature range: -40°C to +105°C
- Storage temperature range: -65°C to +150°C
- Small surface-mount package delivered on T&R
- BeOfree&RoHS compliant



Block Diagram



### Electrical Specifications:

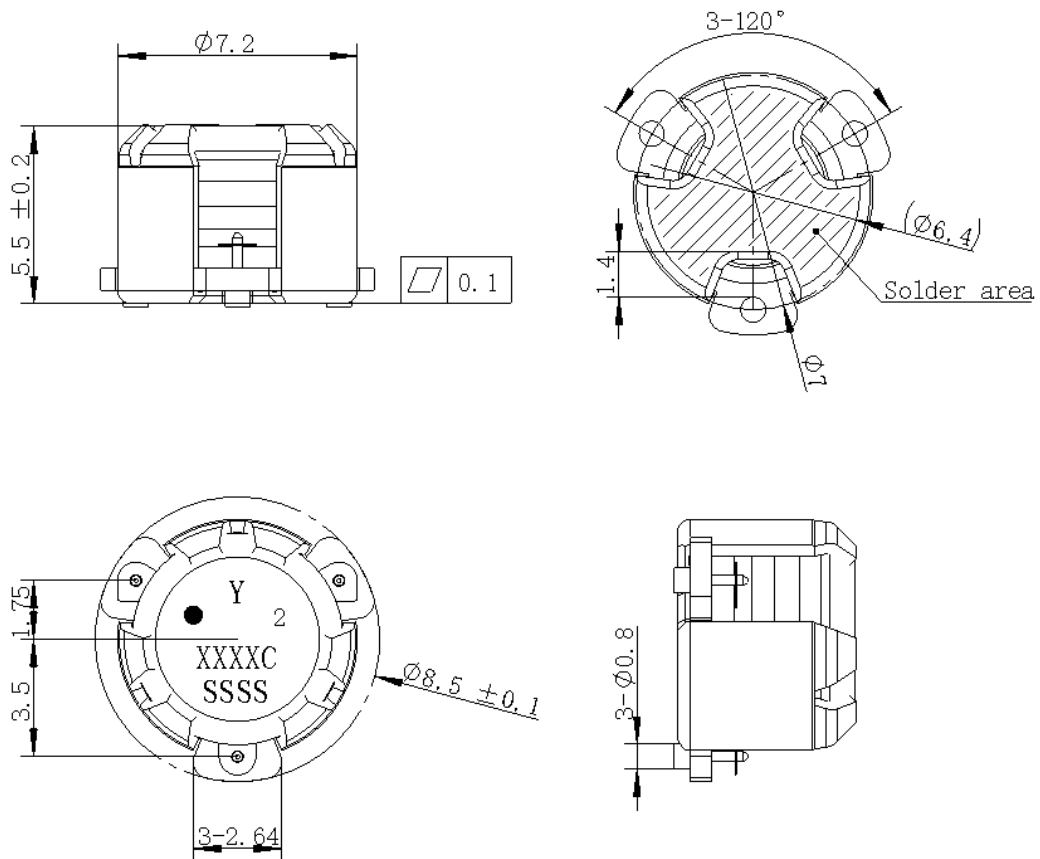
ITEM	SPECIFICATION	
Frequency	2496~2690	MHz
Direction	CW	
Impedance	Typ: 50	$\Omega$
Insertion Loss (Max.)	0.25@25°C $\pm$ 10°C 0.30@-40~+105°C	dB
Isolation (Min.)	20	dB
Return Loss (Min.)	22	dB
3rd IMD (Max.)	-60	dBc
Group delay	2	ns
2nd harmonic attenuation	20@25°C 15@-40~+105°C	dB
3rd harmonic attenuation	10@25°C 8@-40~+105°C	dB
Extend Frequency	2296-2890	MHz
Isolation of extend frequency	12	dB
Power FWD/REV/PEAK	25/-/200	W
Resonance point of out off band	2296MHz-2890MHz	W/dB
Input Impedance ,real	49~55 (typ. 52) @2496 MHz 43~49 (typ. 46) @2600 MHz 42.5~48.5 (typ. 45.5) @2690 MHz	$\Omega$
Input Impedance ,imaginary	-10j ~-2j @2496 MHz -7j~+2j @2600 MHz -4j~+6j @2690 MHz	$\Omega$

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  $\pm 0.2$ 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	24	Φ7.4	9.2	2.7	6.0	Φ1.5	1.75	11.5	-	16	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

