

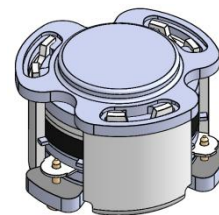


DP3777C

ENG PART:DP-7CM-4500T4800-CW

4500MHz to 4800MHz Single-Junction Surface Mount Circulator

REV.	DESCRIPTION	REVISOR	DATE	APPROVED
1	Creating datasheet	ZC.Wu	2025/2/25	Nick
2	Updated the spec	ZC.Wu	2025/3/6	Nick
3	Updated the spec	ZC.Wu	2025/3/11	Nick

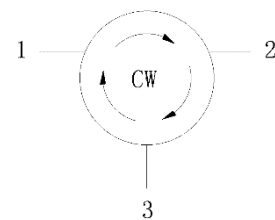


Applications:

- Wireless Infrastructure
- Power Amplifier

Features:

- Operating frequency range: 4500MHz to 4800MHz
- Operating temperature range: -40°C to +110°C
- Storage temperature range: -65°C to +150°C
- Small surface-mount package delivered on T&R
- BeOfree&RoHS compliant



Block Diagram



Electrical Specifications:

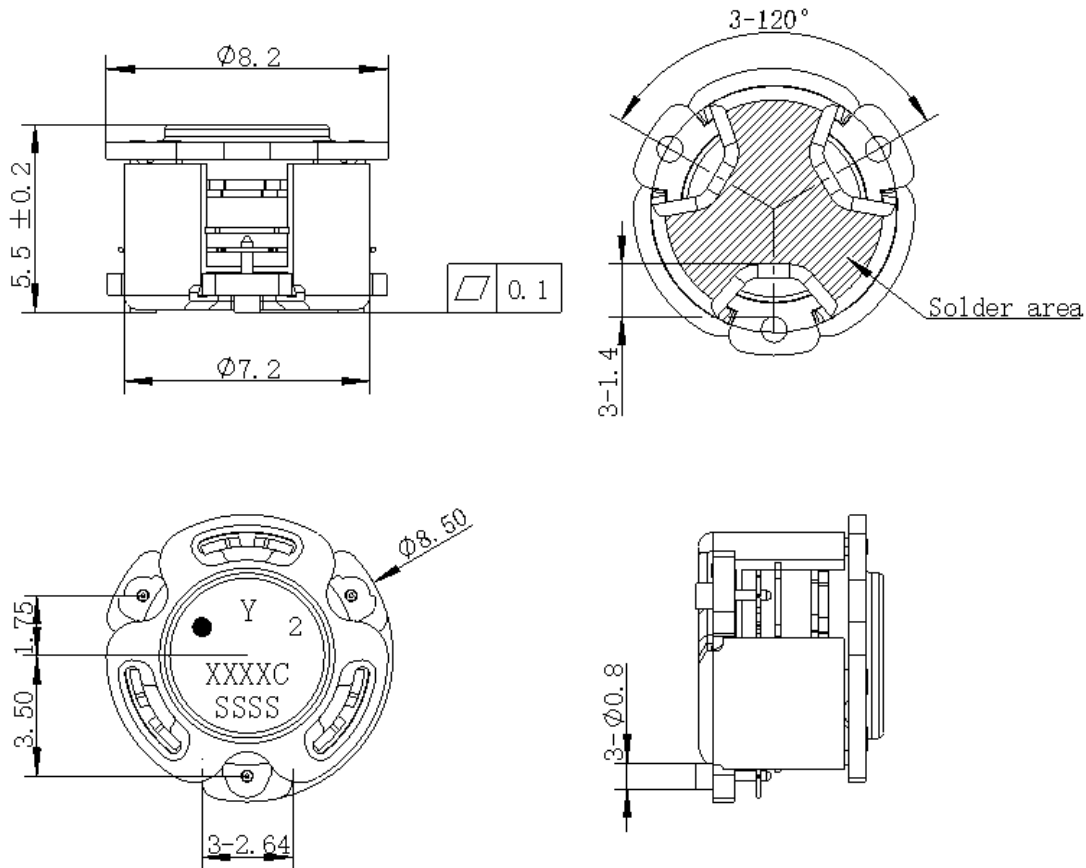
ITEM	SPECIFICATION	
Frequency	4500~4800	MHz
Extend Frequency	4300-5000	MHz
Direction	CW	
Impedance	Typ: 50	Ω
Insertion Loss (Max.)	0.25@25°C \pm 10°C 0.28@-40~+110°C	dB
Isolation (Min.)	21 16@4300~5000MHz	dB
Return Loss (Min.)	22	dB
3rd IMD (Max.)	-60@2X12.5W CW Tones, Spacing 1MHz	dBc
Group delay(Max.)	2	ns
2nd harmonic suppression	10@25°C 10@-40~+110°C	dBc
3rd harmonic suppression	10@25°C 8@-40~+110°C	dBc
Power FWD/REV/PEAK	25/-/200	W
Resonance point of out off band(S11)	4300-5000	MHz
Input Impedance ,real	47~54 (Typ.50.5)@4500 MHz 45~52 (Typ.48.5)@4650 MHz 46~53 (Typ.49.5)@4800 MHz	Ω
Input Impedance ,imaginary	-6j ~+1j @4500 MHz -4j ~+3j @4650 MHz -2j~+5j @4800 MHz	Ω
Output Impedance ,real	47~55 (Typ.51)@4500 MHz 45~53 (Typ.49)@4650 MHz 46~55 (Typ.50.5)@4800 MHz	Ω
Output Impedance ,imaginary	-6j ~+2j @4500 MHz -4j ~+4j @4650 MHz -3j~+5j @4800 MHz	Ω

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 ± 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

