

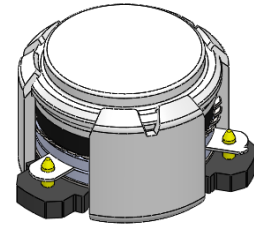


DP2154C

ENG PART:DP-10.2CM-1805T2200-CCW

1805MHz to 2200MHz Single-Junction Surface Mount Circulator

REV.	DESCRIPTION	REVISOR	DATE	APPROVED
A	Creating datasheet	ZZ.Zhu	2022/8/30	Nick
B	Update the spec.	ZZ.Zhu	2022/11/22	Nick
C	Update the spec.	ZZ.Zhu	2023/3/13	Nick
D	Change imaginary Impedance from output to input	ZZ.Zhu	2023/6/12	Nick

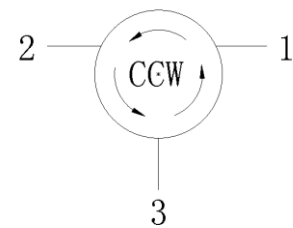


Applications:

- Wireless Infrastructure
- Power Amplifier

Features:

- Operating frequency range: 1805MHz to 2200MHz
- Operating temperature range: -40°C to +120°C
- Storage temperature range: -65°C to +150°C
- Small surface-mount package delivered on T&R
- BeOfree&RoHS compliant



Block Diagram

**Electrical Specifications:**

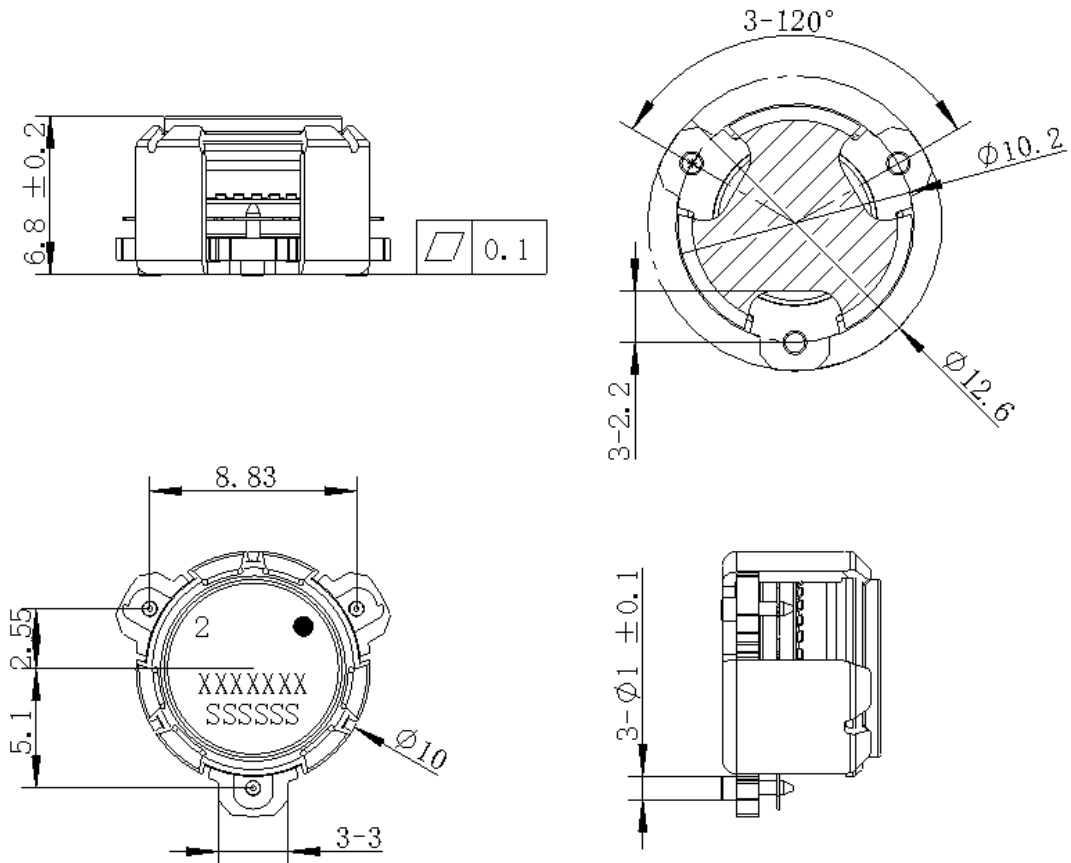
ITEM	SPECIFICATION	
Frequency	1805~2200	MHz
Extend frequency	1605~2400	MHz
Direction	CCW	
Impedance	Typ: 50	Ω
Insertion Loss (Max.)	0.40@25°C 0.45@-40~+120°C	dB
Isolation (Min.)	18@1805~1880MHz 18@2110~2200MHz 17@1880~2110MHz	dB
Isolation of extend frequency	8@1605~2400 MHz	dB
Return Loss (Min.)	17@1805~1880MHz 17@2110~2200MHz 16.5@1880~2110MHz	dB
3rd IMD (Max.)	-60@2x5W CW tones, 1MHz spacing	dBc
Group delay	2	ns
2nd harmonic suppression	12	dBc
3rd harmonic suppression	6	dBc
Power FWD/REV/PEAK	25/-/160	W
Termination/Attenuator	/	W/dB
Resonance point of out-off-band	Resonance point away 1605MHz to 2400 MHz	MHz
Input Impedance ,real	54~62(Typ.58)@1805MHz 43~51(Typ.47)@1880MHz 36~44(Typ.40)@2000MHz 40~48(Typ.44)@2110MHz 50~58(Typ.54)@2200MHz	Ω
Input Impedance ,imaginary	-3~+6(Typ.+1.5)@1805MHz -7~+1(Typ.-3)@1880MHz -7~+1(Typ.-3)@2000MHz -2~+6(Typ.+2)@2110MHz -3~+5(Typ.+1)@2200MHz	j 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 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 dots represent the input port.



Packaging Style:

ITEM	W	A0	B0	C0	K0	D	E	F	F2	P	P0	P2	T
DIM	32	Φ10.4	12.5	4	7.0	Φ1.5	1.75	14.2	28.5	24	4	2	0.5
TOLE	±0.3	±0.2	±0.2	±0.2	±0.2	+0.1	±0.1	±0.15	±0.1	±0.1	±0.1	±0.1	±0.05

