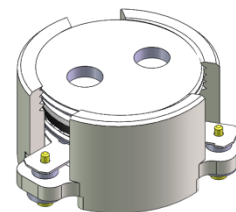




DP0238C

1805MHz to 2170MHz Single-Junction Surface Mount Circulator

REV.	DESCRIPTION	REVISOR	DATE	APPROVED
A	Creating datasheet	ZC.Wu	2020/05/08	Nick
B	Replace the number 1 on the input port of the label with a black dot	ZC.Wu	2020/10/10	Nick

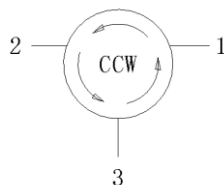


Applications:

- Wireless Infrastructure
- Power Amplifier

Features:

- Operating frequency range: 1805MHz to 2170MHz
- Operating temperature range: -40°C to +110°C
- Storage temperature range: -55°C to +150°C
- Small surface-mount package delivered on T&R
- BeOfree&RoHS compliant



Block Diagram

**Electrical Specifications:**

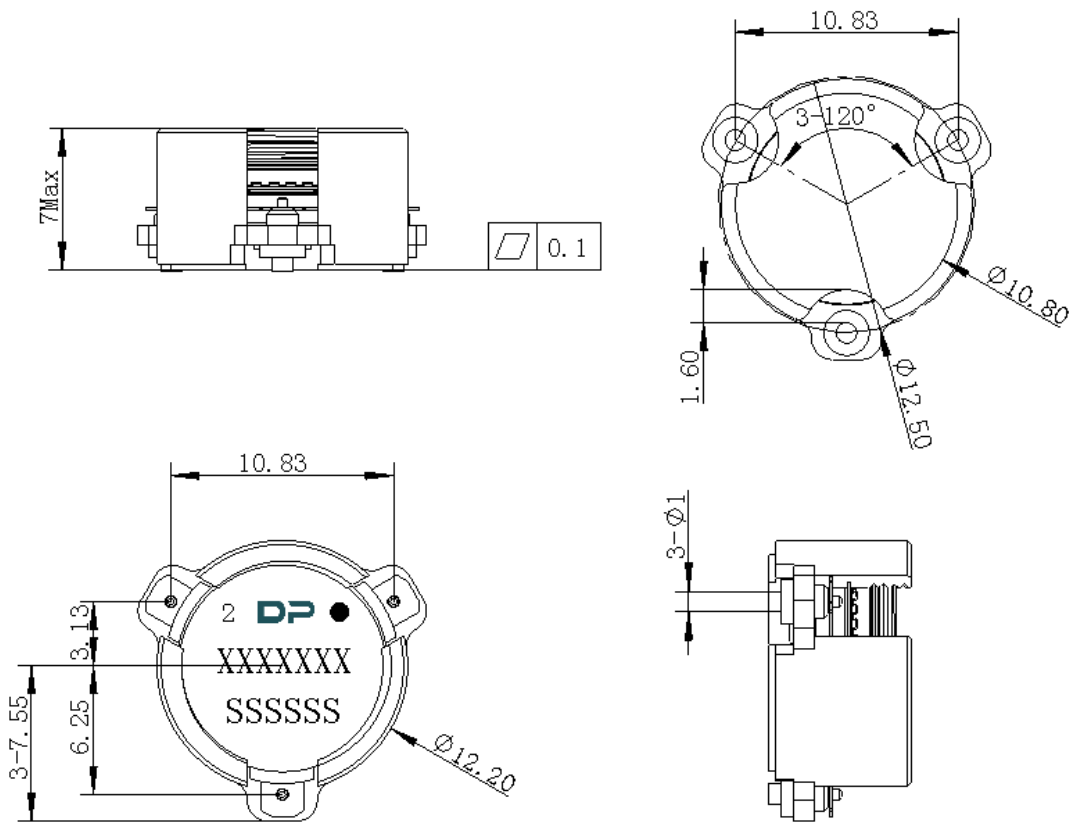
ITEM	SPECIFICATION	
Frequency	1805~2170	MHz
Direction	CCW	
Impedance	Typ: 50	Ω
Insertion Loss (Max.)	0.4 @25 \pm 10 $^{\circ}$ C 0.45@-40~+110 $^{\circ}$ C	dB
Isolation (Min.)	18 @1805~1990 MHz & 2030~2170MHz 16@1990~2030 MHz 10@1655~2320MHz	dB
Return Loss (Min.)	17.7 @1805~1990 MHz & 2030~2170MHz 16.5@1990~2030 MHz	dB
FWD 3rd IMD (Max.)	-55@2x10W,CW tones,spacing 1MHz(-40~+90 $^{\circ}$ C)	dBc
Extend frequency	1655~2320	MHz
Group delay	2	ns
2nd harmonic suppression	10	dBc
3rd harmonic suppression	5	dBc
Power FWD/REV/PEAK	50/-/400	W
Ripple of group delay in extend frequency	2	ns
Input Impedance ,real @1805~1880MHz	44 Min 52.5 Typ. 63 Max	Ω
Input Impedance ,imaginary @1805~1880MHz	-8.5j Min +8j Max	Ω
Input Impedance ,real @2110~2170MHz	40 Min 47.5 Typ. 61 Max	Ω
Input Impedance ,imaginary @2110~2170MHz	-3.5j Min +9j Max	Ω
Output Impedance ,real	41 Min 50 Typ. 61.5 Max	Ω
Output Impedance ,imaginary	-8j Min +8j Max	Ω
Out-of-band resonance point	Resonance point away 1605 MHz to 2370 MHz	

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 $^{\circ}$ C.



Mechanical Specifications:



Unit : Millimeters

Notes:

1. The housing and pins are silver-plated.
2. Tolerance $\pm 0.2\text{mm}$ 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. Part Number format shall be XXXXXXXX.
6. Serial Number format shall be SSSSSS



Packaging Style:

ITEM	W	A0	B0	K0	D	E	F	F2	P	P0	P2	T
DIM	32	14.7	12.4	7.4	Φ1.5	1.75	14.2	28.5	24	4	2	0.5
TOLE	±0.3	±0.2	±0.2	±0.2	+0.1	±0.1	±0.15	±0.1	±0.1	±0.1	±0.1	±0.05

