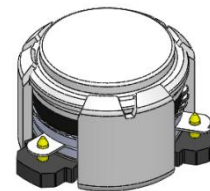




## DP0190C

### 2496MHz to 2690MHz Single-Junction Surface Mount Circulator

REV.	DESCRIPTION	REVISOR	DATE	APPROVED
A	Creating	ZC.Wu	2019/12/10	Nick
B	The total height is changed from 7 Max. to 6.8±0.2	ZC.Wu	2020/02/20	Nick
C	Remove the DP logo from the top cover and replace the number 1 on the input port with a black dot	ZC.Wu	2020/04/01	Nick
D	Optimize the housing and cover to strengthen the reliability	ZC.Wu	2020/6/23	Nick

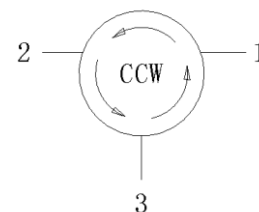


#### Applications:

- Wireless Infrastructure
- Power Amplifier

#### Features:

- Operating frequency range: 2496MHz to 2690MHz
- 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:

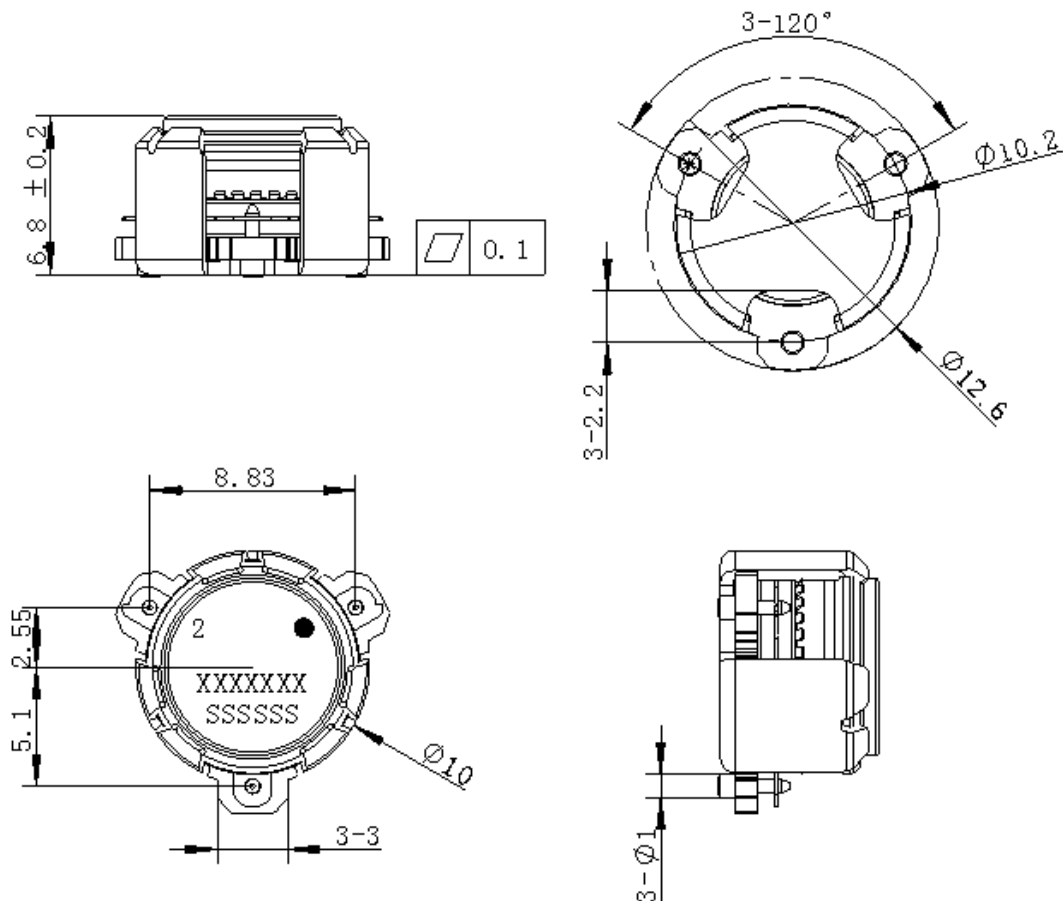
ITEM	SPECIFICATION	
Frequency	2496~2690	MHz
Direction	CCW	
Impedance	Typ: 50	$\Omega$
Insertion Loss (Max.)	0.25@25°C 0.30@-40~+110°C	dB
Isolation (Min.)	20@2496~2690MHz 14@2296~2890MHz	dB
Return Loss (Min.)	22	dB
3rd IMD (Max.)	60@2x5W CW tones, 1MHz spacing	dBc
Group delay	2	ns
2nd harmonic	10	dBc
3rd harmonic	5	dBc
Power FWD/REV/PEAK	20/20/160	W
Termination/Attenuator	/	W/dB
Out Band Resonance	Resonance point away 2296MHz-2890MHz	
Input Impedance ,real	48 Min@2496MHz 54Max@2496MHz 51Typ@2496MHz 43Min@2600MHz 49 Max@2600MHz 46 Typ@2600MHz 42.5Min@2690MHz 48.5 Max@2690MHz 45.5 Typ@2690MHz	$\Omega$
Input Impedance ,imaginary	-10j Min@2496MHz -2j Max@2496MHz -7j Min@2600MHz 2j Max@2600MHz -4j Min@2690MHz 6j Max@2690MHz	j $\Omega$

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 an operating temperature of 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: 0.1 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 ports.



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

