



## DP2907C

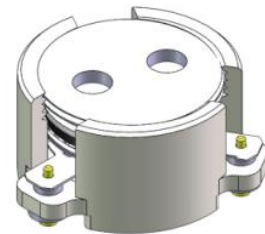
### ENG PART:DP-15.5CM-4700T5000-CW

4700MHz to 5000MHz Single-Junction Surface Mount Circulator

REV.	DESCRIPTION	REVISOR	DATE	APPROVED
A	SAME AS REV.1	ZZ.Zhu	2024/3/25	Nick

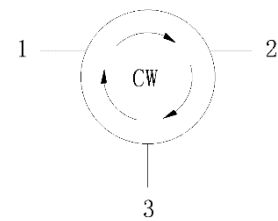
#### Applications:

- Wireless Infrastructure
- Power Amplifier



#### Features:

- Operating frequency range: 4700MHz to 5000MHz
- Operating temperature range: -40°C to +125°C
- Storage temperature range: -50°C to +125°C
- Small surface-mount package delivered on T&R
- BeO free & RoHS compliant



Block Diagram

**Electrical Specifications:**

ITEM	SPECIFICATION	
Frequency	4700~5000	MHz
Direction	CW	
Impedance	Typ: 50	$\Omega$
Insertion Loss (Max.)	0.25@-40~+115 $^{\circ}$ C 0.27@+115~+125 $^{\circ}$ C	dB
Isolation (Min.)	22@4700~5000MHz 20@4650~5050MHz 10@4400~5300MHz 8 @4100~5600MHz	dB
Return Loss (Min.)	23@4700~5000MHz (0~125 $^{\circ}$ C) 20@4700~5000MHz (-40~0 $^{\circ}$ C) 20@4650~5050MHz 6@4400~5300MHz 6@4100~5600MHz	dB
3rd IMD (Max.)	-69@2x50W , 5MHz spacing	dBc
5th IMD (Max.)	-79@2x50W , 5MHz spacing	dBc
Harmonics	-10@ 2 x TX (100W CW ) -10@ 3 x TX (100W CW ) -10@ 4 x TX (100W CW )	dBm
Out of band attenuation	15@2xTX 10@3xTX 10@nxTX	dB
Group delay	0.4~2.0	ns
Deviation from nominal delay over temperature range	$\pm 0.05$ (Measured with fixed frequency)	ns
Power FWD/REV/PEAK	100/100/1000	W
Input Impedance (Real)	/	$\Omega$
Max voltage rating	1080	V
Input Impedance (real)	48.5~50.5 (Typ.49.5) @4700MHz 51~53 (Typ.52) @4850MHz 52.5~54.5 (Typ.53.5) @5000MHz	
Input Impedance (Imaginary)	-0.5j~+1.5j (Typ.+0.5j) @4700MHz -0.5j~+2.0j (Typ.+1.0j) @4850MHz -2.0j~+1.0j (Typ.-0.5j) @5000MHz	$\Omega$
Output Impedance	50	$\Omega$
Resonance out of	4100~5600	MHz
Termination/Attenuator	/-	W/dB



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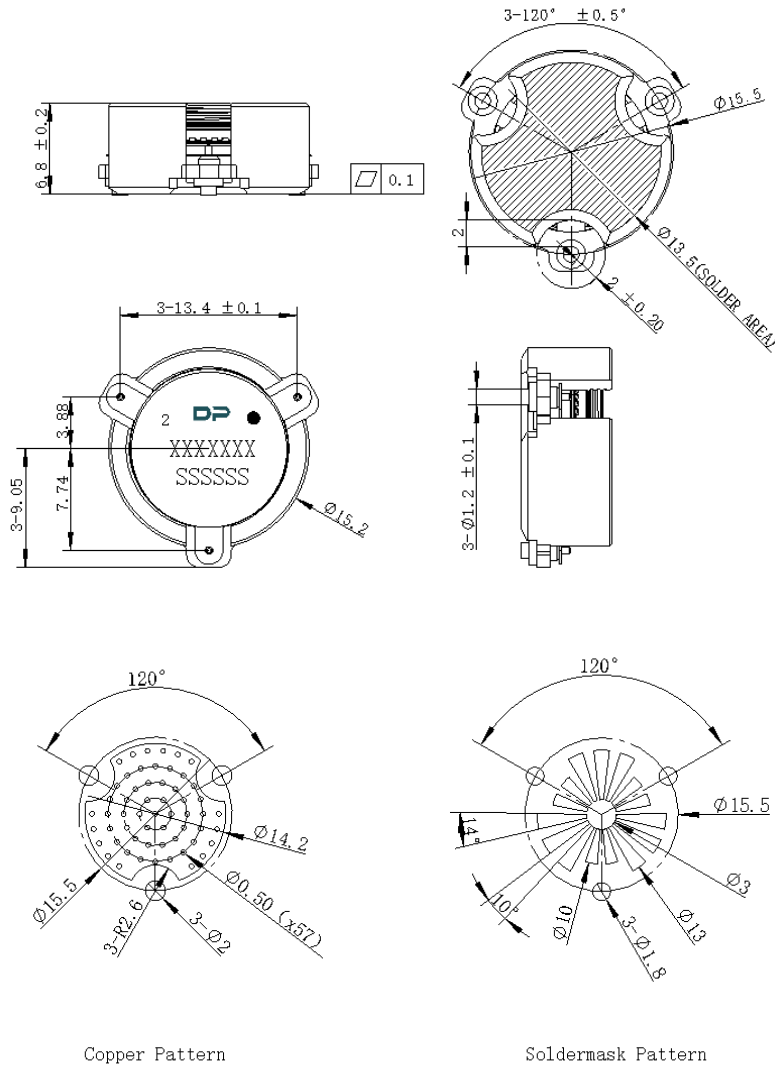
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Notes:

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.



Mechanical Specifications:



Copper Pattern

Soldermask Pattern

Unit: Millimeters

PCB Material: ROGERS R04350B 0.508mm thicknesss trace width 1.07mm wide

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 XXXXXXX on the label represents the part number
6. The SSSSSS on the label represents the serial number
7. The black dot on the label represents the input port



Packaging Style:

ITEM	W	A0	B0	K0	D	E	F	F2	P	P0	P2	Γ
DM	44	Φ14.5	Φ17.2	7.3	Φ1.5	1.75	20.2	40.5	28	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

