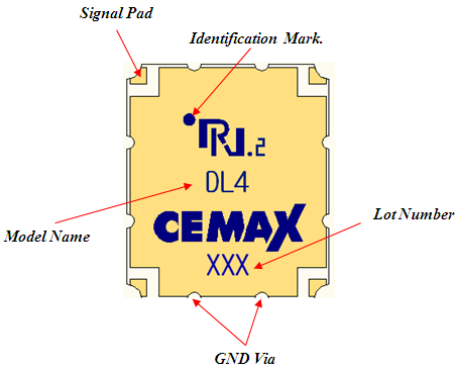
1. Description

1-1. Part number: DL4



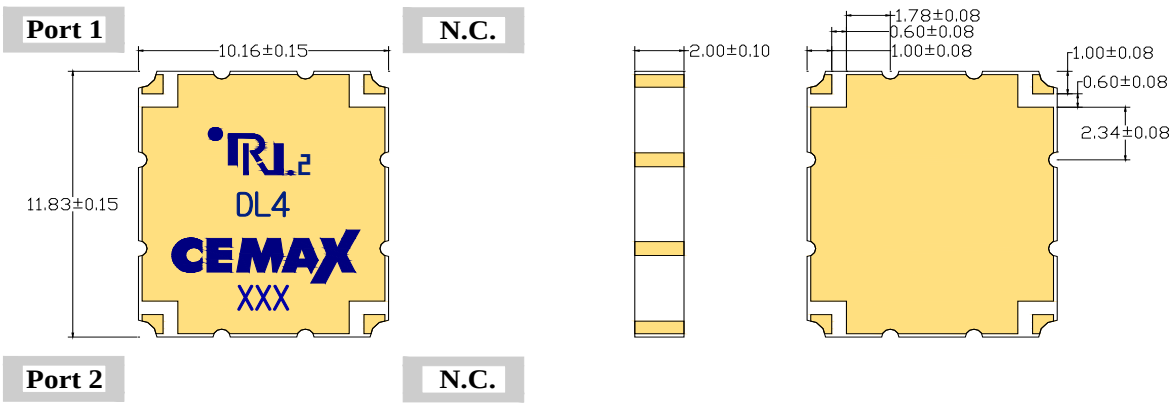
1-2. Features

- Surface mount type
- **RoHS** Compliance (Pb = Free)
- LTCC base (Er = 6)
- Low loss Silver (Ag) Conductor
- **Gold plated**

2. Electrical Specification(at room temperature)

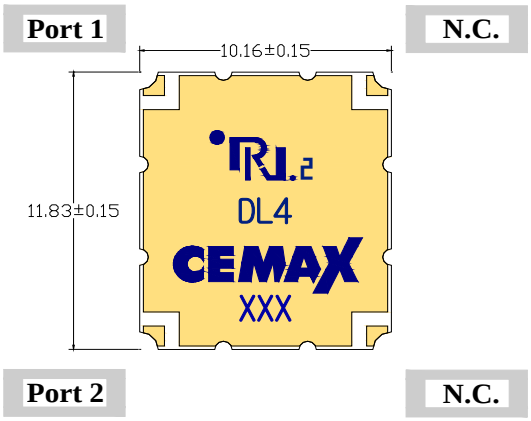
Freq. (MHz)	Return Loss min (dB)	Insertion Loss min (dB)	Group Delay (nS)	Power Capacity (Watts)
300-700	-20	-1.9	3.95± 0.1	
700-1000	-20	-2.3	3.95± 0.1	
1000-1400	-20	-2.8	3.97± 0.1	100
1400-1800	-17	-3.4	4.03± 0.1	
1800-2100	-18	-3.8	4.11± 0.1	
2100-2800	-15	-4.6	4.20± 0.2	

3. Mechanical Specification



[Unit = mm]

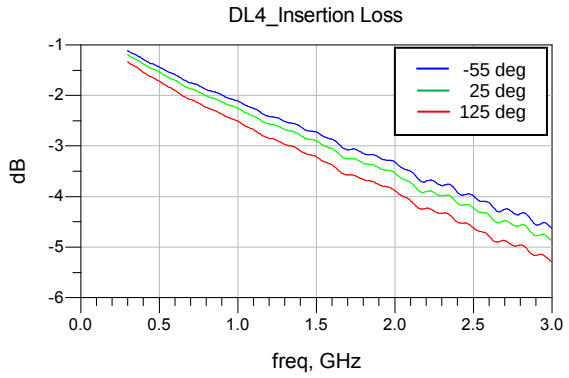
4. Port Configuration

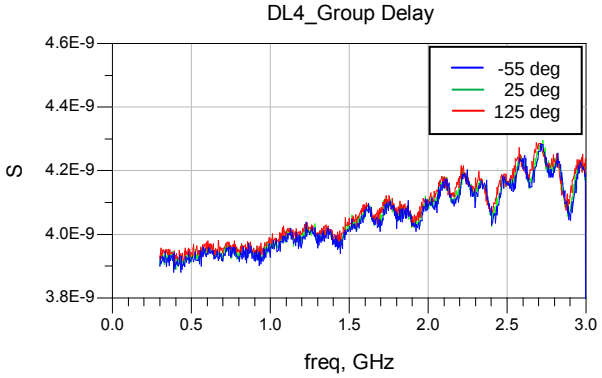


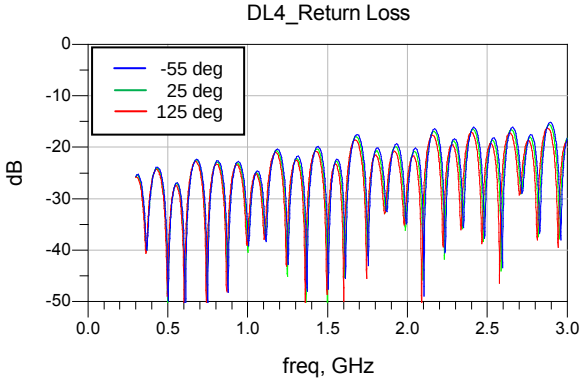
Configuration	Port 1	Port 2	N.C.	N.C.
Case 1.	Input	Output	N.C.	N.C.
Case 2.	Output	Input	N.C.	N.C.

* Once Port 1 is determined, the other three ports are defined automatically.

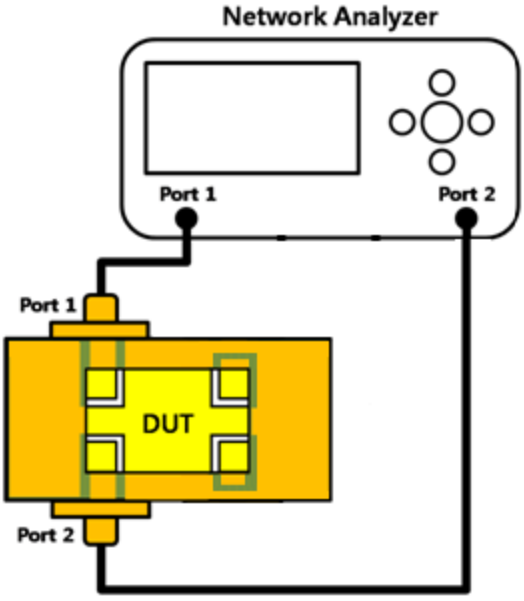
5. Typical data over temperature (−55, +25 and +125°C)



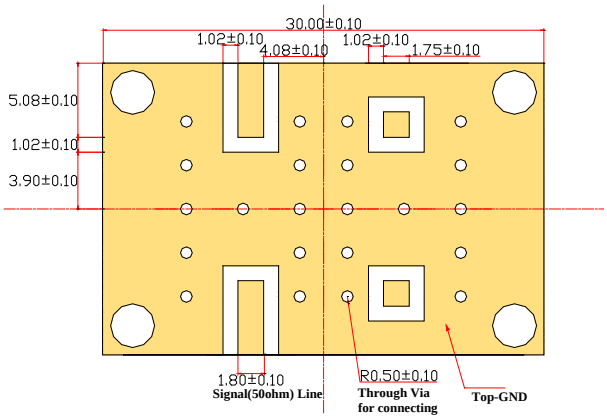




6. Test Method



* RN2 Test Board
  - Taconic RF35 board
  - Dielectric constant 3.5
  - Board thickness 0.8mm
  - Copper 1 Oz

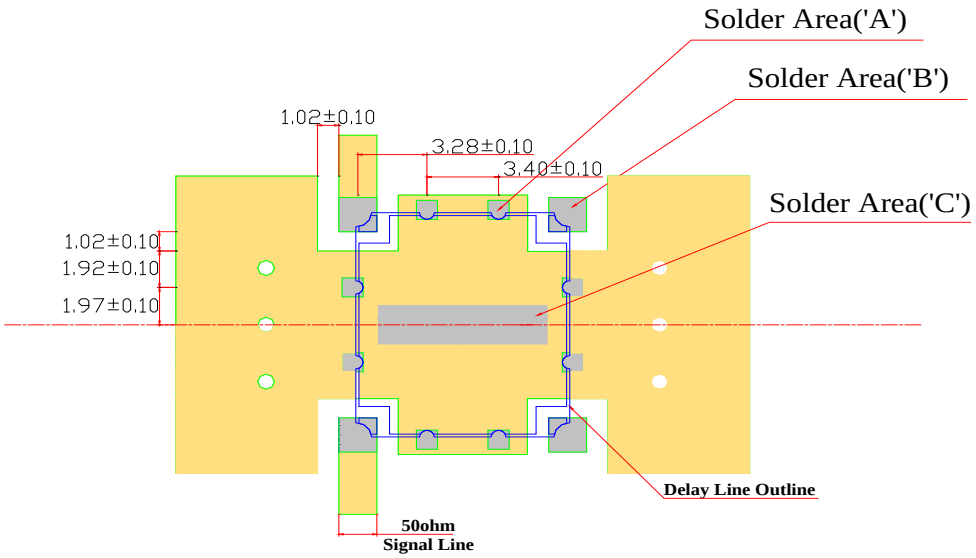


To recognize the specified performance of the part, it has to be evaluated on the RN2 test board shown above.

1. Calibrate the network analyzer
2. Measure the data of **Return Loss** through Port 1 to Port 1 (S11)
3. Measure the data of **Insertion Loss** and **Group delay** through Port 1 to Port 2 (S21)

7. Recommended PCB layout and Solder mask pattern

PROJECTION	No.	DATE	REVISION & DESCRIPTION	SIGNATURE REVIEWED	SIGNATURE CHECKED
	1	2011.09.29	New - Drawing		
	2				
	3				

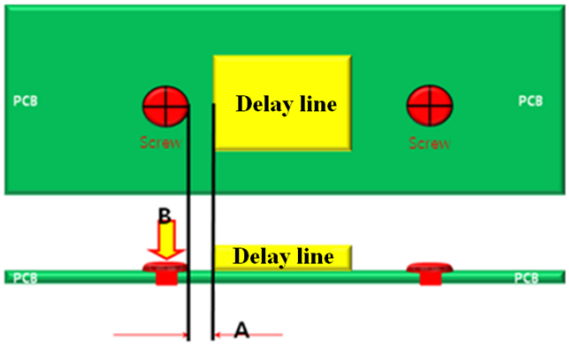


NOTE.
1. Test Solder Cream : SAC-305 (Alpa Metal)
2. Lead Free Solder Alloy : Sn/Ag/Cu Ratio Of 96.5/3.0/0.5
3. Solder Area ('A') Demension : 1.0 mm by 1.0 mm
4. Solder Area ('B') Demension : 1.8 mm by 1.8 mm
5. Solder Area ('C') Demension : 8.0 mm by 2.0 mm

No.	DESCRIPTION	UNIT QUANTITY	TOTAL	PERUNIT	TOTAL

TITLE	DL4 - Recommended Solder Quantity &Area	RN2 DWG No.	11-0929-01	SCALE	1/1		
				SIZE	A4	DIMENSION	mm

I. Be careful when Screw



Screw Drive Force B (kgf)	Recommended Distance (Btw Screw Head and Device edge) A (mm)
5	3
10	4
15	8

II. Be careful when SMD or Assembly

A. LTCC delay line require appropriate measures to avoid its base PCB from warping.

B. PCB excessively warping over defined standard may result in crack of LTCC delay line potentially.