

2a

1a 1d ;
 2a 2c ;
 3 가 ;
 4 가 ;

< >

10: 12:
 14: 20:
 50: 60:
 60':
 75: 70:
 Cs: C3:

1x10¹¹ 2x10¹² /cm³ 가

(High Density Plasma, HDP)
 (Inductively Coupled Plasma, ICP)

1a
 1a (10) (12) (chuck, 20) (30) (20)
 (10) (14)가 (12) (14)
 (10) (50) (50) 가(60)가
 (75) (60) (60) (60) 1b
 (60) (10) (40)가
 (75) (60) (stray capacitor, Cs)가 (impedance matching box, I
 MB, 70)가 (20)

가

1b 1a (60) (70) 1c 1d
 1b (stray capacitor, Cs)가 가
 1b 1d (60) L1, L2, L3 L4가
 (70) (L4) 1a (C3)가
 1b La (60) (inductance)

(L1, L2, L3) 가 , (Cs) (L4)
 가 (75) 가 가 (Cs)
 가 (40) (capacitively coupled type) ,
 (20MHz ~ 300MHz) (inductively coupled plasma, ICP) (Cs)
 capacitively coupled plasma, CCP) 가 (

(C3) (60) $1/(L_a \cdot C_3)^{1/2}$, L
 a (60) , C3 (20
 MHz ~ 300MHz) (C3) 가 (vac
 uum variable capacitor) 5pF

(Cs) 가 (40)
 (capacitively coupled type)

(20MHz ~ 300MHz)

;

가 가 ;

가 가 ;

가 가 1~5pF 가 가 ;

가 1 ; 1 1 ; 1
 2 , 2 1 1 2 ; 가
 , 1

2a 2c (60') (70) , 2a 2b
 2a 2c (Cs)가 가 (60') L1, L2, L3, L4 2a 2b
 , L1, L2, L3 (75) 20MHz ~ 300MHz , L4가 , L4

(Cs) (C3) (C3) (Cs)
 (60') 가 (vacuum variable capacitor) 5pF 가
 (C3) , 5pF 가

(L4) 가 가 가 가 가
 (Cs) 가 (L4) (C3) (L1, L2, L3)
 (L4) 가

3 가
 3 , 1 (110, 112) 1 (120)
 1 (120) 2 (130) , 2 (130) 1 (120)
) 2 (130) , 2 (130) 1 (110, 112) , 2 (130) 1 (140)
 (L4)가 (140) , (150) 가 (L4) 1 (110, 112) (130)
 1 ~ 5pF , 1 (110, 112) 1 (120)
 4 가 (a) 1 가
 가 , (b) 가
 , (c) 가
 (c) 가 , 가
 , (a), (b) (c) 가
 , 가
 가

(57)

1.

2.

3.

4.

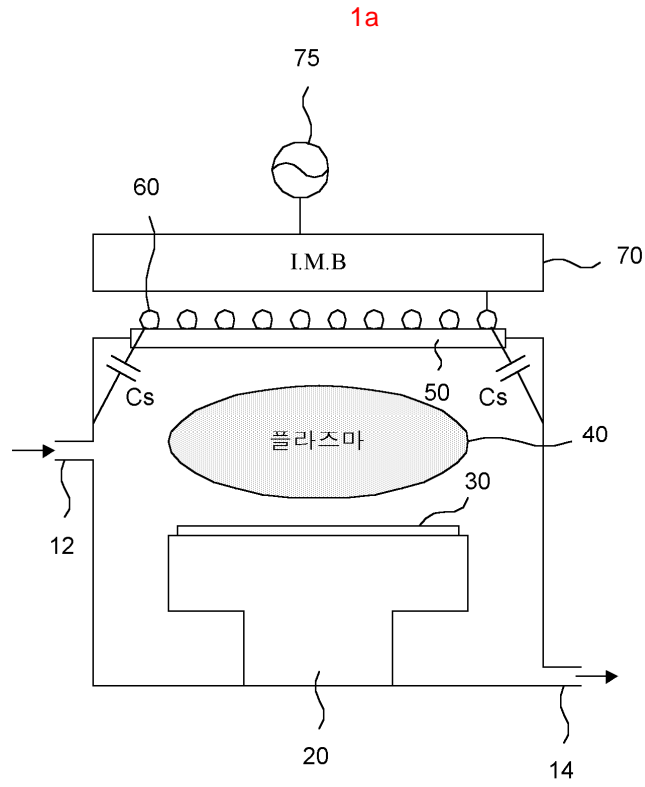
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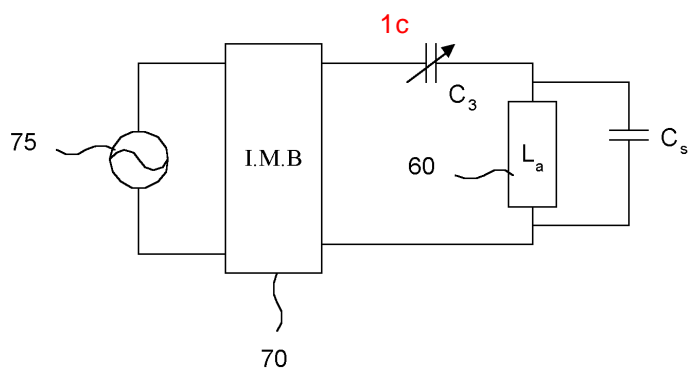
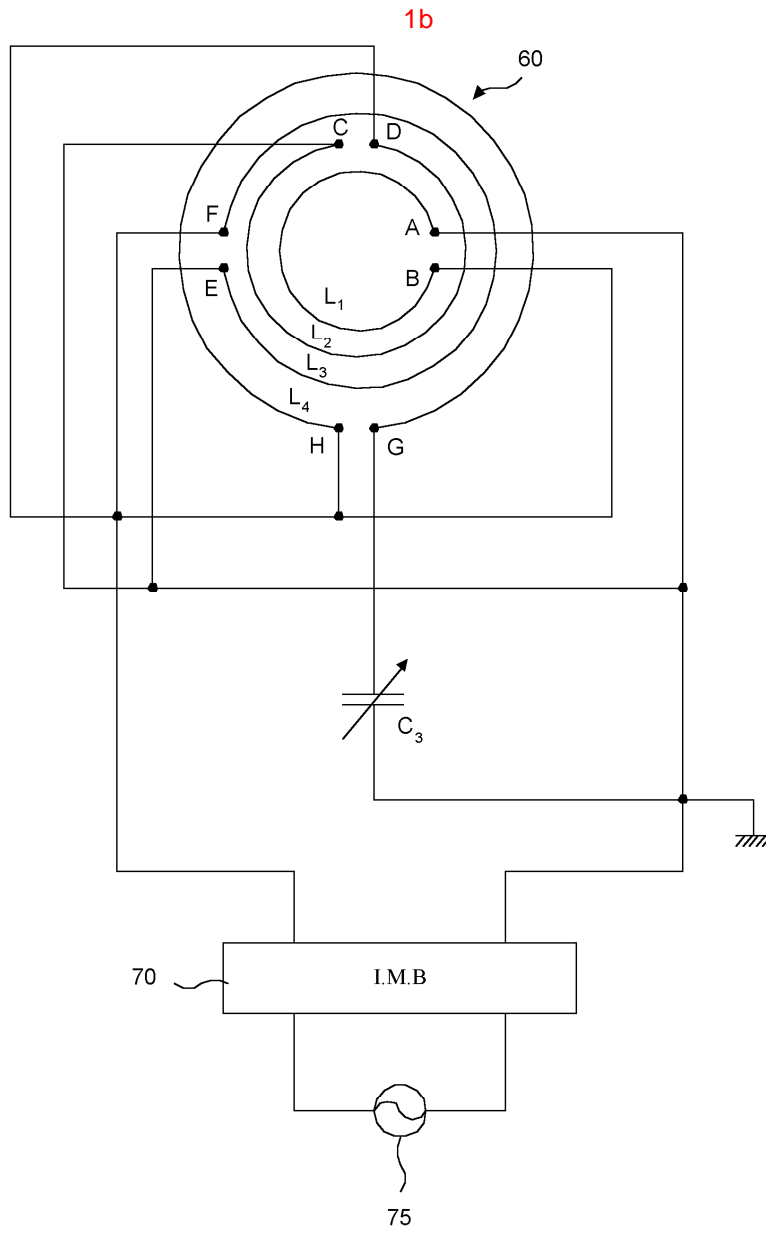
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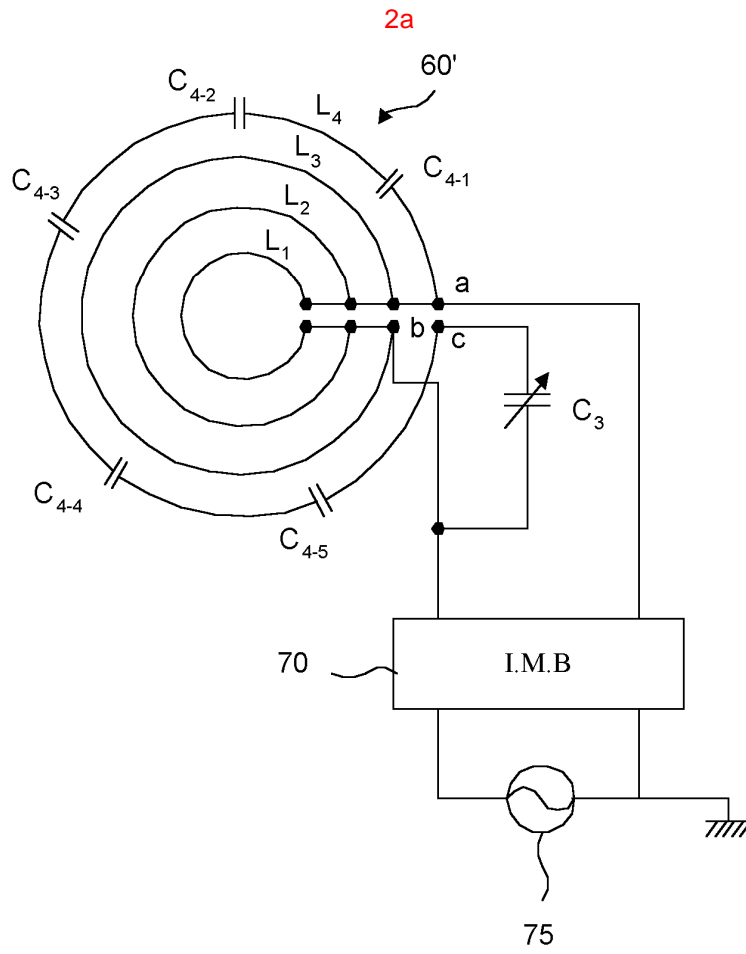
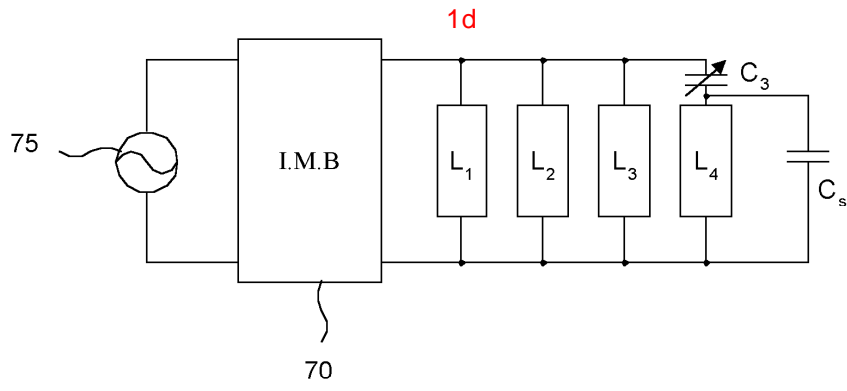
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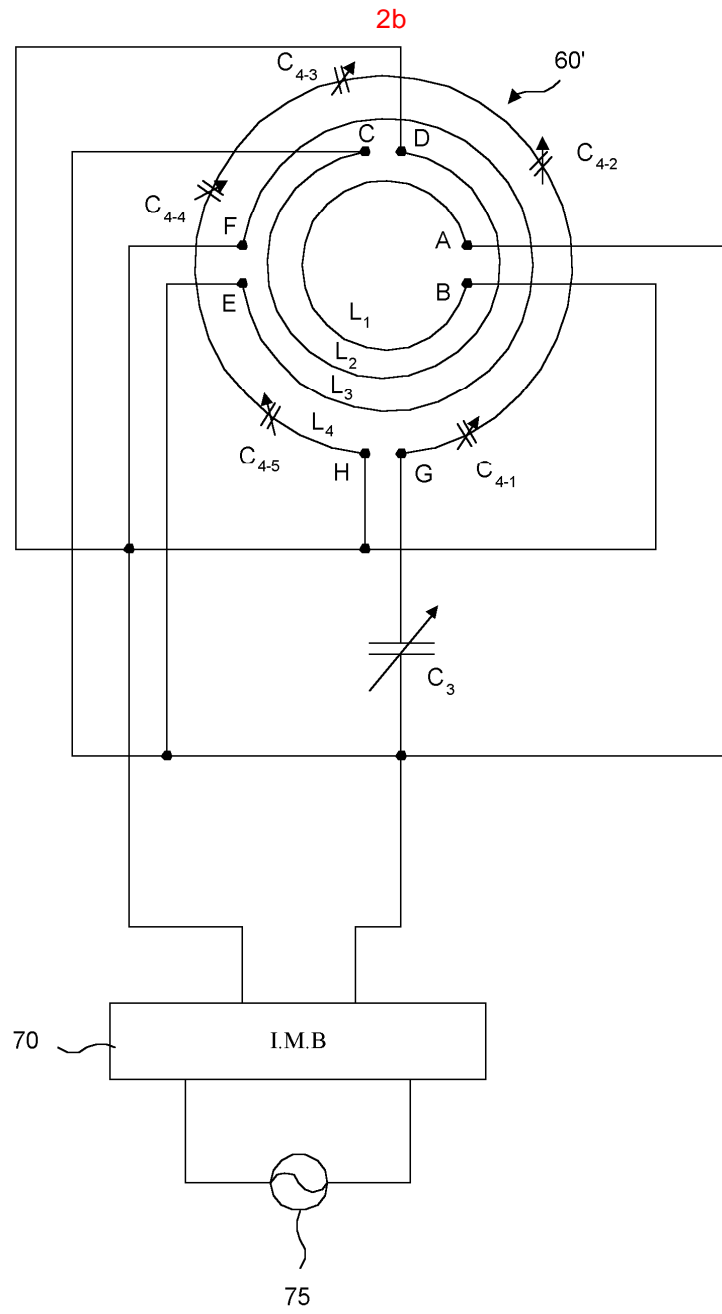
1 , 가 가 ;
 ; 가 가 ;
 ;
 1 , 가 가 ;
 1 , 가 ;
 1 , 가 ;
 1 , 20 300MHz 가 ;
 1 , 가 가, ;
 1 ; 1 ; 2
 1 ; 1 ; 2 ;
 2 , 2 2 ;

6 , 1 1 가
8. 가 가 1~5pF 가 .

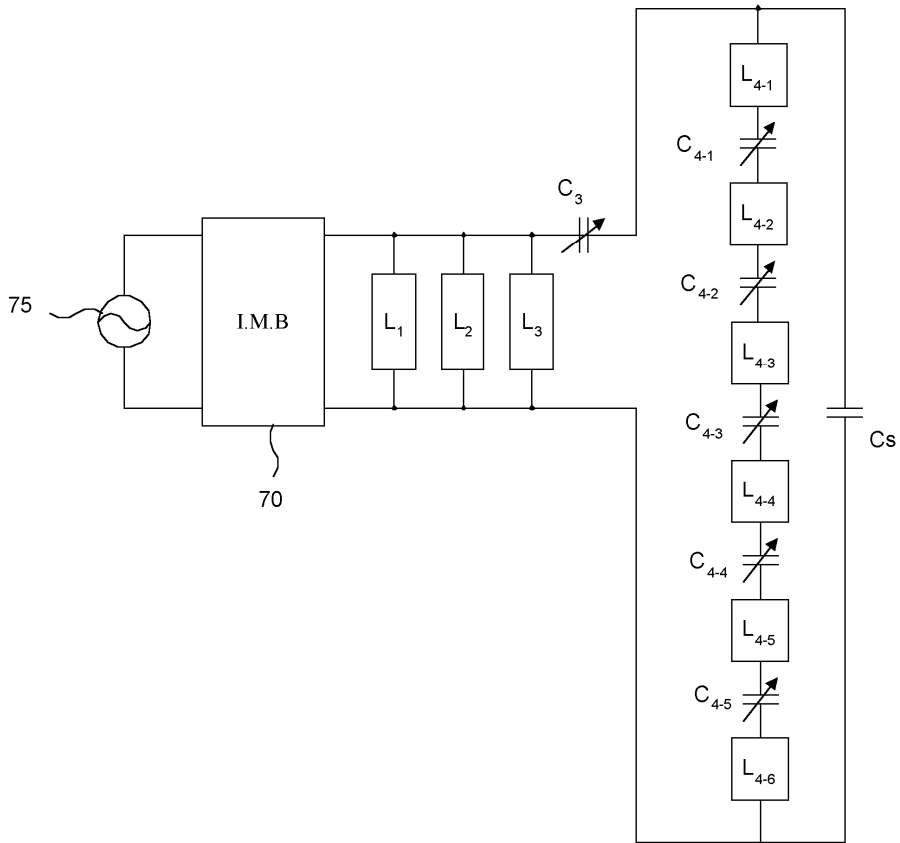




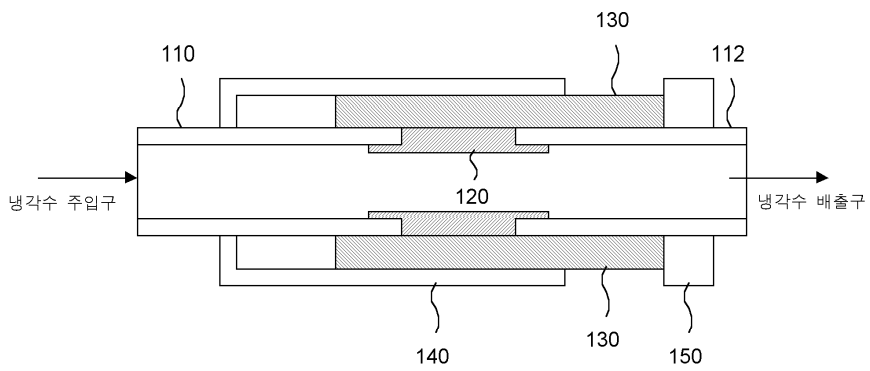




2c

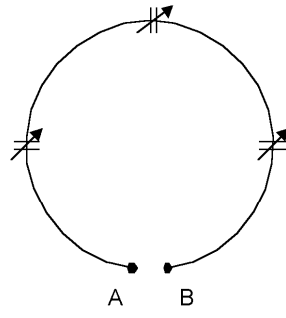


3

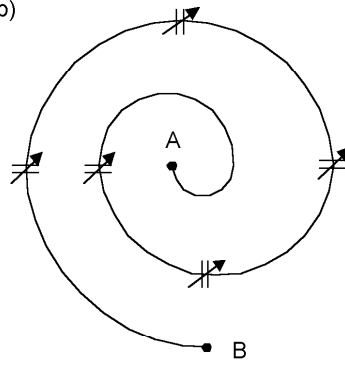


4

(a)



(b)



(c)

