Fig. 1 PRIOR ART

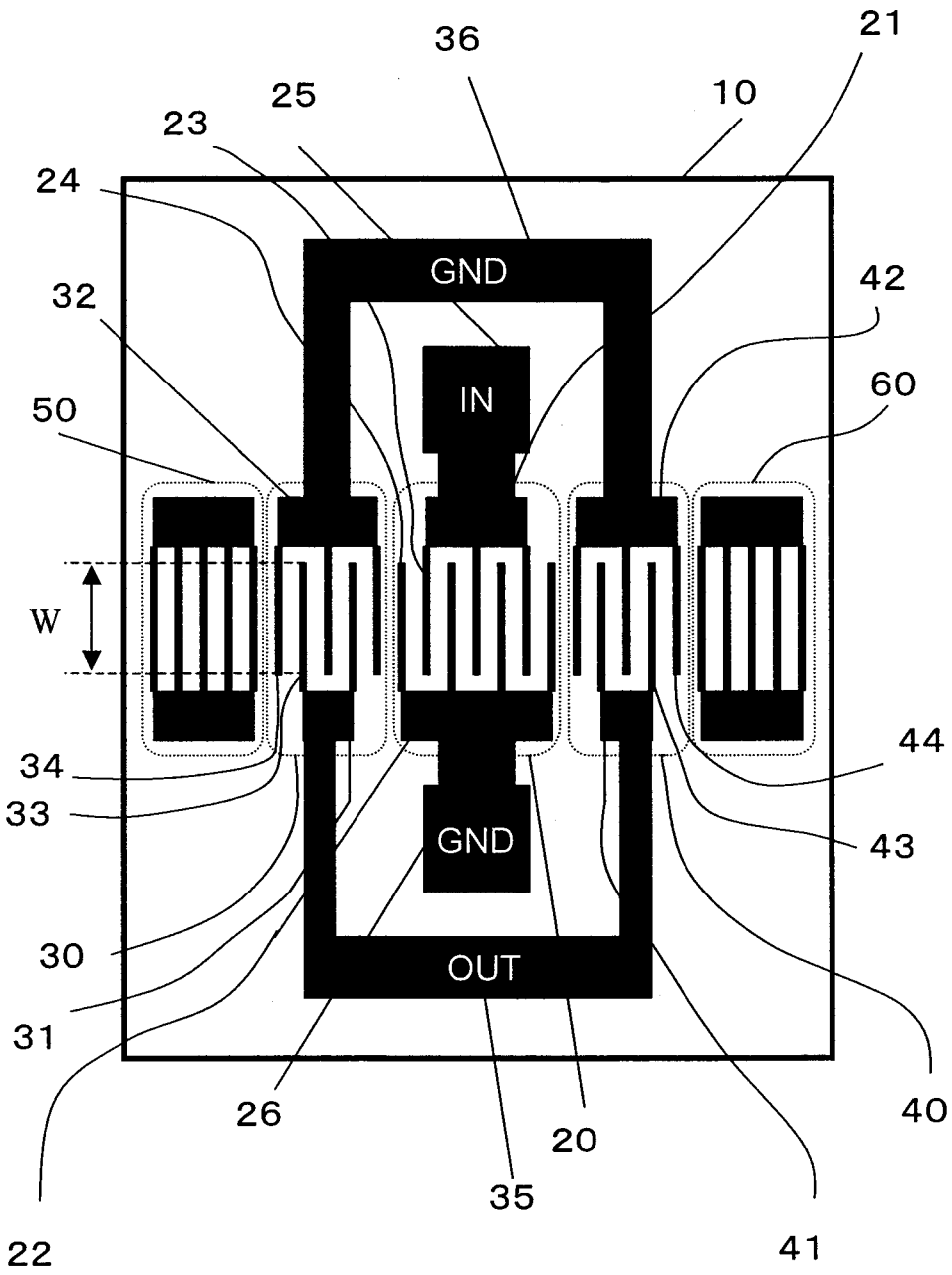


Fig. 2 PRIOR ART

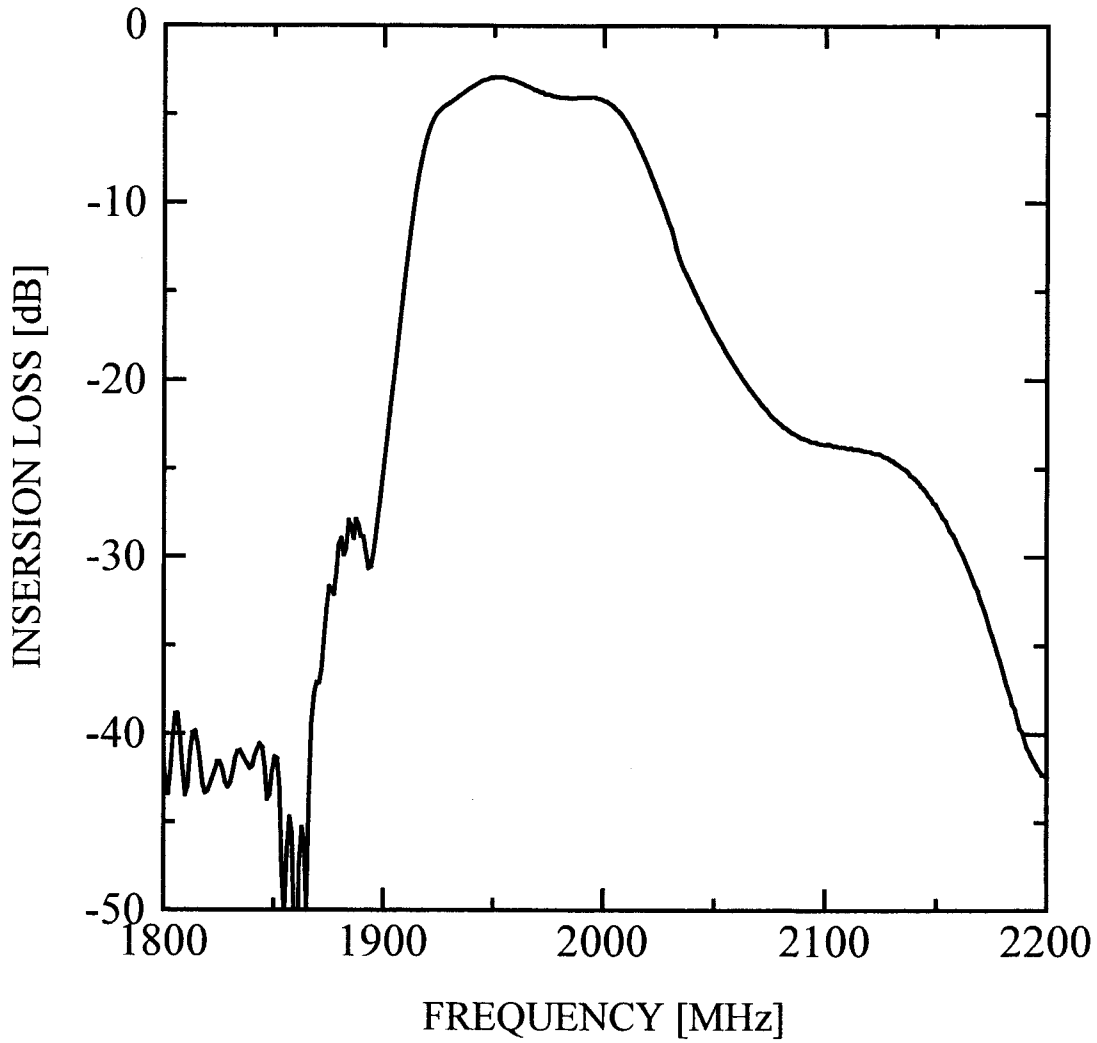


Fig. 3

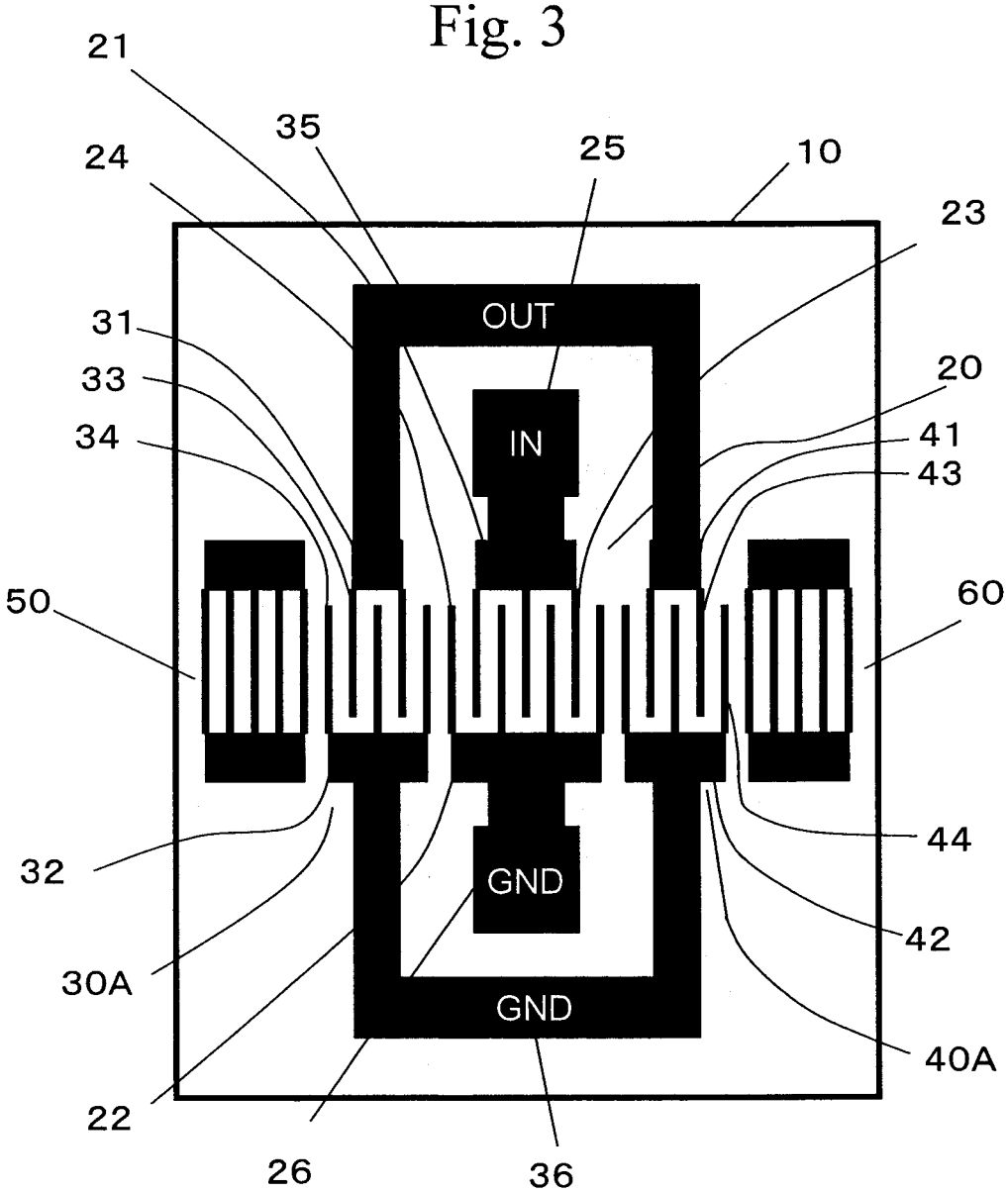

21
35
25
10
24
23
OUT
31
20
33
IN
41
34
43
50
60
44
32
GND
42
30A
GND
40A
22
26
36

Fig. 4

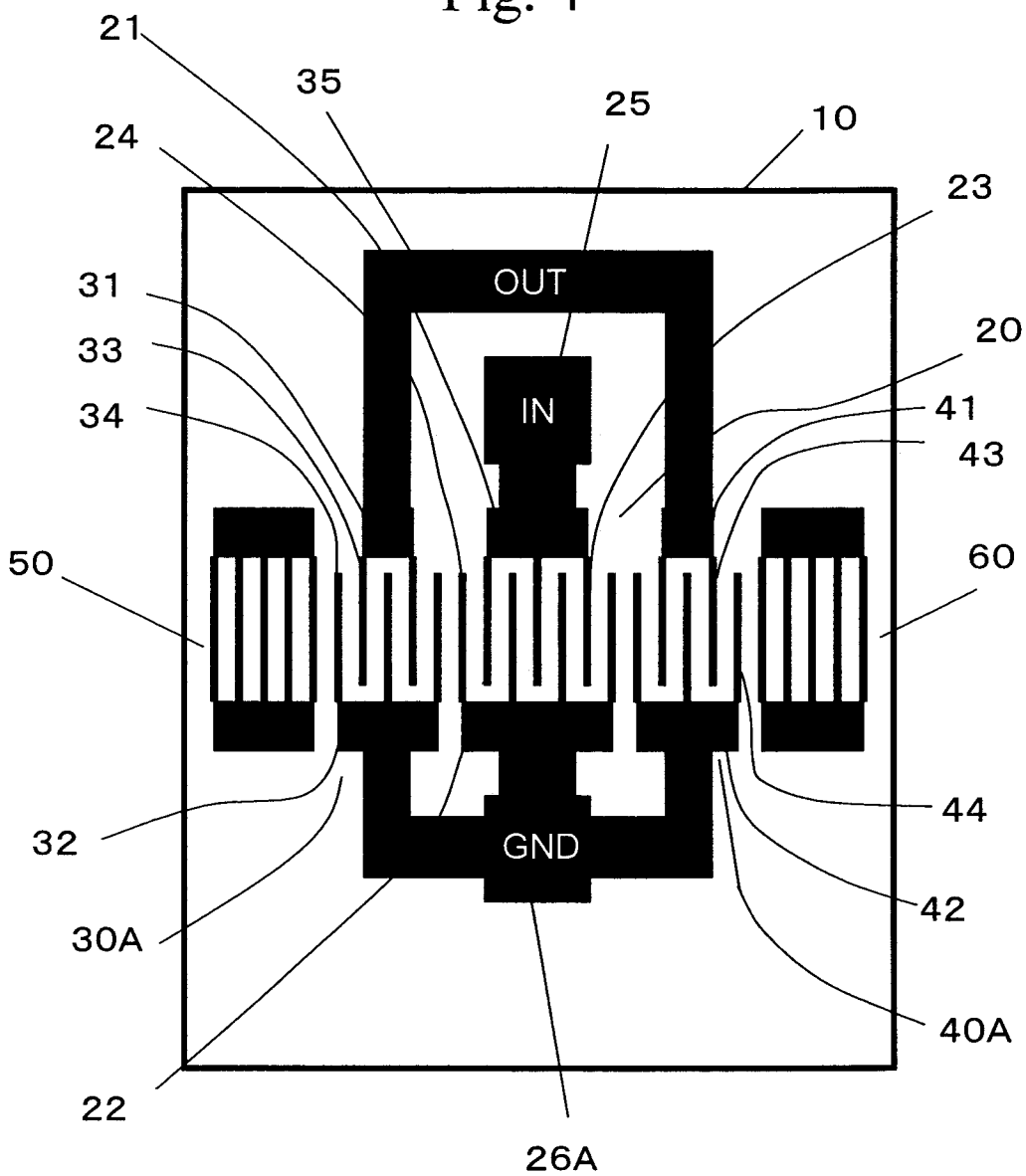

21
35
25
10
24
23
OUT
31
20
33
IN
41
34
43
50
60
44
32
GND
42
30A
40A
22
26A

Fig. 5

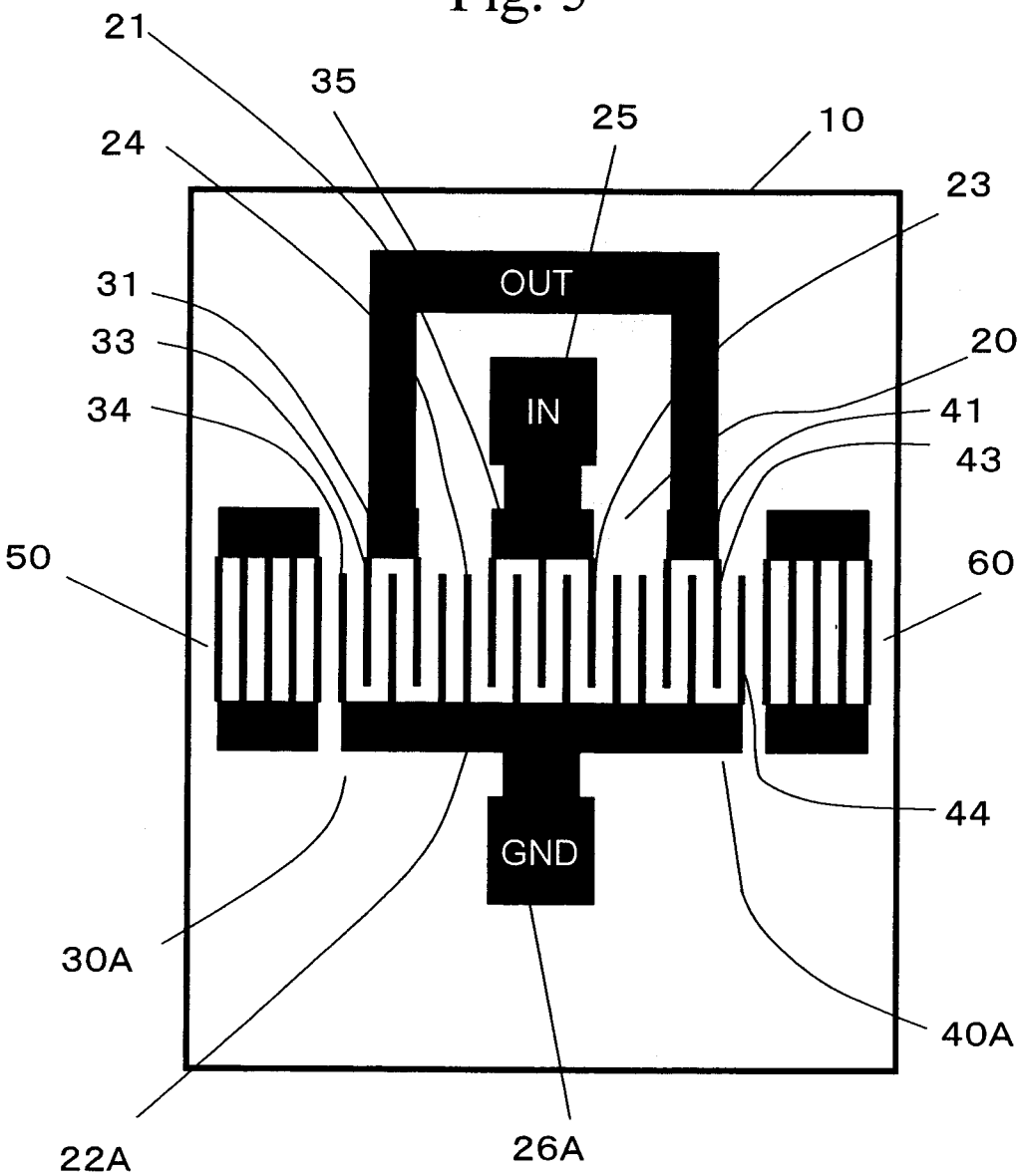

21
35
25
10
24
23
OUT
31
33
20
IN
34
41
43
50
60
44
GND
30A
40A
22A
26A

Fig. 6

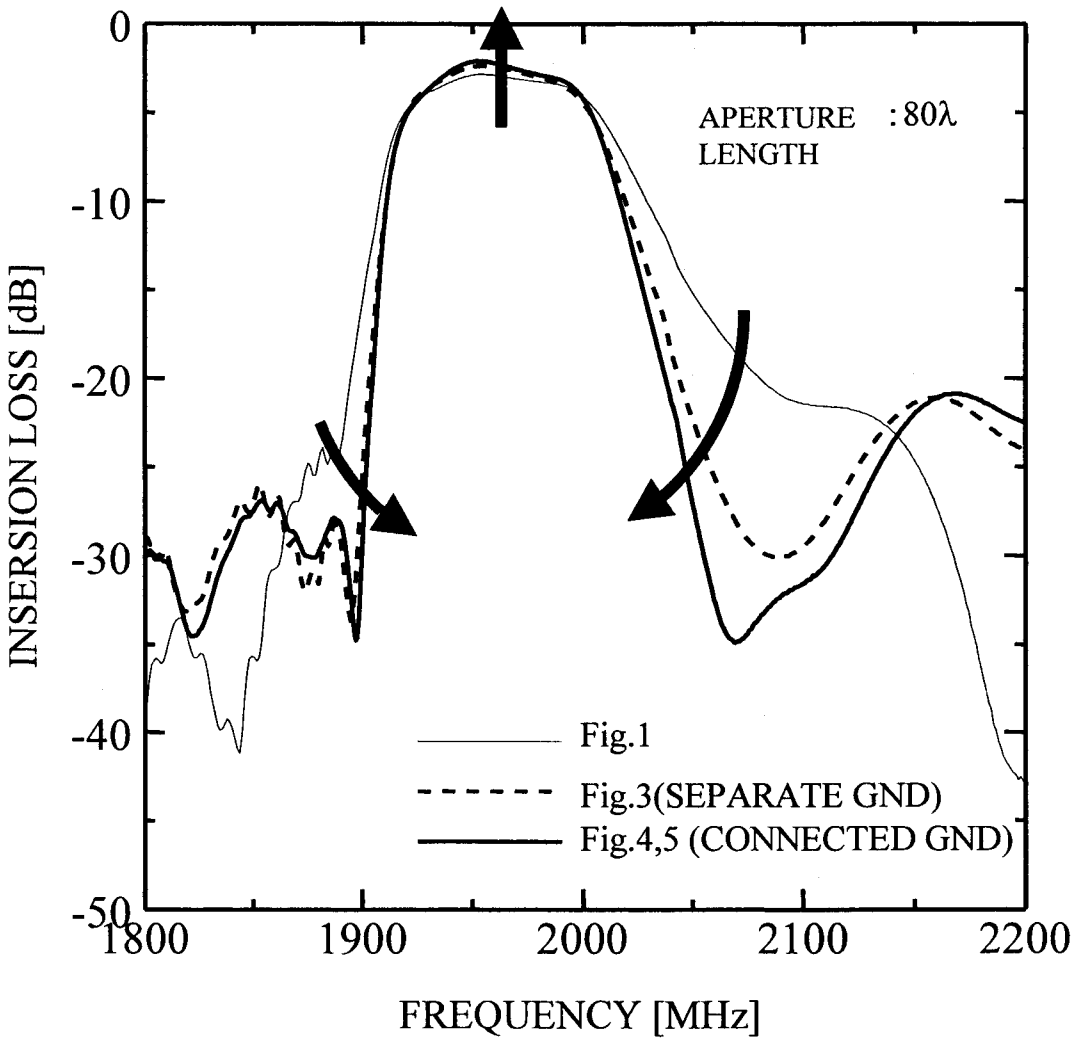

0
-10
-20
-30
-40
-50
INSERSION LOSS [dB]
1800
1900
2000
2100
2200
FREQUENCY [MHz]
APERTURE LENGTH : 80λ
Fig.1
Fig.3(SEPARATE GND)
Fig.4,5 (CONNECTED GND)

Fig. 7

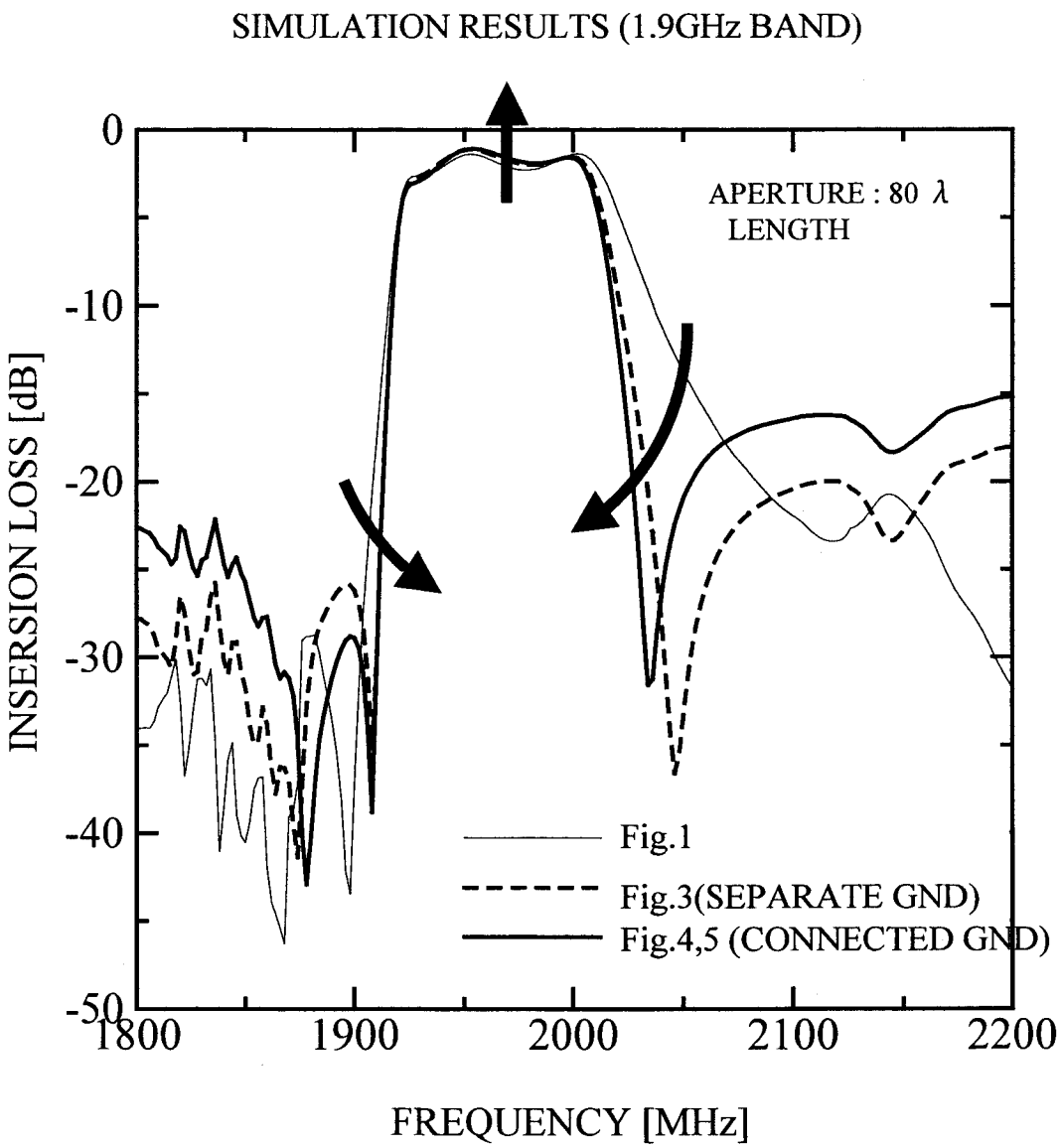

SIMULATION RESULTS (1.9GHz BAND)
APERTURE : 80 λ
LENGTH
INSERSION LOSS [dB]
0
-10
-20
-30
-40
-50
1800
1900
2000
2100
2200
FREQUENCY [MHz]
Fig.1
Fig.3(SEPARATE GND)
Fig.4,5 (CONNECTED GND)

Fig. 8

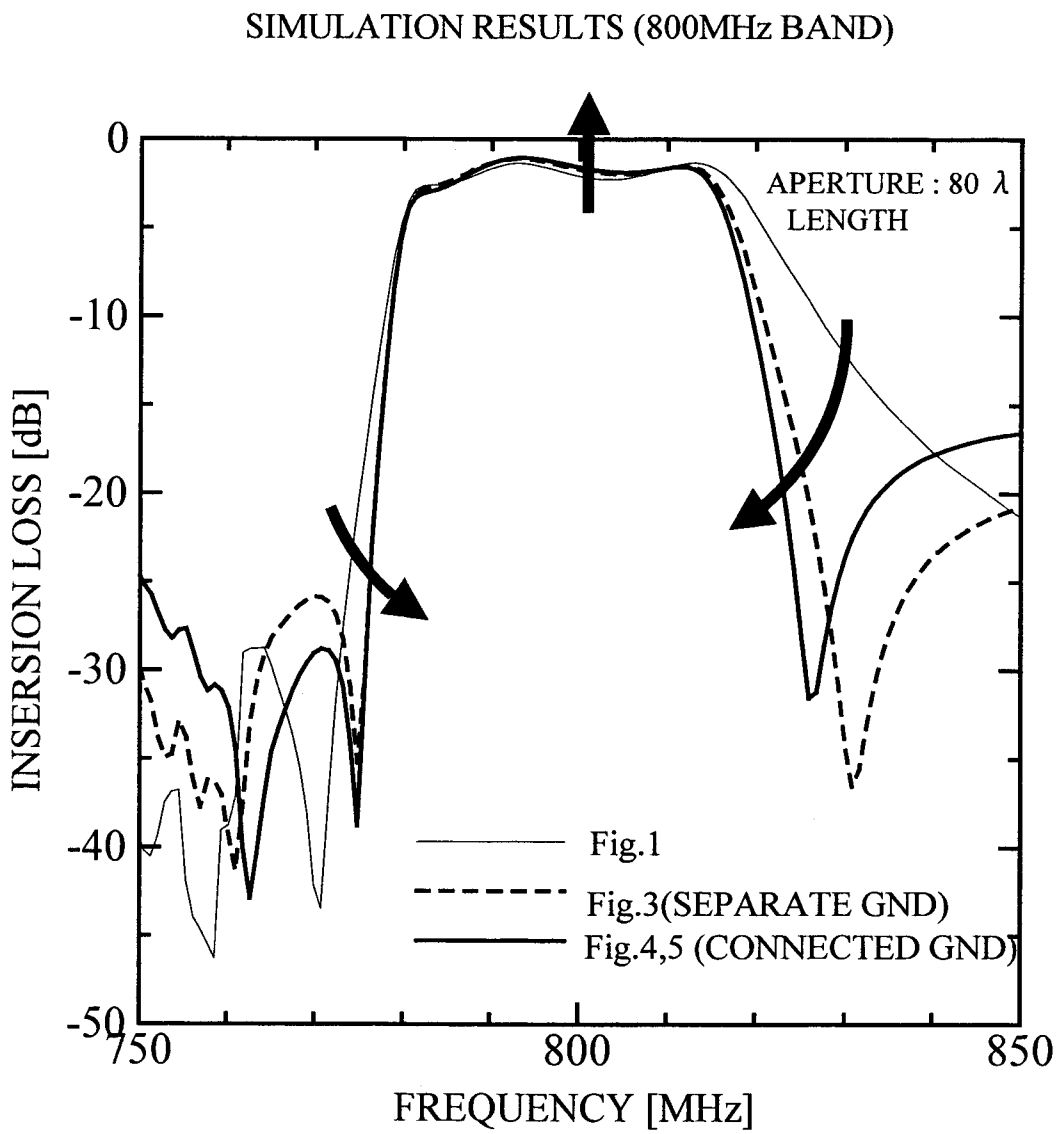

SIMULATION RESULTS (800MHz BAND)
APERTURE : 80 λ
LENGTH
0
-10
-20
-30
-40
-50
INSERSION LOSS [dB]
750
800
850
FREQUENCY [MHz]
Fig.1
Fig.3(SEPARATE GND)
Fig.4,5 (CONNECTED GND)

Fig. 9

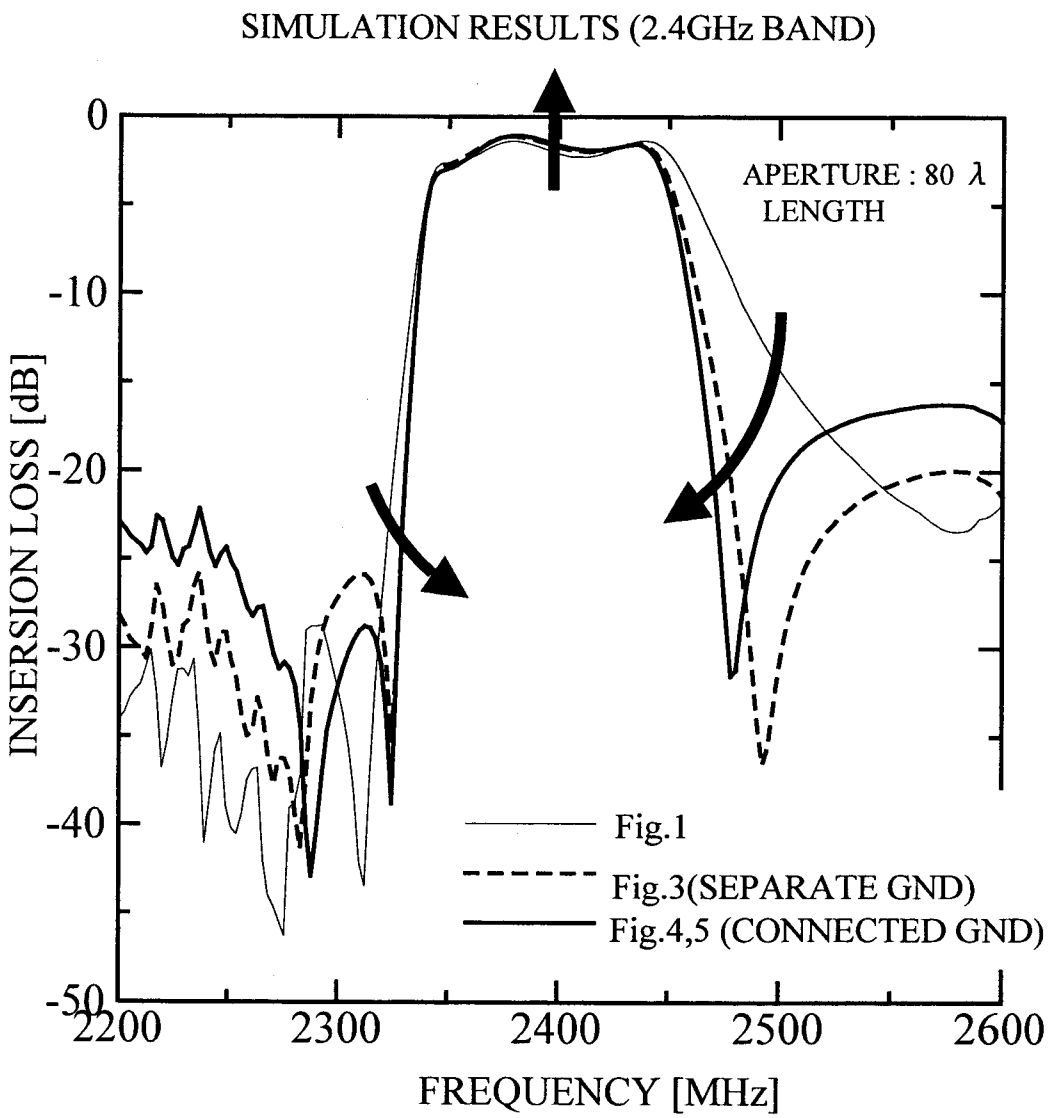

SIMULATION RESULTS (2.4GHz BAND)
APERTURE : 80 λ
LENGTH
INSERSION LOSS [dB]
0
-10
-20
-30
-40
-50
2200
2300
2400
2500
2600
FREQUENCY [MHz]
Fig.1
Fig.3(SEPARATE GND)
Fig.4,5 (CONNECTED GND)

Fig. 10

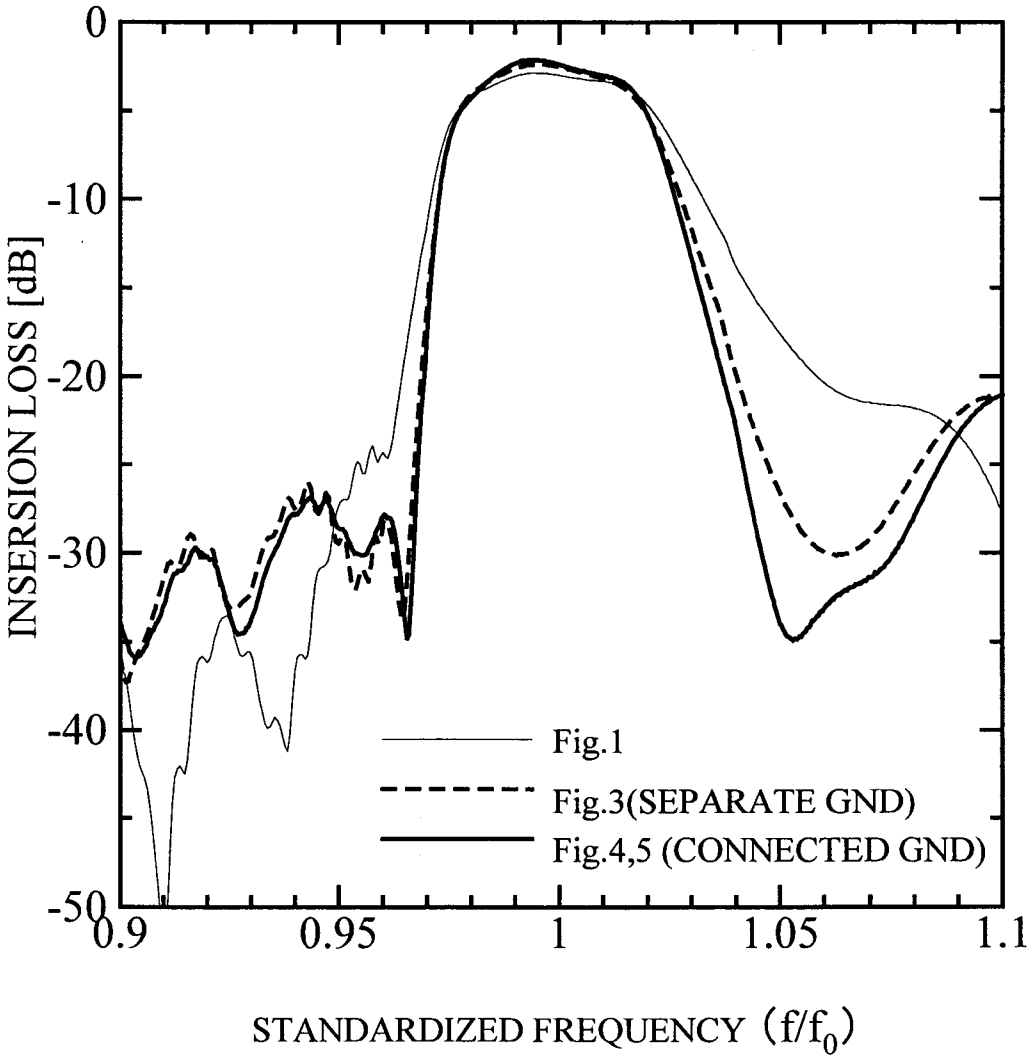

0
-10
-20
-30
-40
-50
INSERSION LOSS [dB]
0.9
0.95
1
1.05
1.1
Fig.1
Fig.3(SEPARATE GND)
Fig.4,5 (CONNECTED GND)
STANDARDIZED FREQUENCY (f/f0)

Fig. 11A

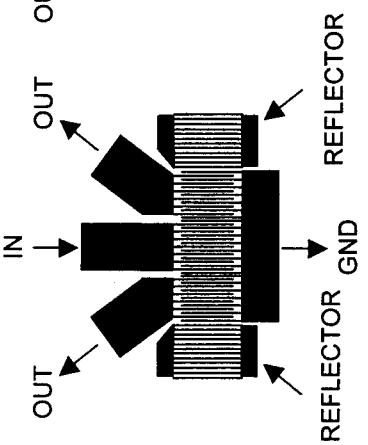


Fig. 11B

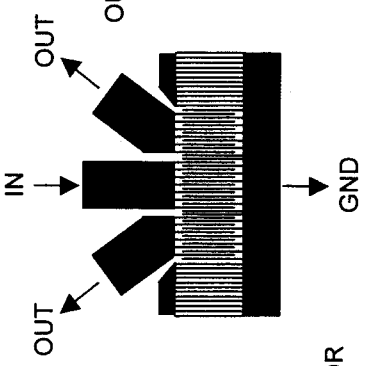


Fig. 11C

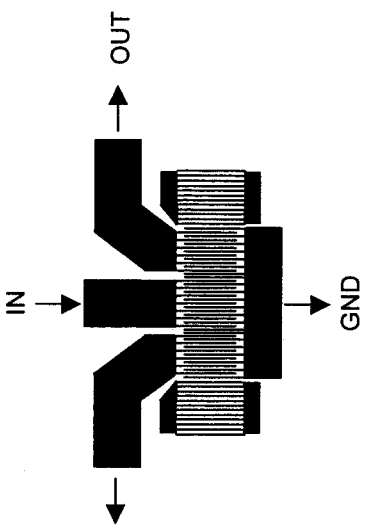


Fig. 11D



Fig. 11E

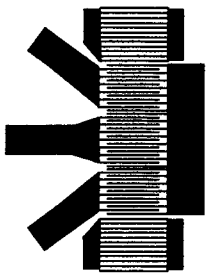


Fig. 11F

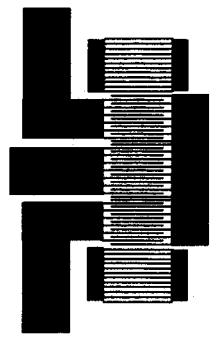


Fig. 11G

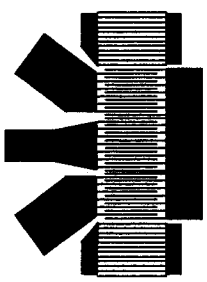


Fig. 11H



Fig. 11I

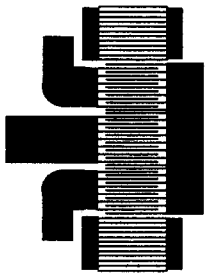


Fig. 11J

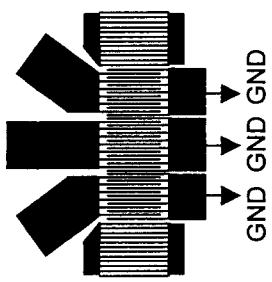


Fig. 11K

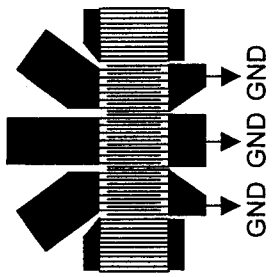


Fig. 11L

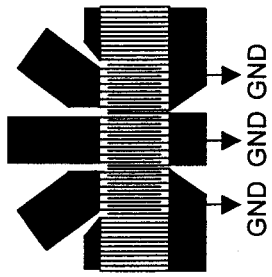


Fig. 12

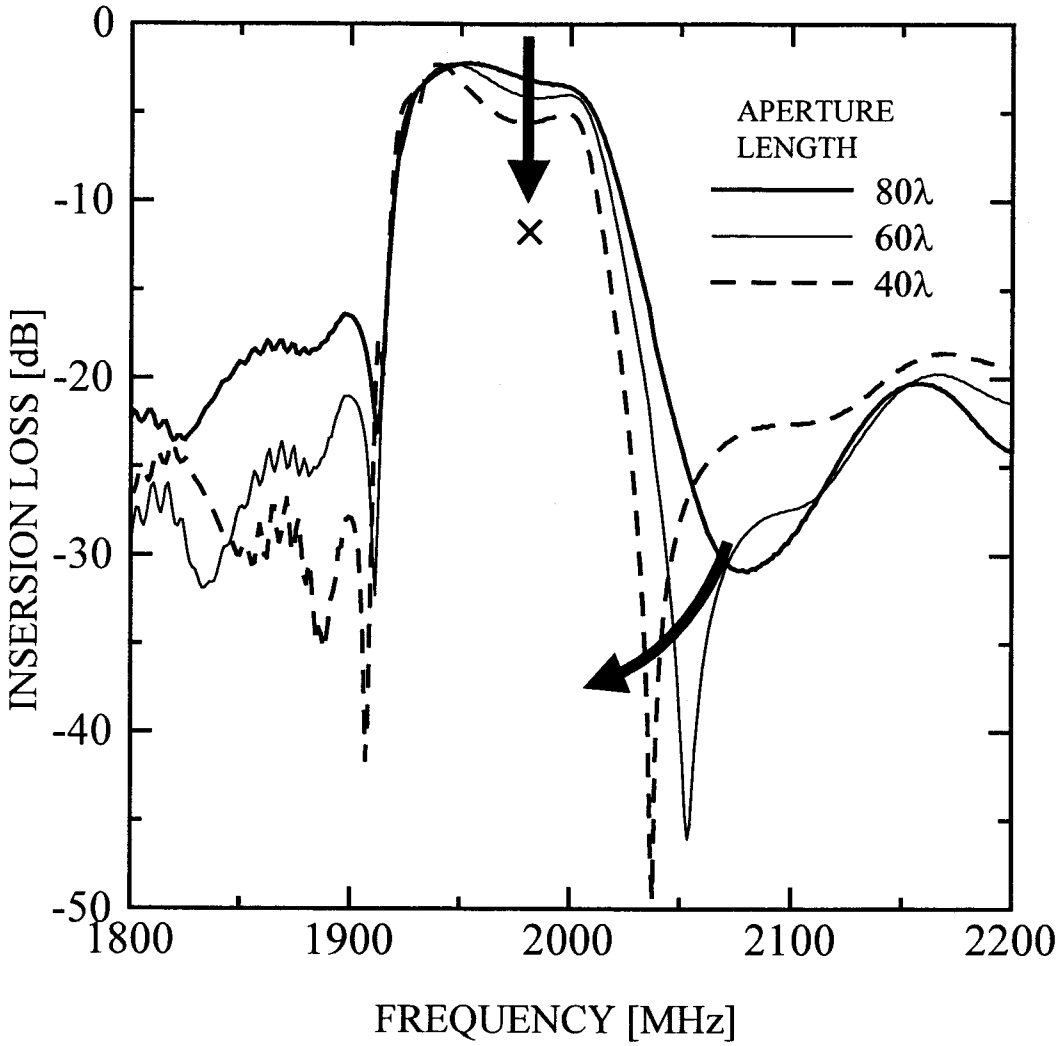
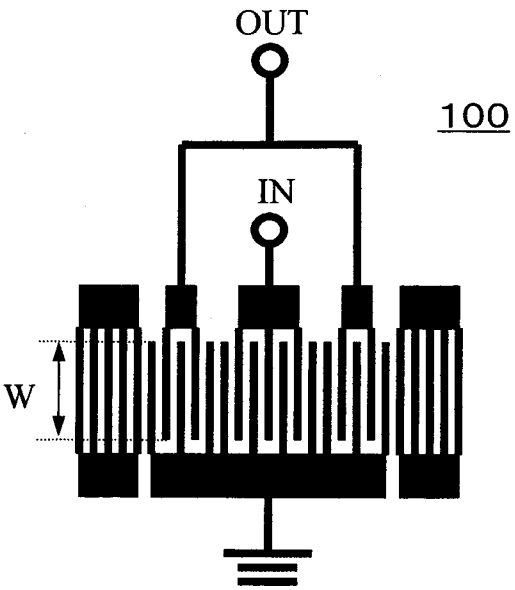
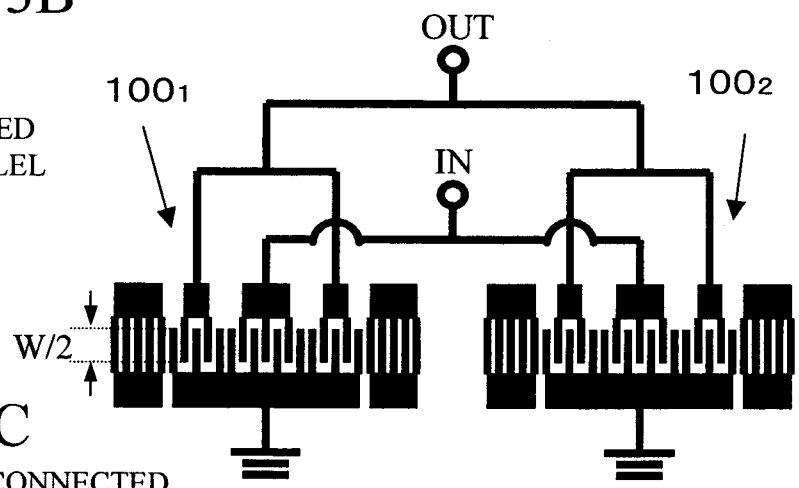

0
-10
-20
-30
-40
-50
INSERSION LOSS [dB]
1800
1900
2000
2100
2200
FREQUENCY [MHz]
APERTURE
LENGTH
80λ
60λ
40λ

Fig. 13A



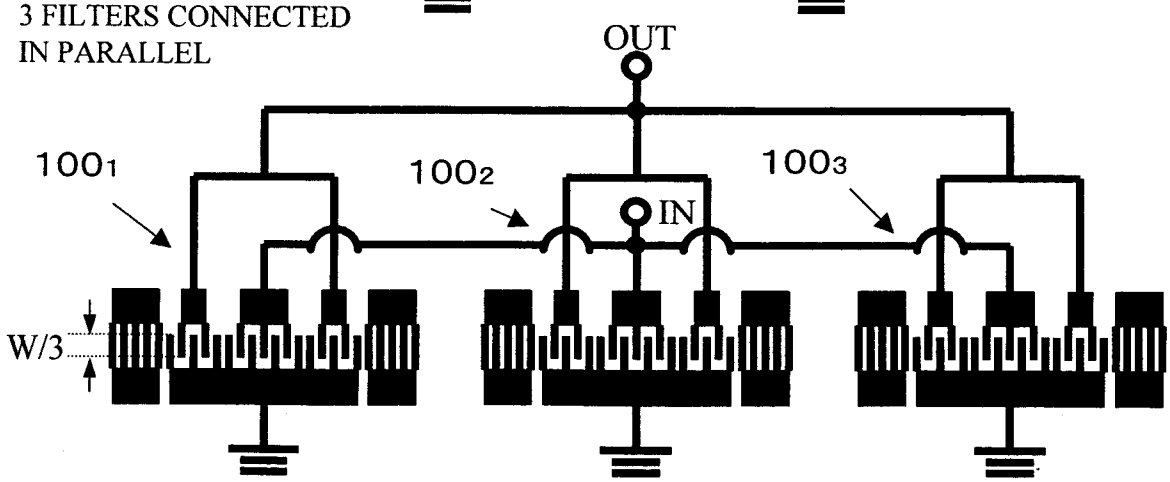
NO PARALLEL
CONNECTED

Fig. 13B



2 FILTERS
CONNECTED
IN PARALLEL

Fig. 13C



3 FILTERS CONNECTED
IN PARALLEL

Fig. 14

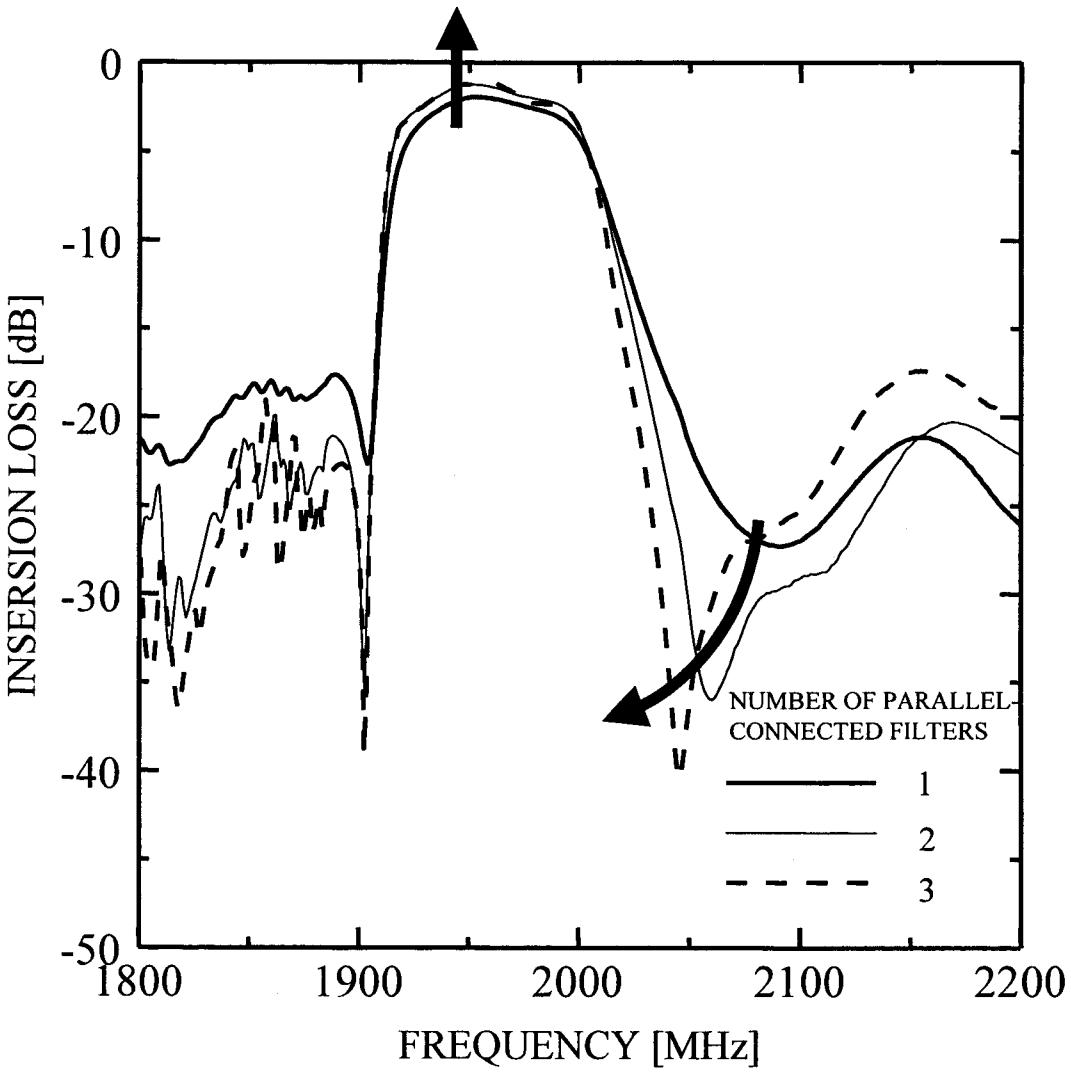

0
-10
-20
-30
-40
-50
INSERSION LOSS [dB]
1800
1900
2000
2100
2200
FREQUENCY [MHz]
NUMBER OF PARALLEL-CONNECTED FILTERS
1
2
3

Fig. 15

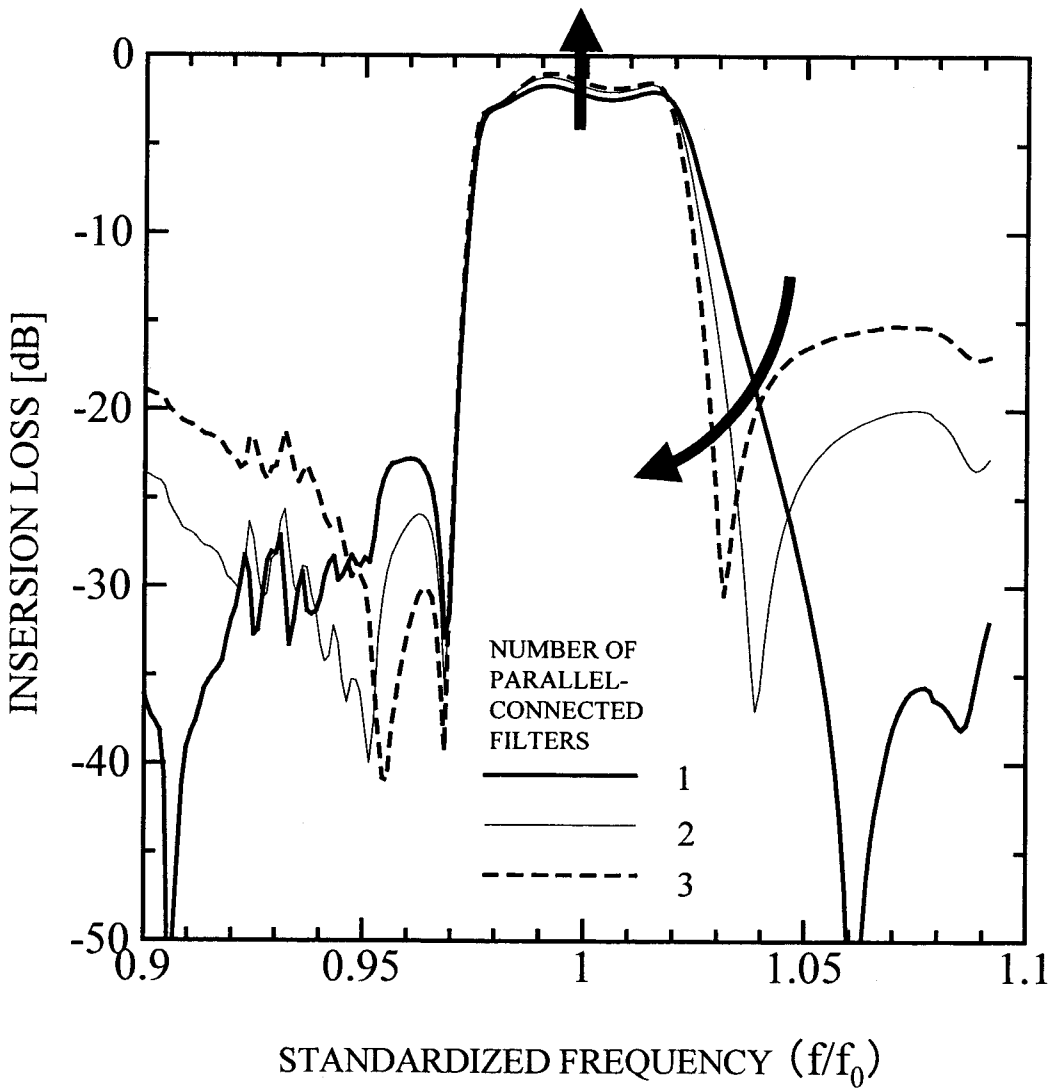

0
-10
-20
-30
-40
-50
INSERSION LOSS [dB]
0.9
0.95
1
1.05
1.1
STANDARDIZED FREQUENCY (f/f0)
NUMBER OF PARALLEL-CONNECTED FILTERS
1
2
3

Fig. 16

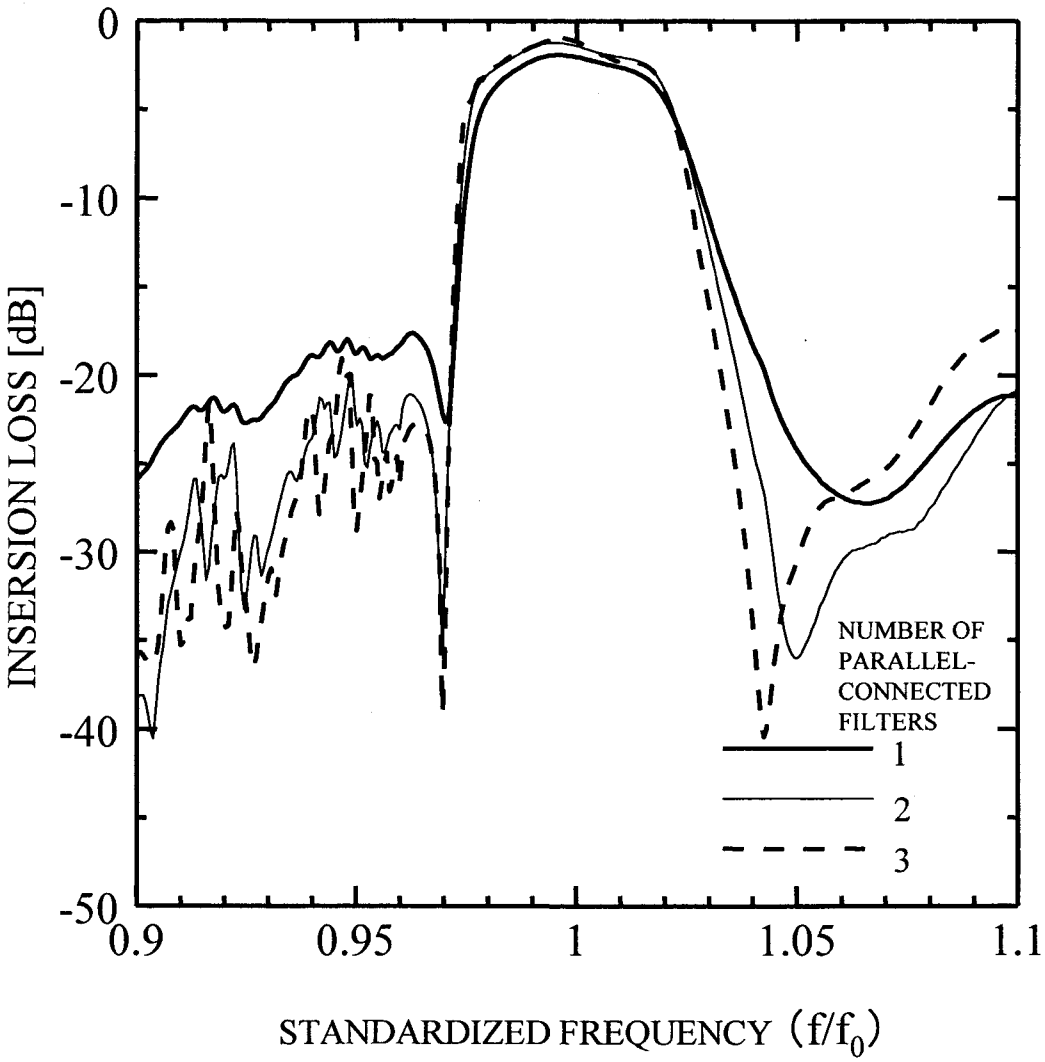

0
-10
-20
-30
-40
-50
INSERSION LOSS [dB]
0.9
0.95
1
1.05
1.1
STANDARDIZED FREQUENCY (f/f0)
NUMBER OF PARALLEL-CONNECTED FILTERS
1
2
3

Fig. 17

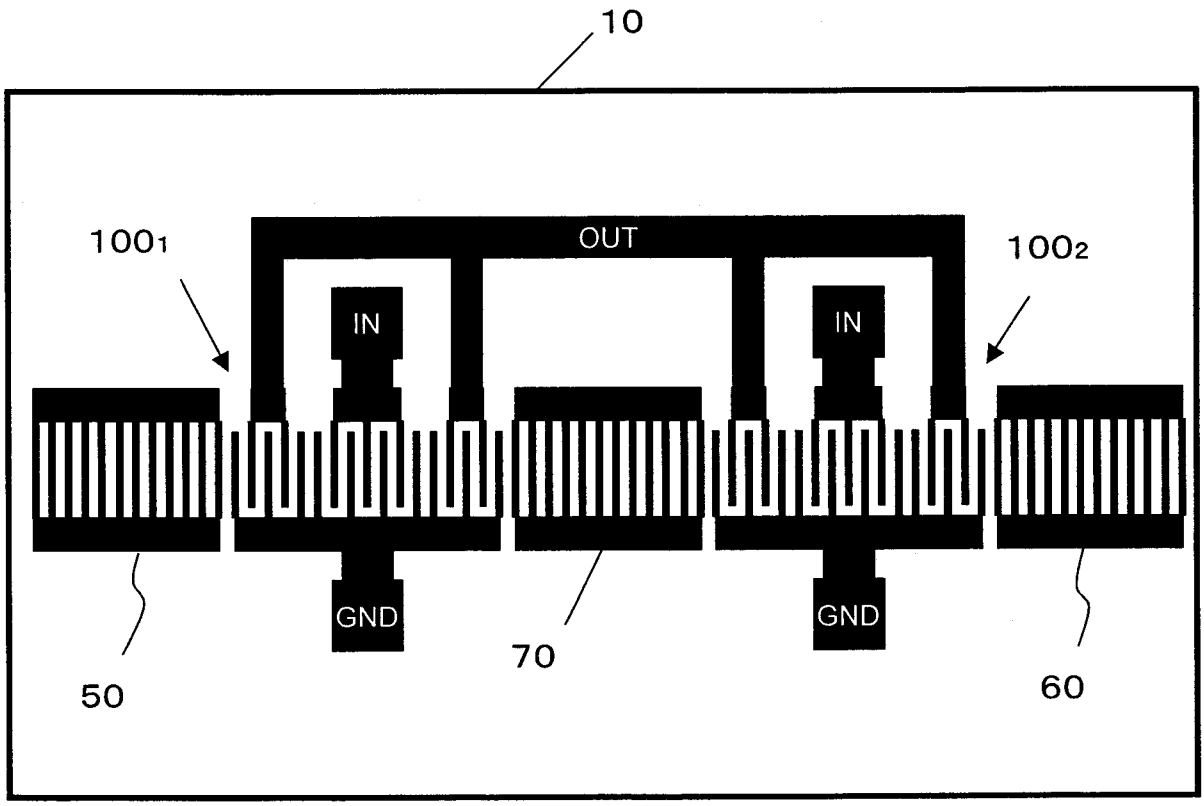


Fig. 18

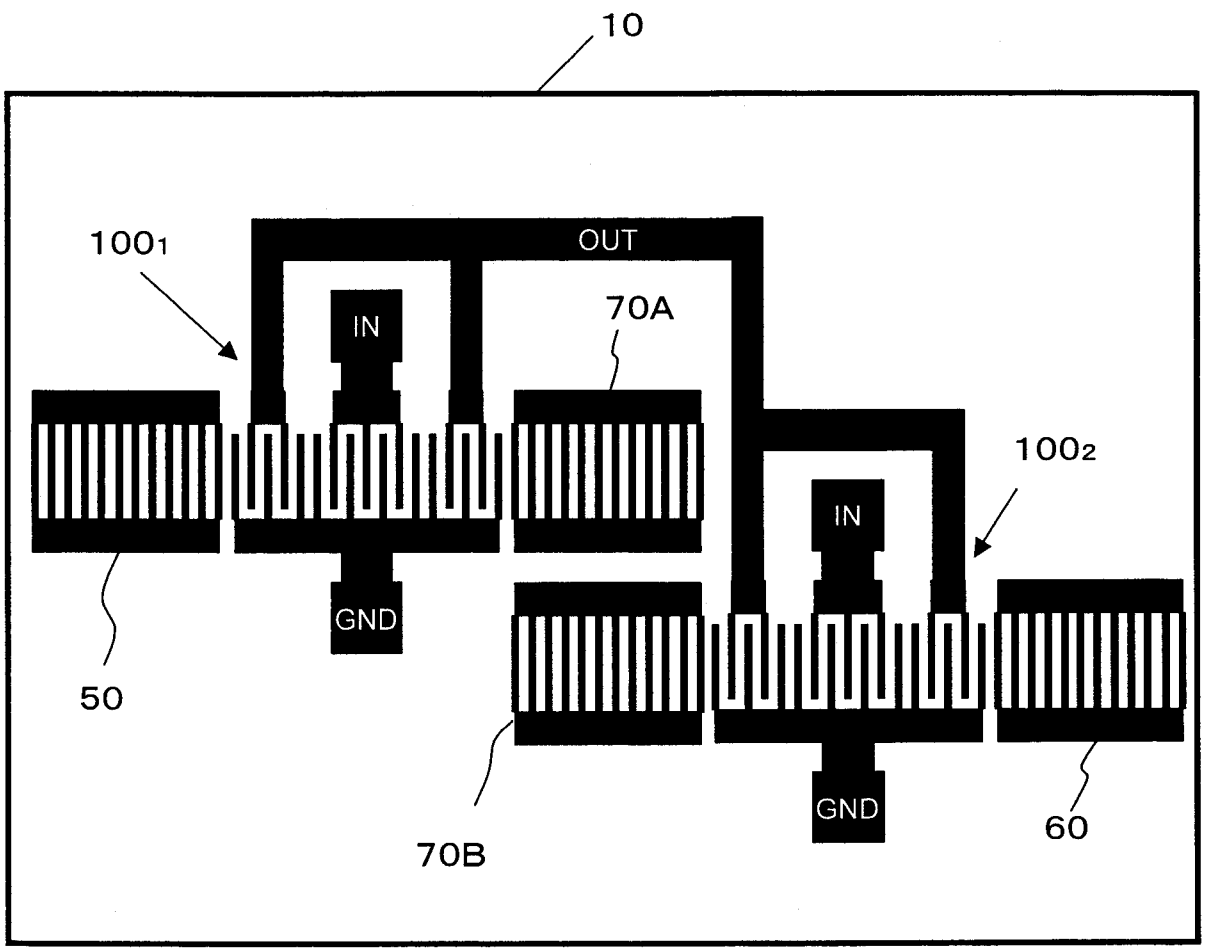


Fig. 19

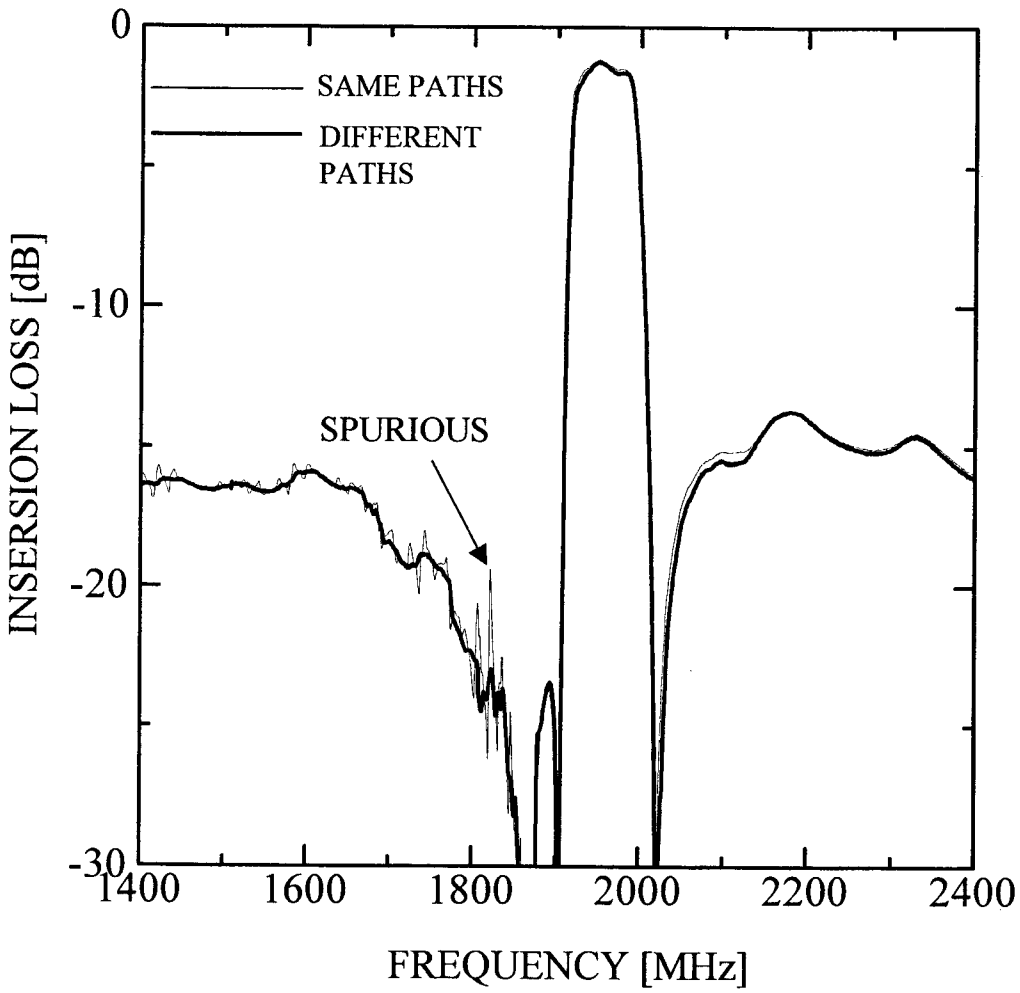

0
-10
-20
-30
INSERSION LOSS [dB]
SAME PATHS
DIFFERENT PATHS
SPURIOUS
1400
1600
1800
2000
2200
2400
FREQUENCY [MHz]

Fig. 20

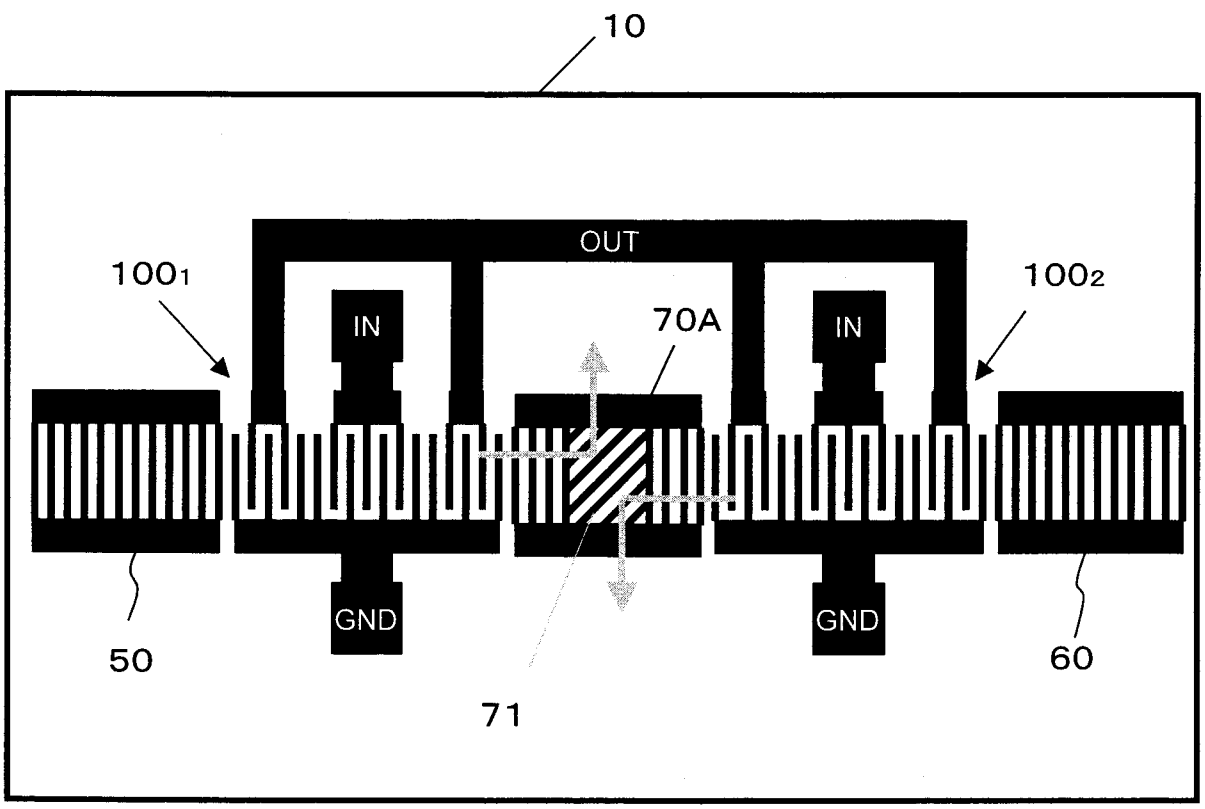


Fig. 21

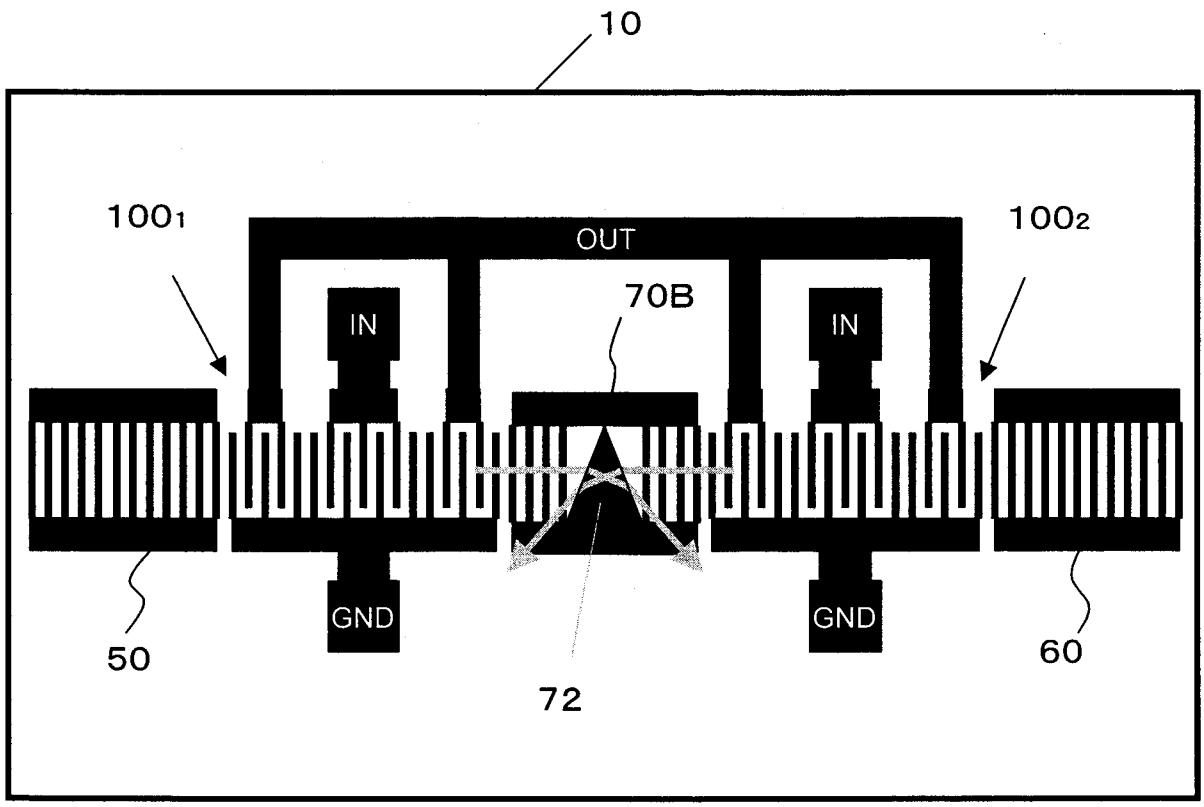


Fig. 22

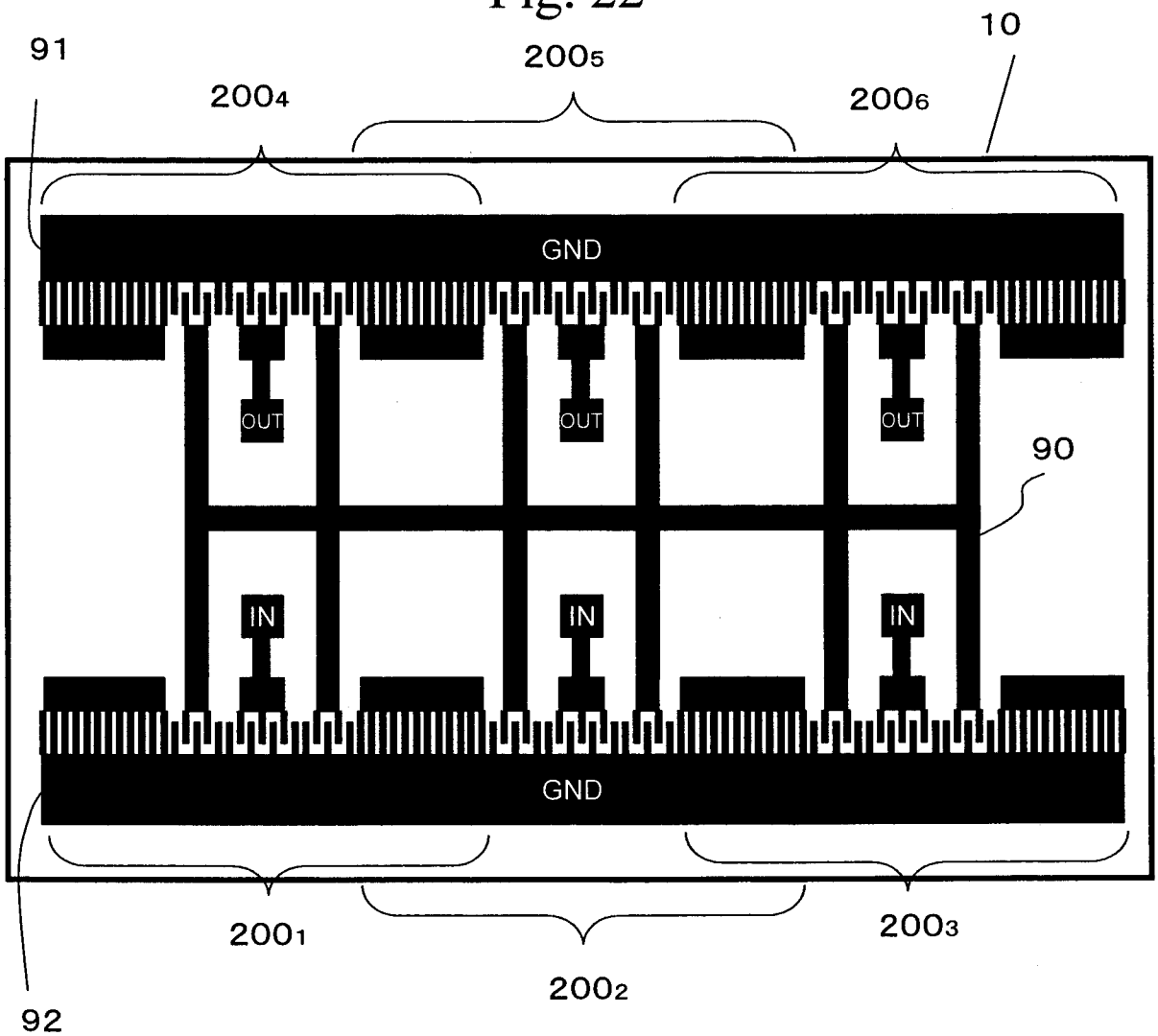

91
10
200_5
200_4
200_6
GND
OUT
OUT
OUT
90
IN
IN
IN
GND
200_1
200_3
200_2
92

Fig. 23

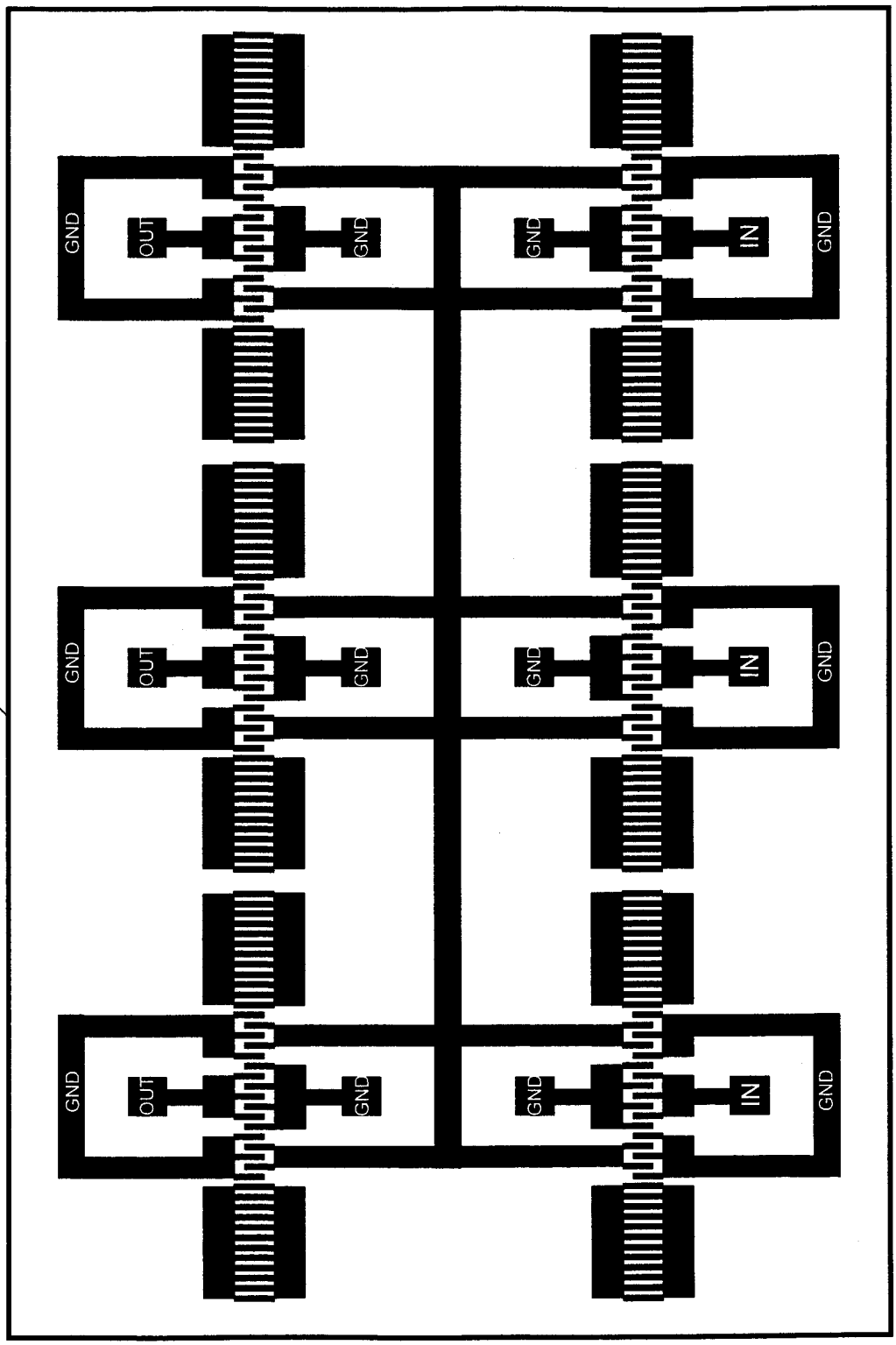

10
GND
OUT
GND
GND
IN
GND
GND
OUT
GND
GND
IN
GND
GND
OUT
GND
GND
IN
GND

Fig. 24

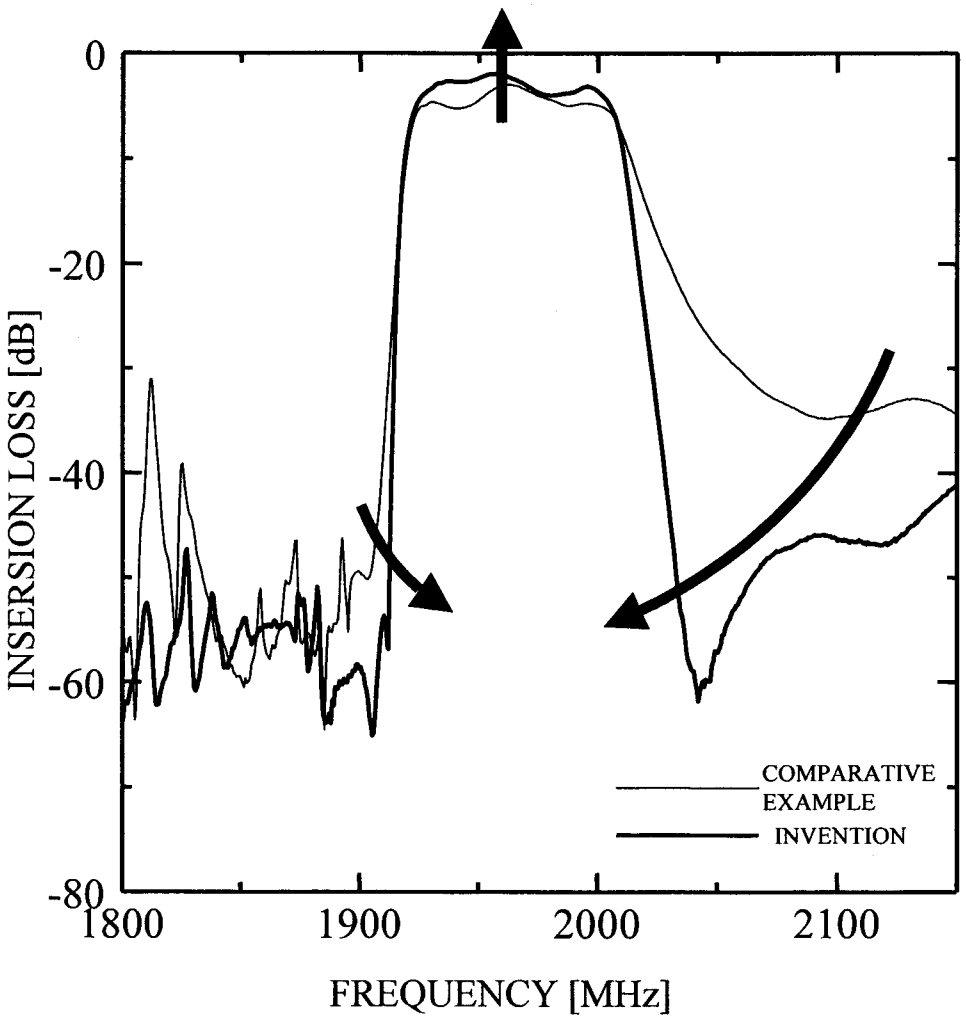

0
-20
-40
-60
-80
INSERSION LOSS [dB]
1800
1900
2000
2100
FREQUENCY [MHz]
COMPARATIVE EXAMPLE
INVENTION

Fig. 25

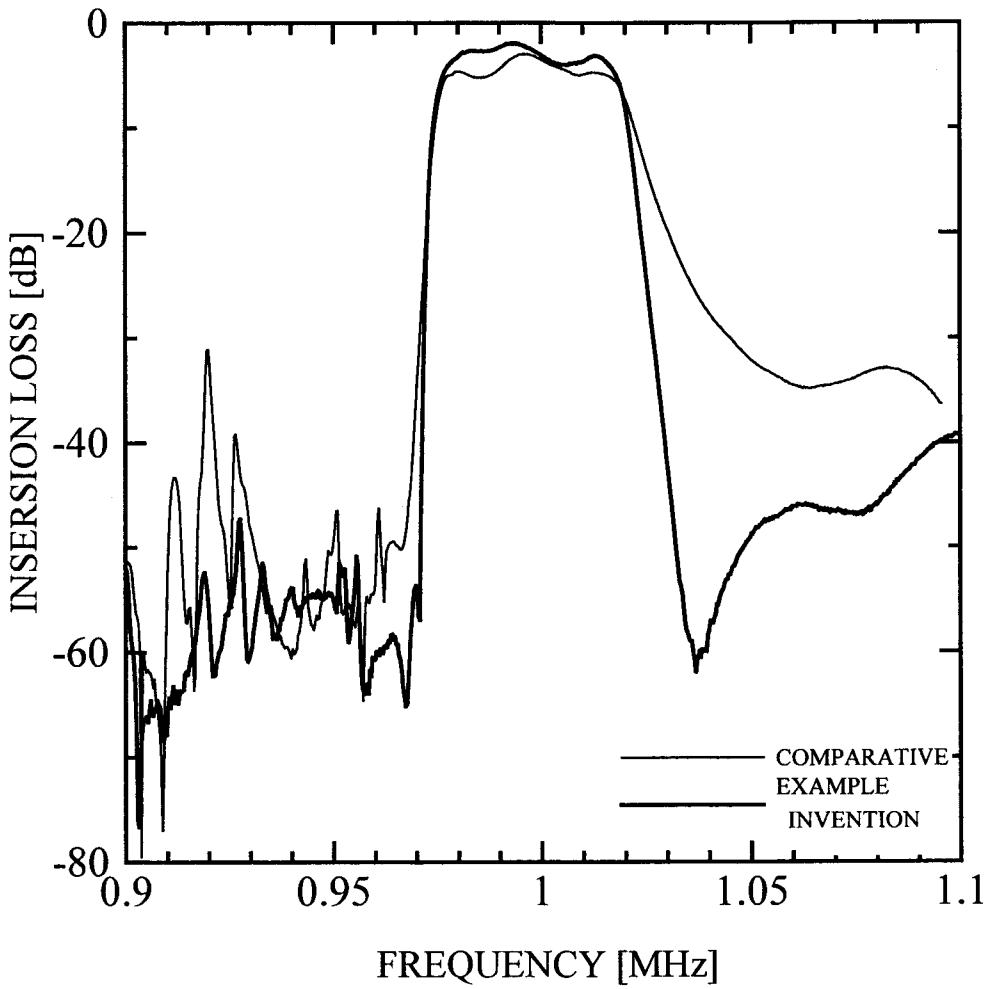

0
-20
-40
-60
-80
INSERSION LOSS [dB]
0.9
0.95
1
1.05
1.1
FREQUENCY [MHz]
COMPARATIVE EXAMPLE
INVENTION

Fig. 26

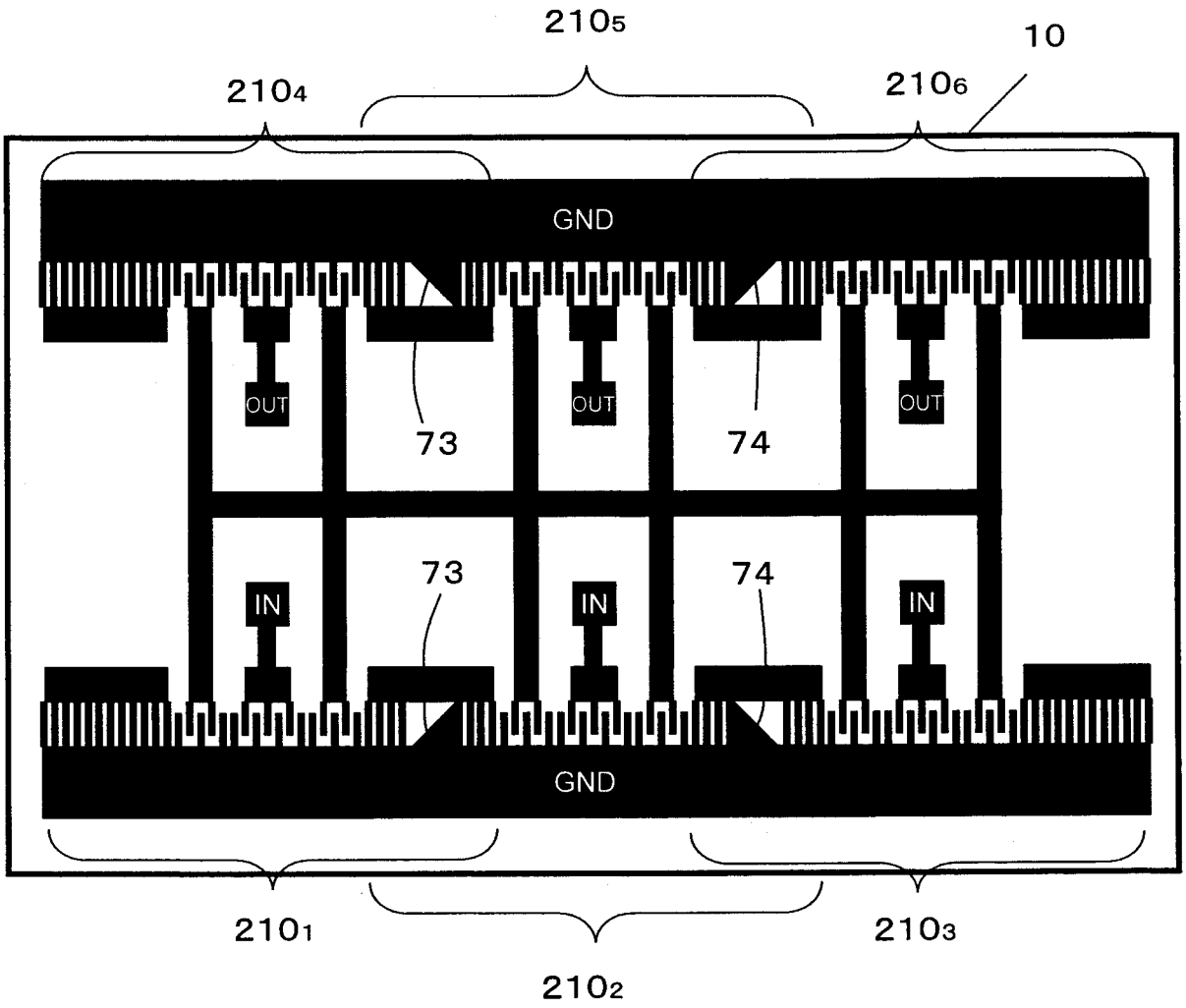

2105
10
2104
2106
GND
OUT
OUT
OUT
73
74
73
74
IN
IN
IN
GND
2101
2103
2102

Fig. 27

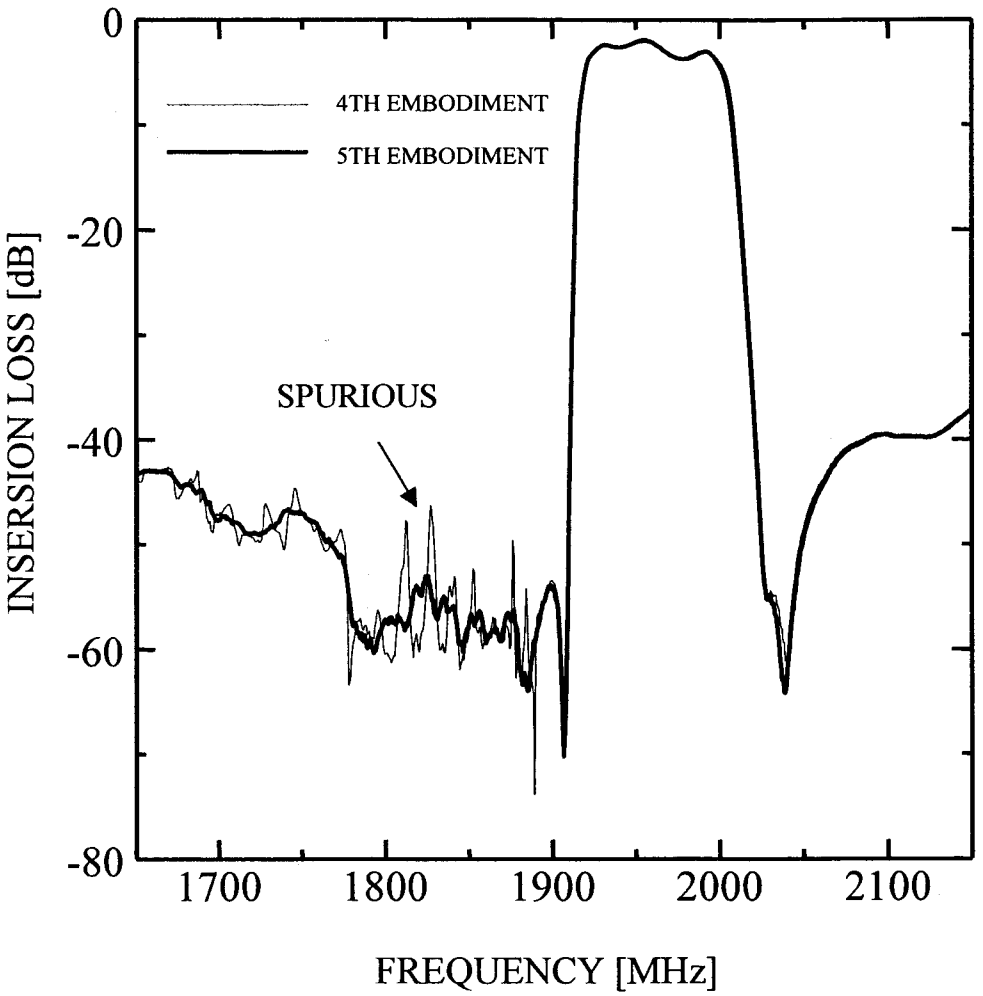

0
-20
-40
-60
-80
INSERSION LOSS [dB]
4TH EMBODIMENT
5TH EMBODIMENT
SPURIOUS
1700
1800
1900
2000
2100
FREQUENCY [MHz]

Fig. 28

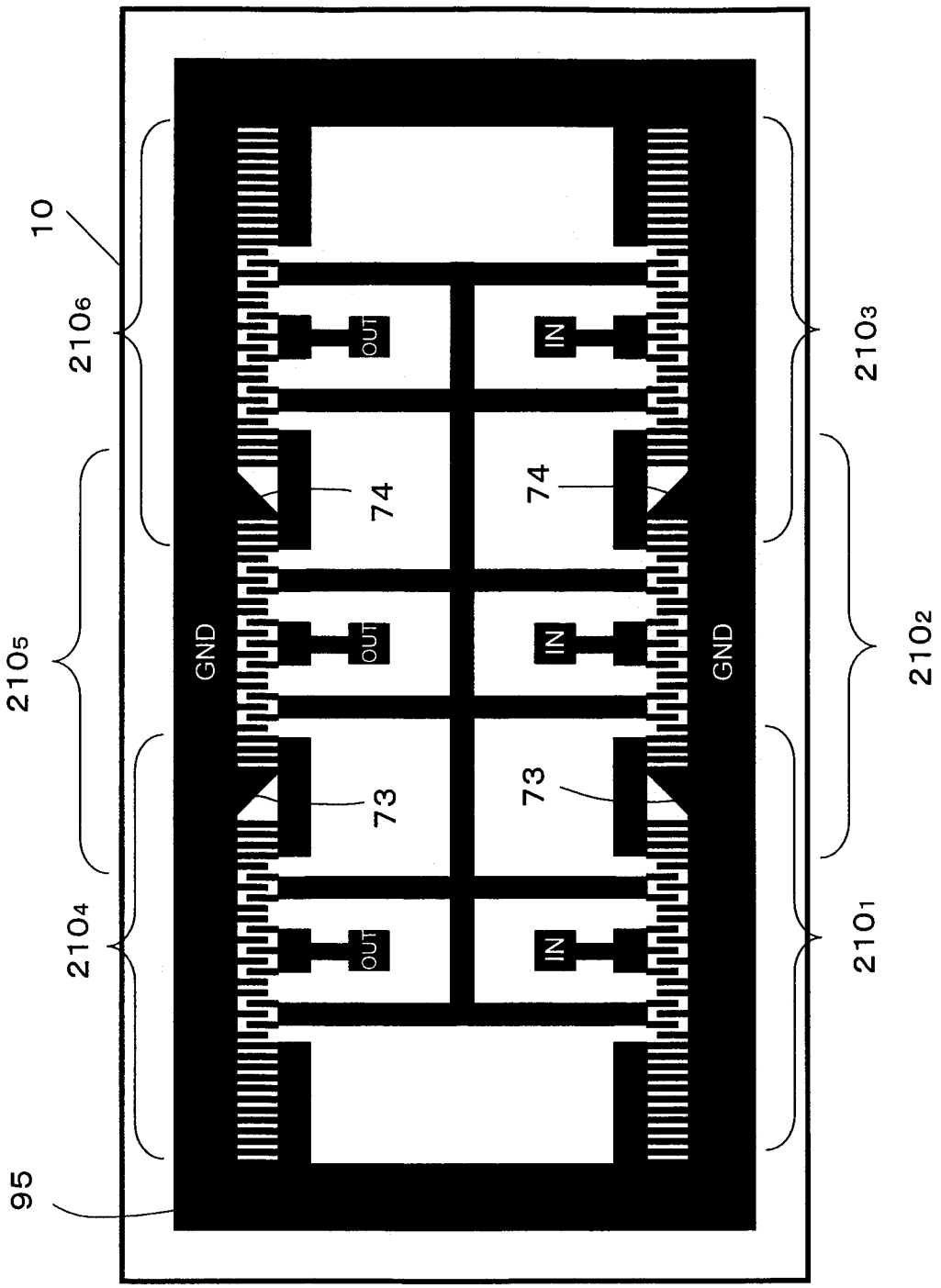
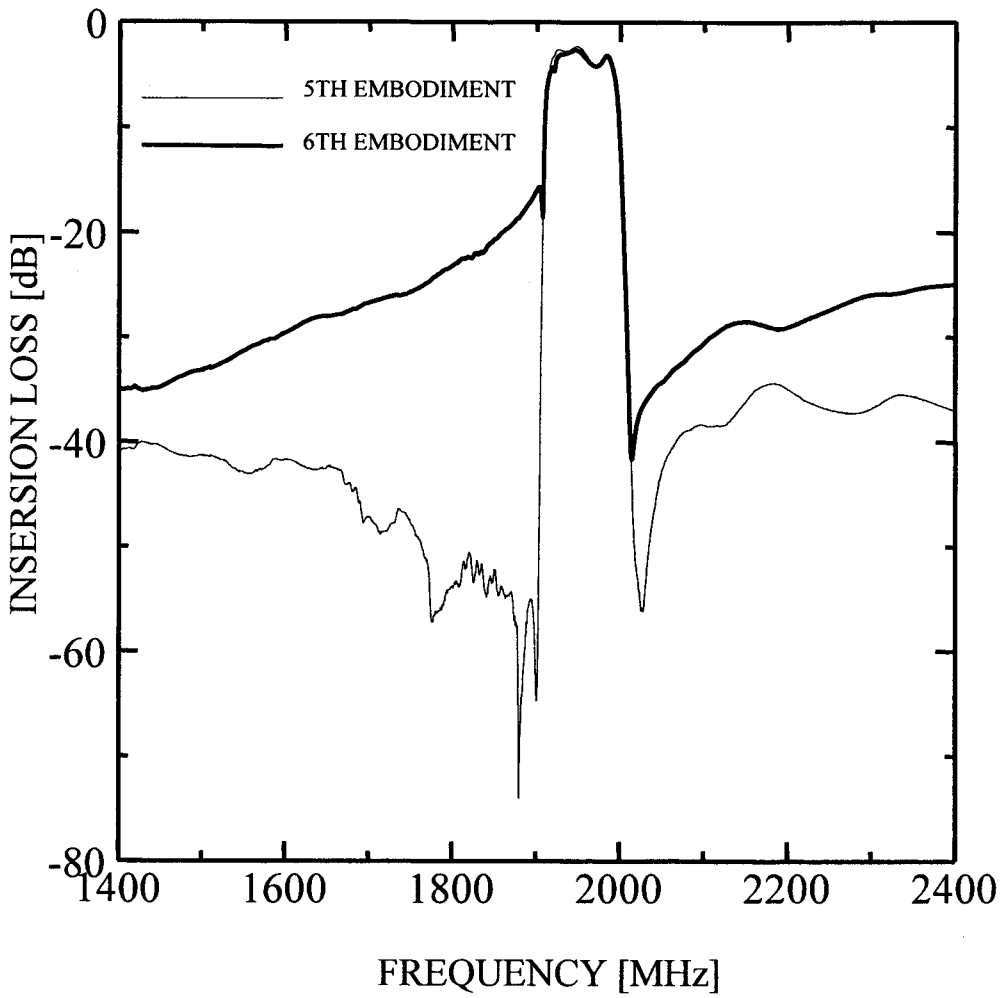

10
210_6
210_5
210_4
95
210_3
210_2
210_1
GND
GND
OUT
OUT
OUT
IN
IN
IN
74
74
73
73

Fig. 29


0
-20
-40
-60
-80
INSERSION LOSS [dB]
5TH EMBODIMENT
6TH EMBODIMENT
1400
1600
1800
2000
2200
2400
FREQUENCY [MHz]

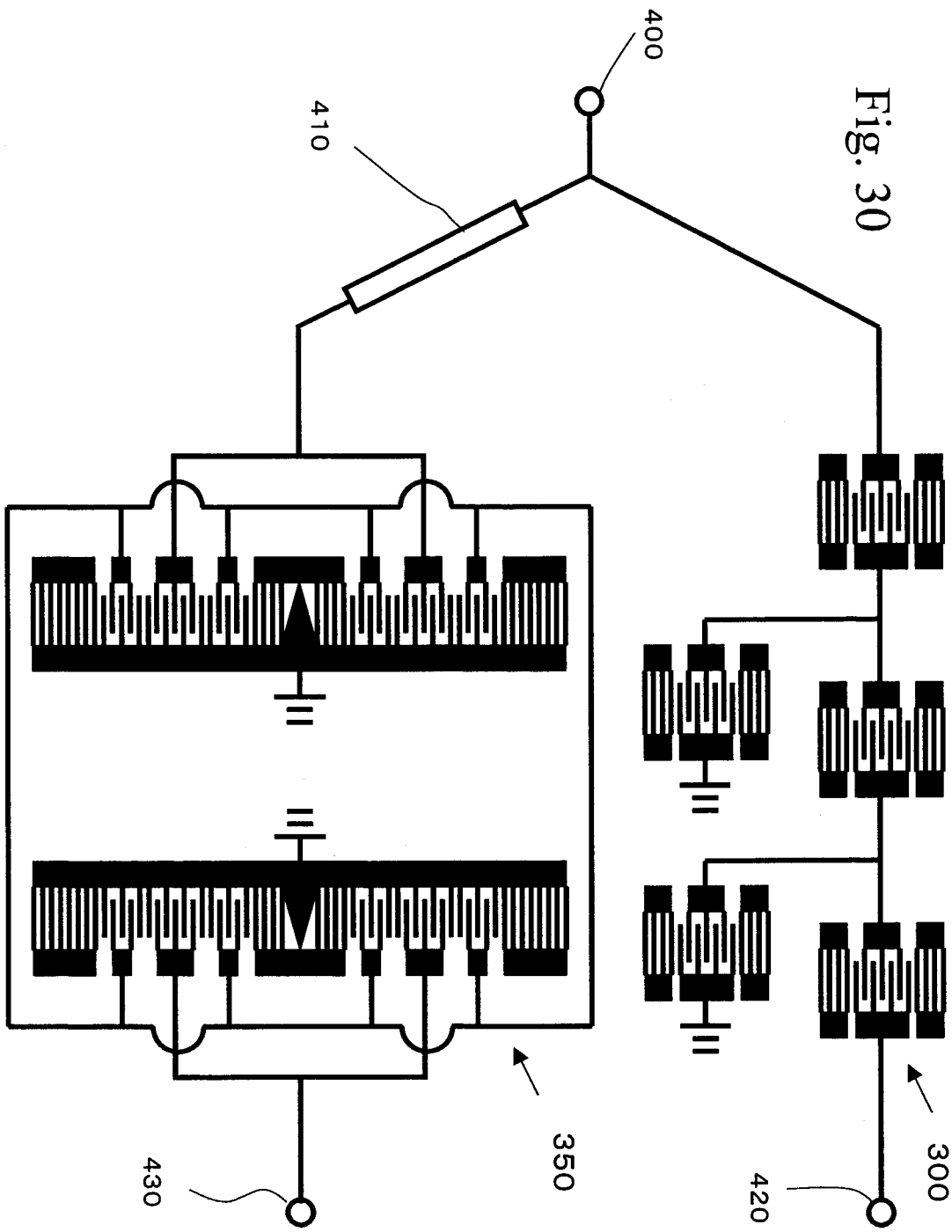


Fig. 30