FIG. 1

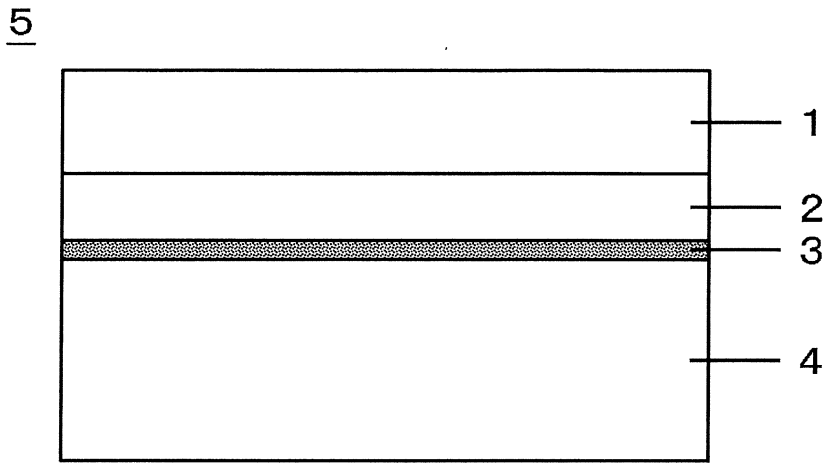

5
1
2
3
4

FIG. 2

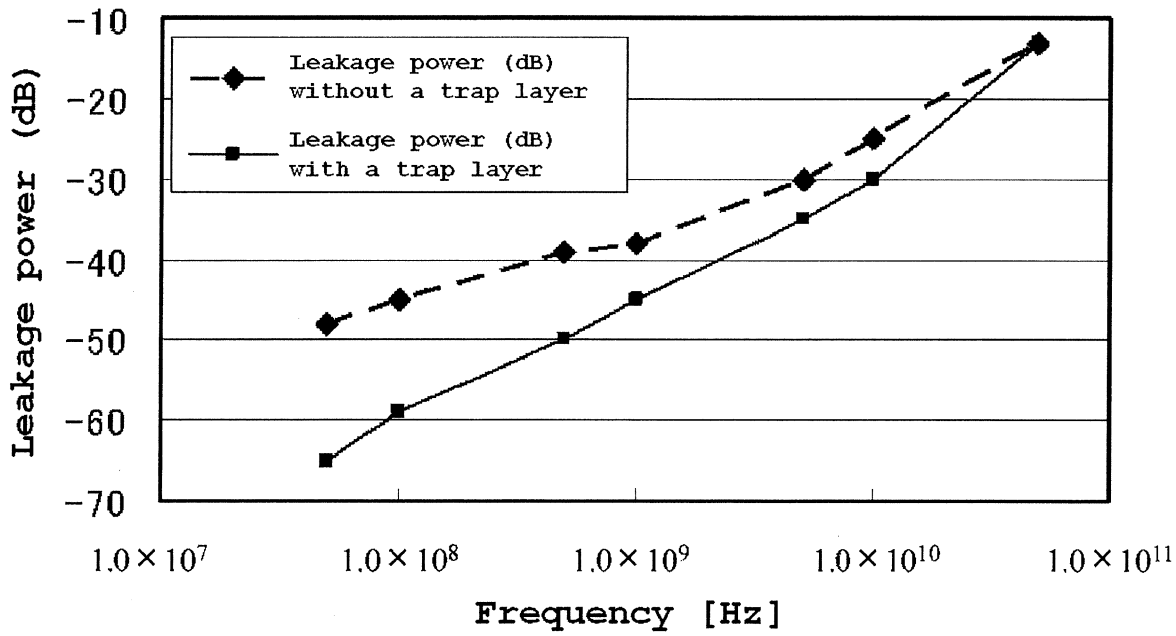

Leakage power (dB)
without a trap layer
Leakage power (dB)
with a trap layer
-10
-20
-30
-40
-50
-60
-70
Leakage power (dB)
1.0×10^7
1.0×10^8
1.0×10^9
1.0×10^10
1.0×10^11
Frequency [Hz]

FIG. 3

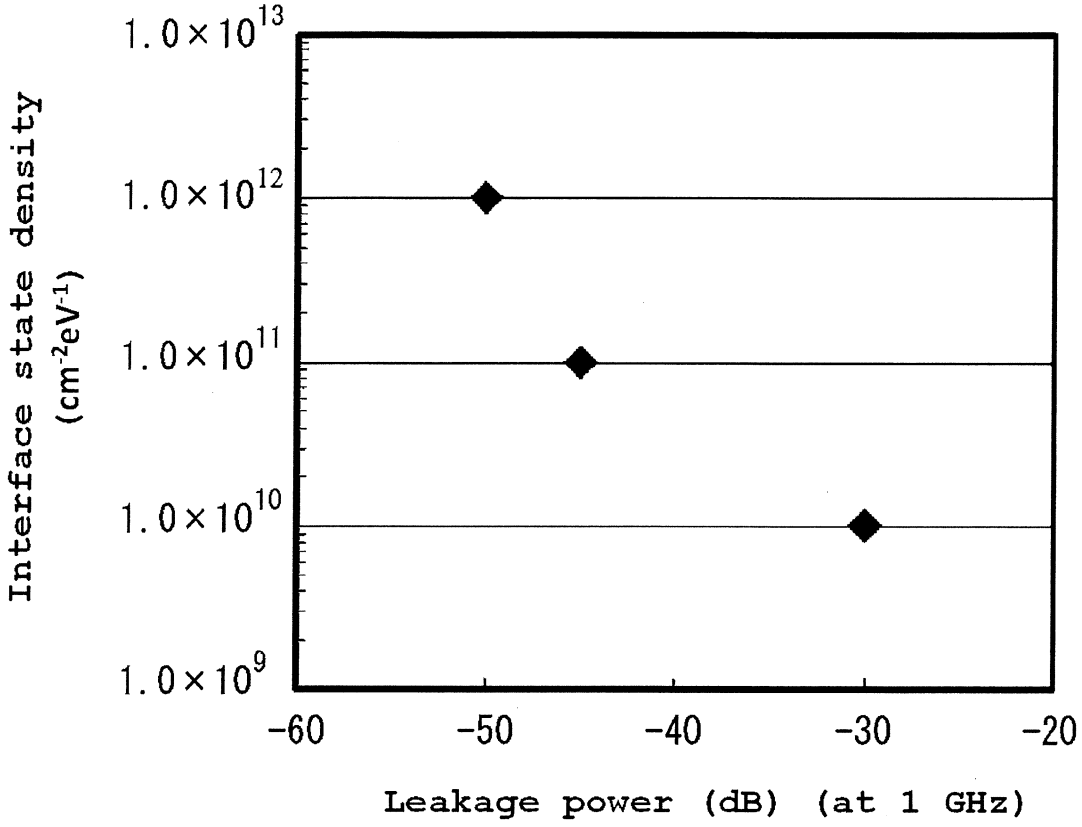

Interface state density
(cm-2eV-1)
1.0×10^13
1.0×10^12
1.0×10^11
1.0×10^10
1.0×10^9
-60
-50
-40
-30
-20
Leakage power (dB) (at 1 GHz)

FIG. 4

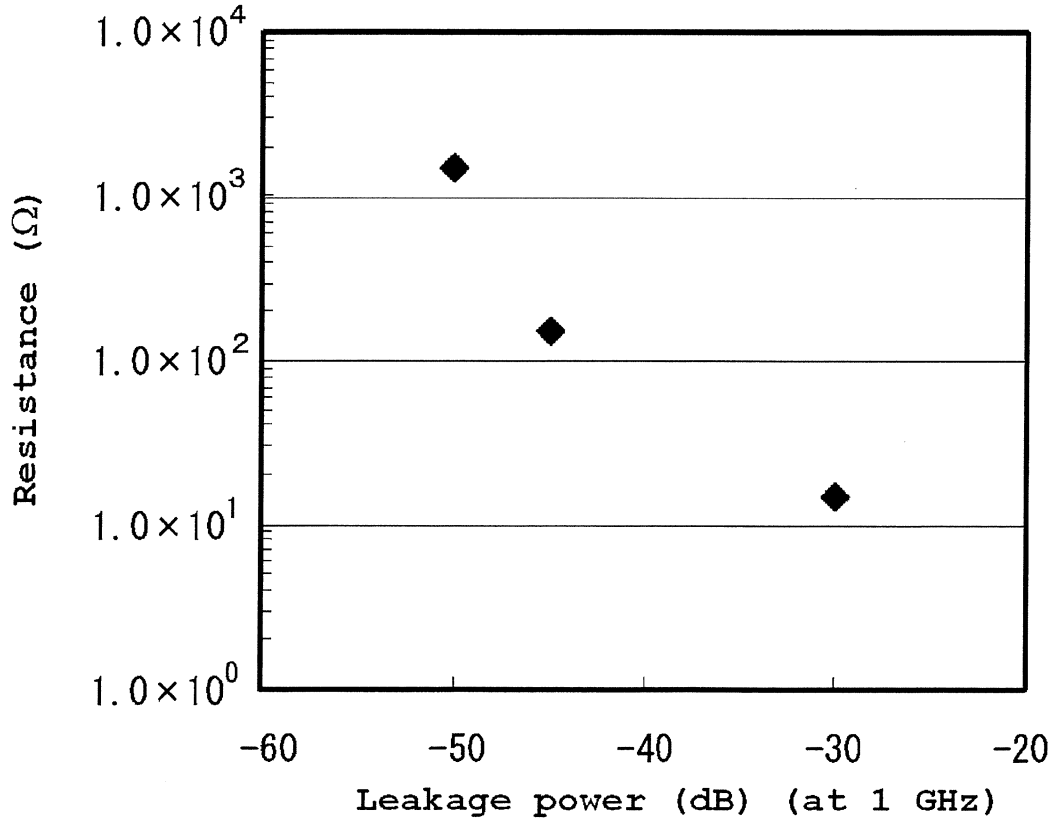
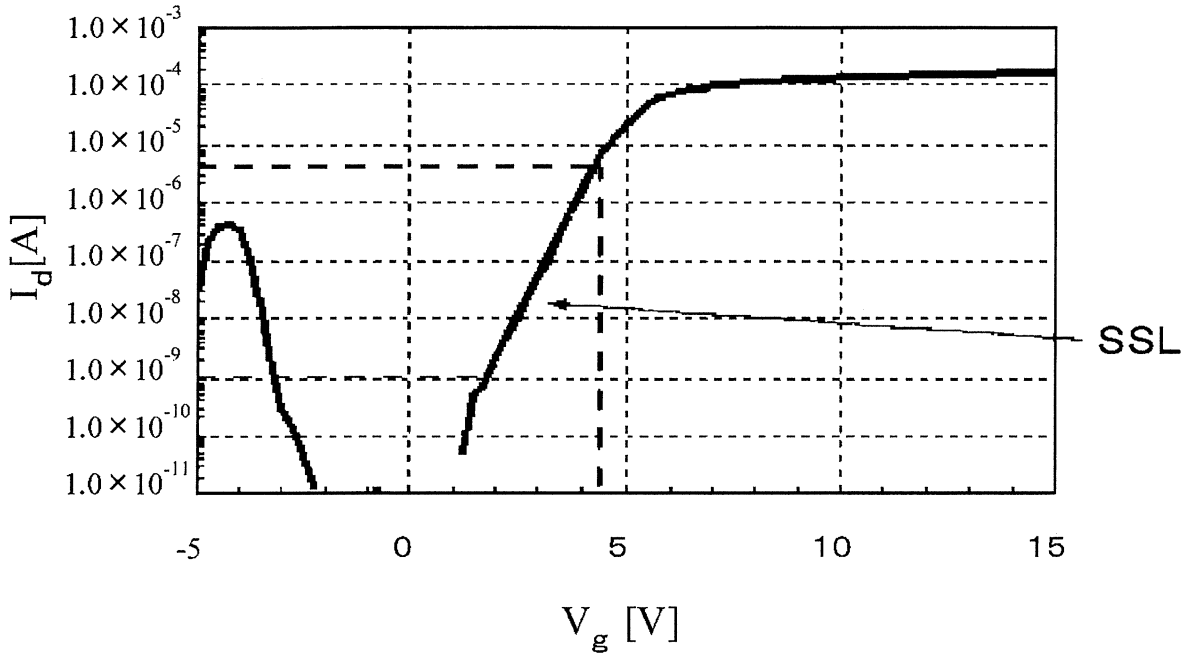

Resistance (Ω)
1.0×10^4
1.0×10^3
1.0×10^2
1.0×10^1
1.0×10^0
-60
-50
-40
-30
-20
Leakage power (dB) (at 1 GHz)

FIG. 5


1.0×10^-3
1.0×10^-4
1.0×10^-5
1.0×10^-6
1.0×10^-7
1.0×10^-8
1.0×10^-9
1.0×10^-10
1.0×10^-11
I_d [A]
-5
0
5
10
15
V_g [V]
SSL