Microwave Integrated Circuits
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Module 6
Lecture No 26
Amplifier gain stability (contd.)

Hello, welcome to another module of this course, microwave integrated circuits. We are now in the week 6. This is module 4, week 6. In the previous module, we had discussed about stability and what are the conditions for unconditional stability and what is the condition for just keeping the circuit stable. So let us review once again what we mean by stability.

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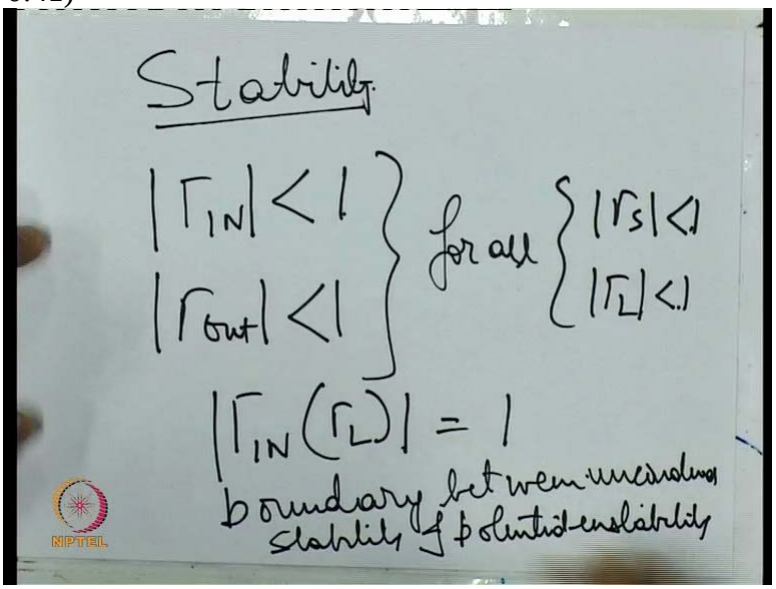

We saw that if gamma in modulus is lesser than 1, or gamma out modulus is lesser than 1 for all mod gamma S lesser than 1 and what gamma L lesser than 1. So this is the stability criteria that gamma in should and gamma out modulus should be lesser than 1 for all gamma S and gamma L modulus lesser than 1.

If modulus of gamma in or gamma out is more than one, then it is not stable. So this is the condition for unconditionally stable. Fine? So then, can we say that the condition that gamma in which is a function of gamma L modulus becomes equal to 1 this is the boundary between unconditional stability and potential instability. Gamma in is a function of gamma L modulus equal to 1 is a boundary between unconditional stability and potential instability. What does that mean actually? It means that when gamma in as a function of gamma L so those values of

gamma L for which gamma in modulus becomes equal to 1 is that boundary. So if we can find out the locus of those points, a locus…

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