Summary of 4x10Gb/s Channel Models in a Redundant Link Low Cost HVM Blade Server

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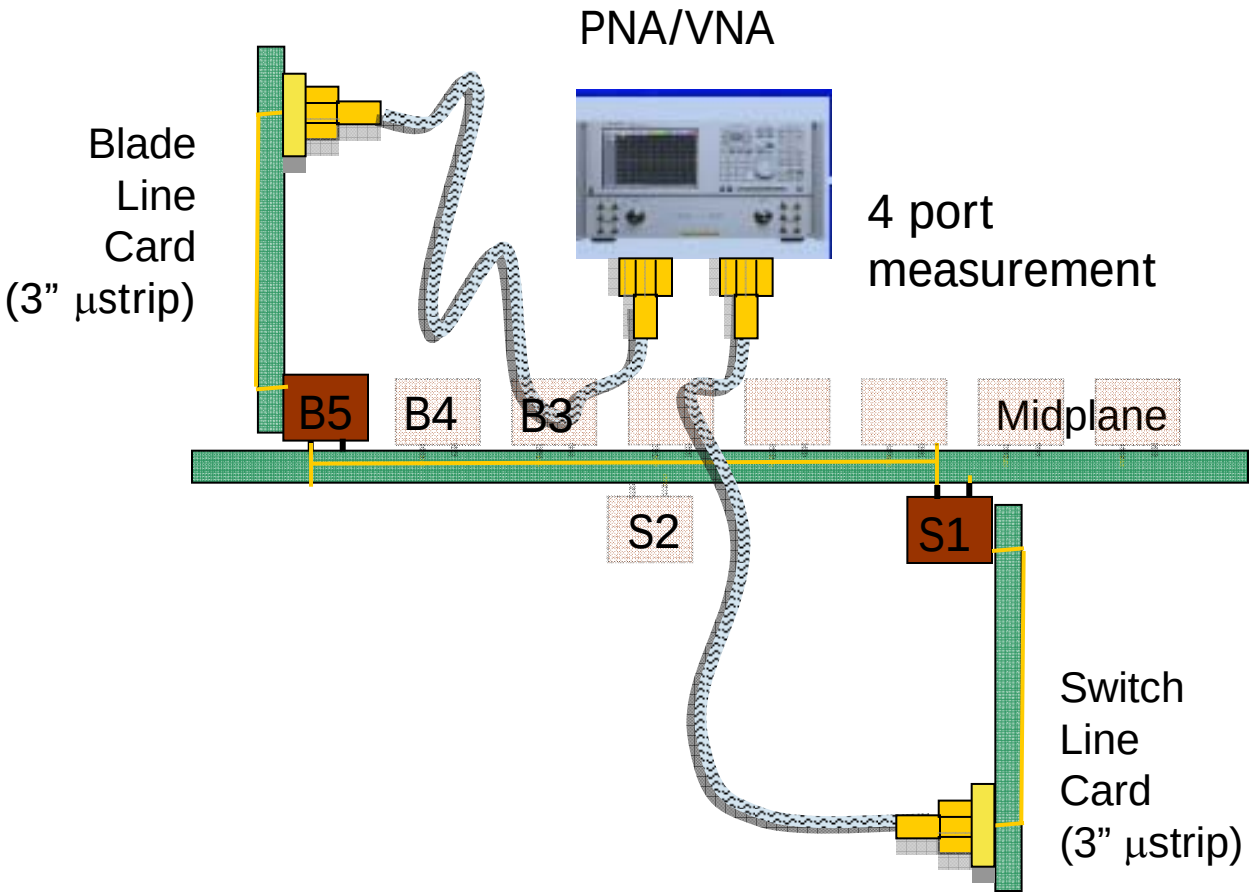
Low Cost Blade Test Set Up

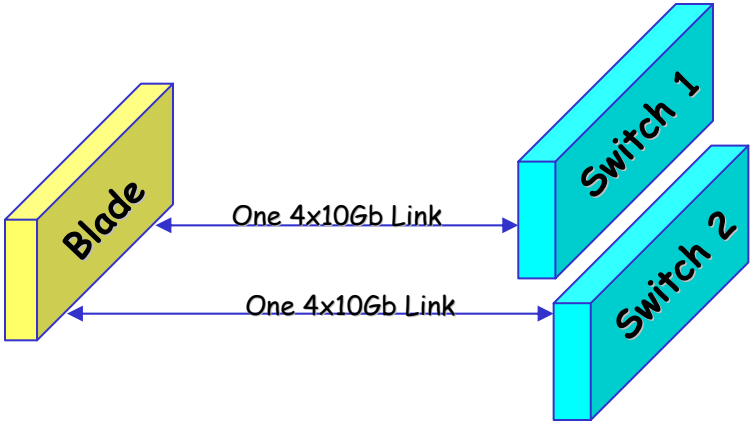


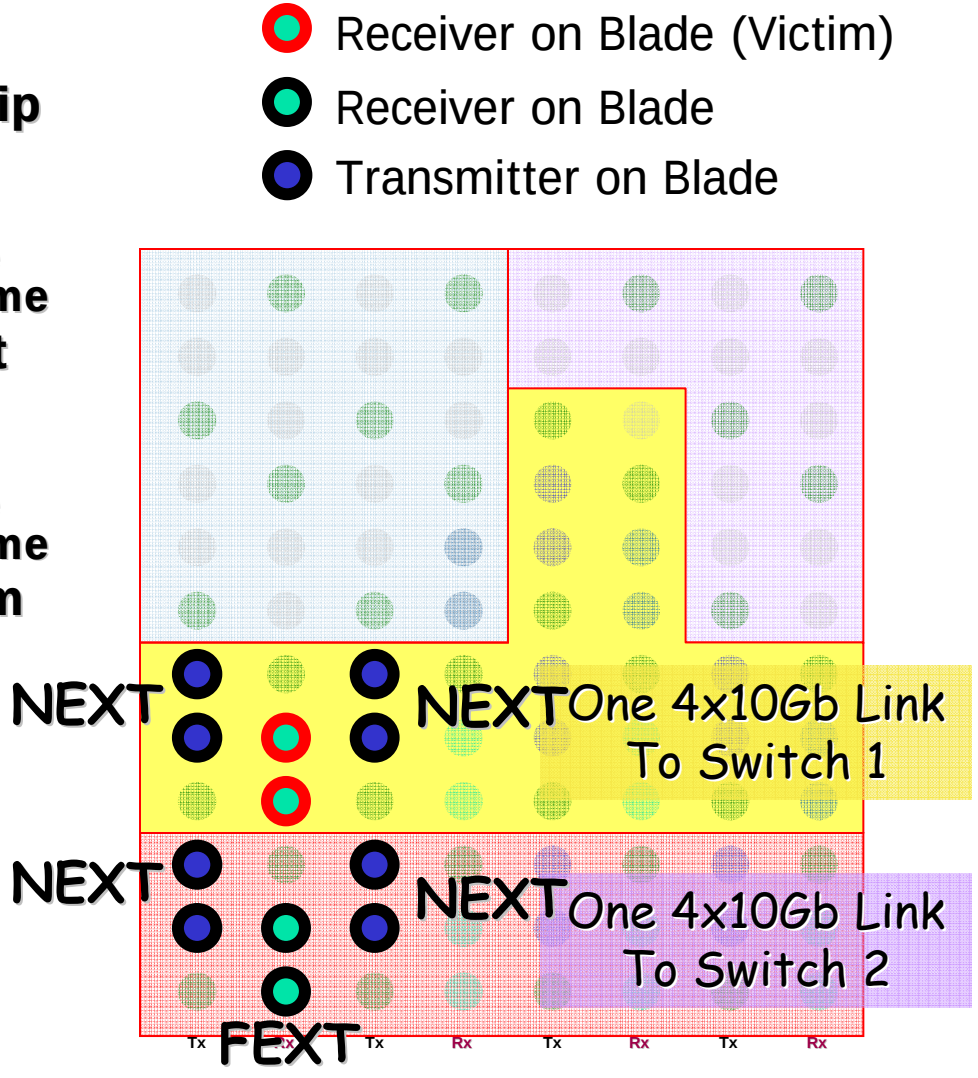
Channel File Map

File name		Midplane length (in)
case1_thru.s4p	switch 1 to blade 3 Thru	4.6
case1_NEXT2.s4p	blade 3 to switch 2 NEXT	2.5
case1_NEXT1.s4p	blade 3 to switch 1 NEXT	4.1
case1_FEXT2.s4p	switch 1 to blade 3 FEXT	2.2
case2_thru.s4p	switch 1 to blade 4 Thru	3.5
case2_FEXT2.s4p	blade 4 to switch 2 NEXT	2.5
case2_NEXT1.s4p	blade 4 to switch 1 NEXT	3.6
case2_NEXT2.s4p	switch 1 to blade 4 FEXT	3.7
case3_thru.s4p	switch 1 to blade 5 Thru	3.5
case3_NEXT2.s4p	blade 5 to switch 2 NEXT	2.2
case3_NEXT1.s4p	blade 5 to switch 1 NEXT	3.2
case3_FEXT2.s4p	switch 1 to blade 5 FEXT	2.3

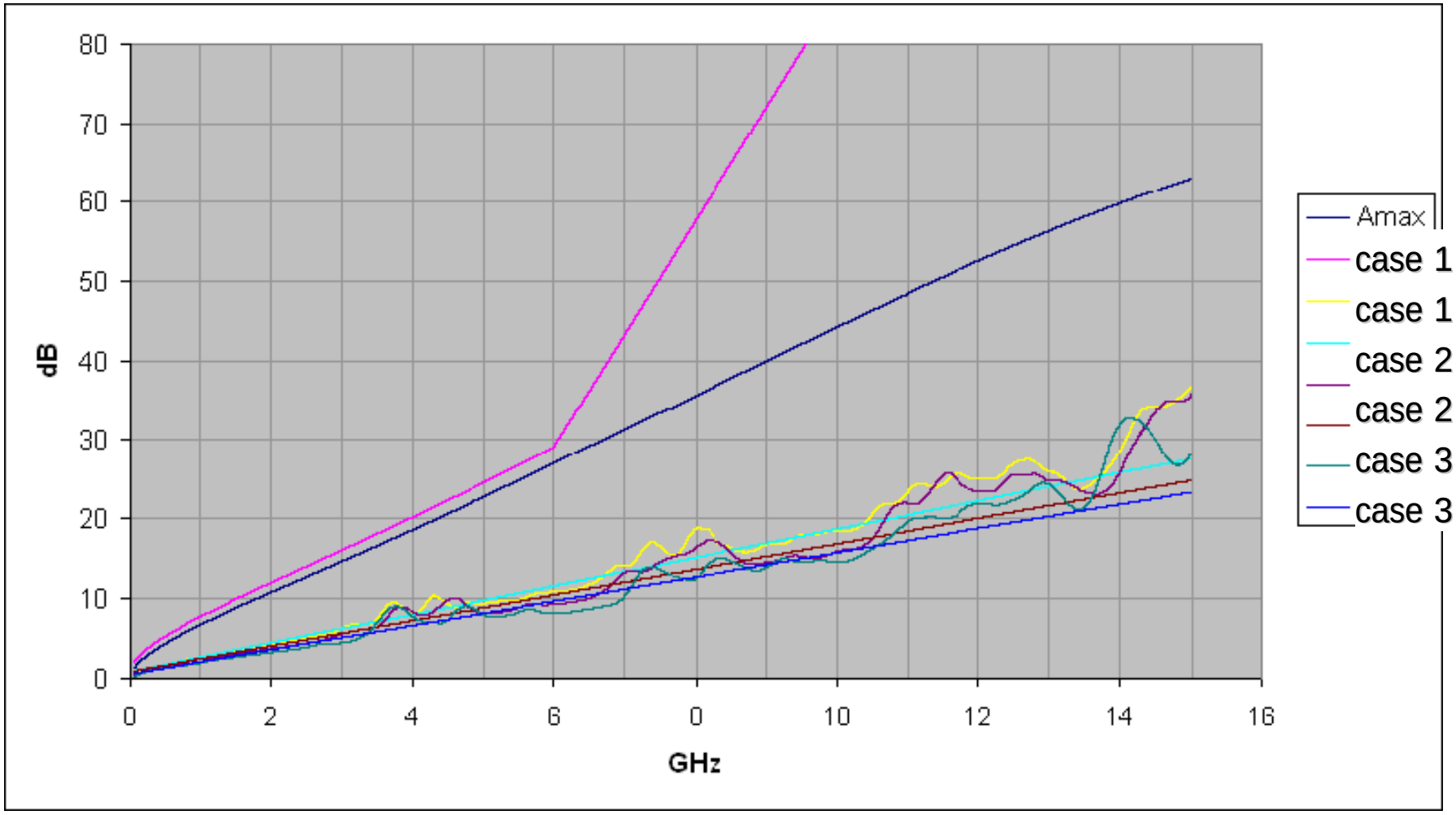
Usage Model

- **2 NEXT from blade from same chip as victim**
  - **Only 1 is supplied**
  - **The 1 is supplied is to used twice since the routing is about the same**
- **2 NEXT from blade from different chip as victim**
  - **Only 1 is supplied**
  - **The 1 is supplied is to used twice since the routing is about the same**
- **1 FEXT from switch different from victim**

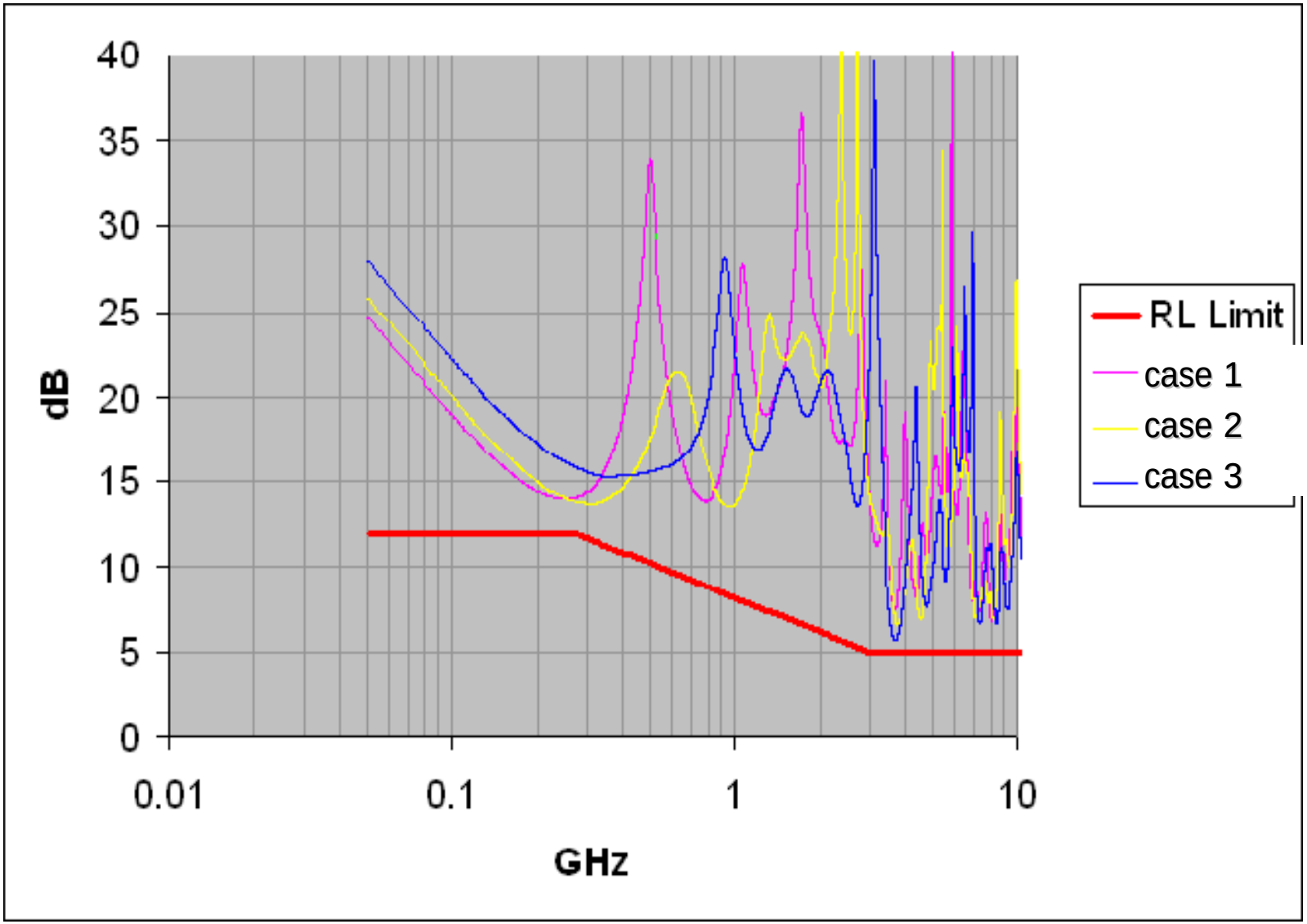




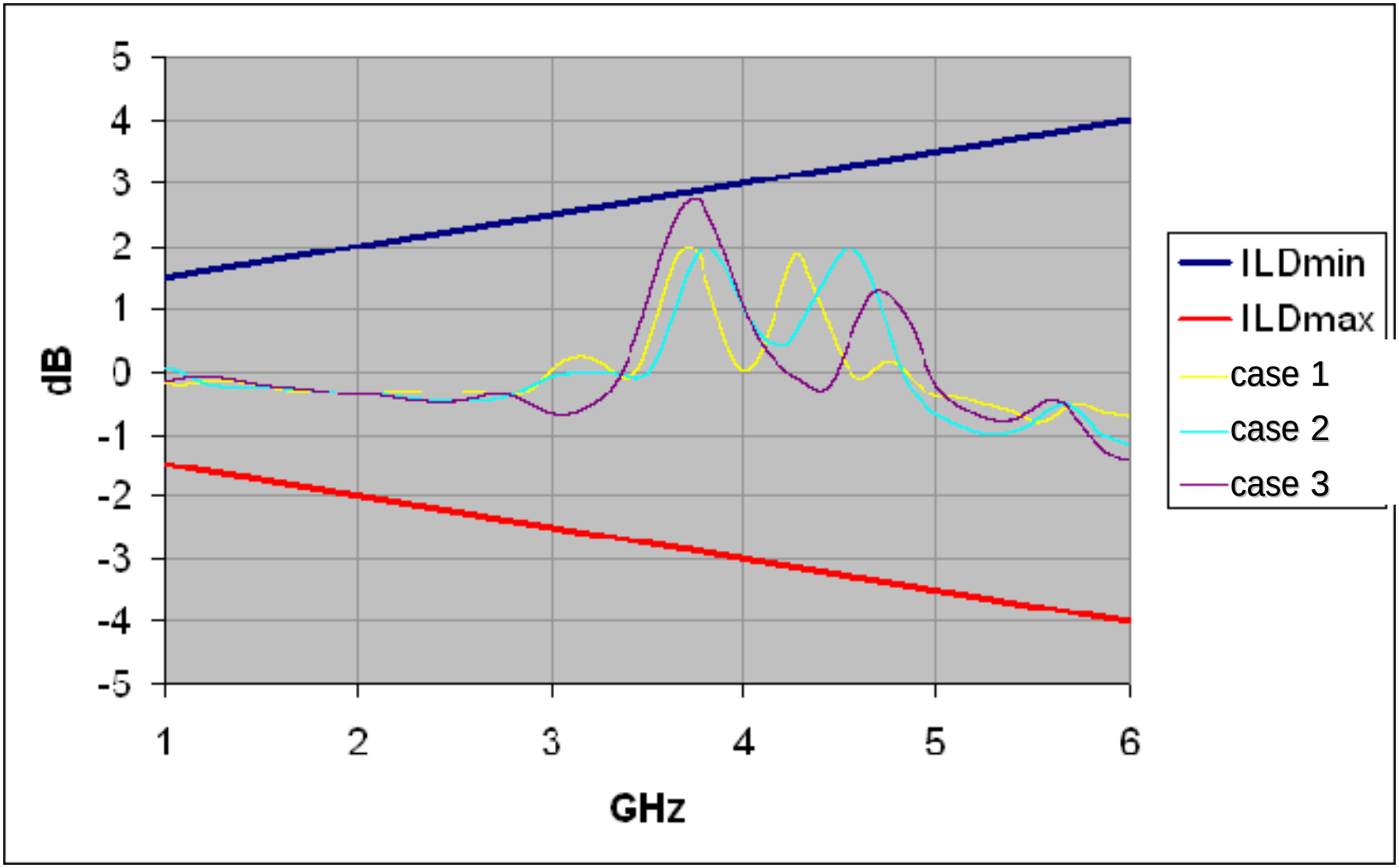
Insertion Loss



Return Loss


40
35
30
25
20
15
10
5
0
dB
0.01
0.1
1
10
GHz
RL Limit
case 1
case 2
case 3

Insertion Loss Deviation



Insertion Loss to Crosstalk Ratio, ICR (2 x NEXT Used)