Consideration of Update to ICR Proposal

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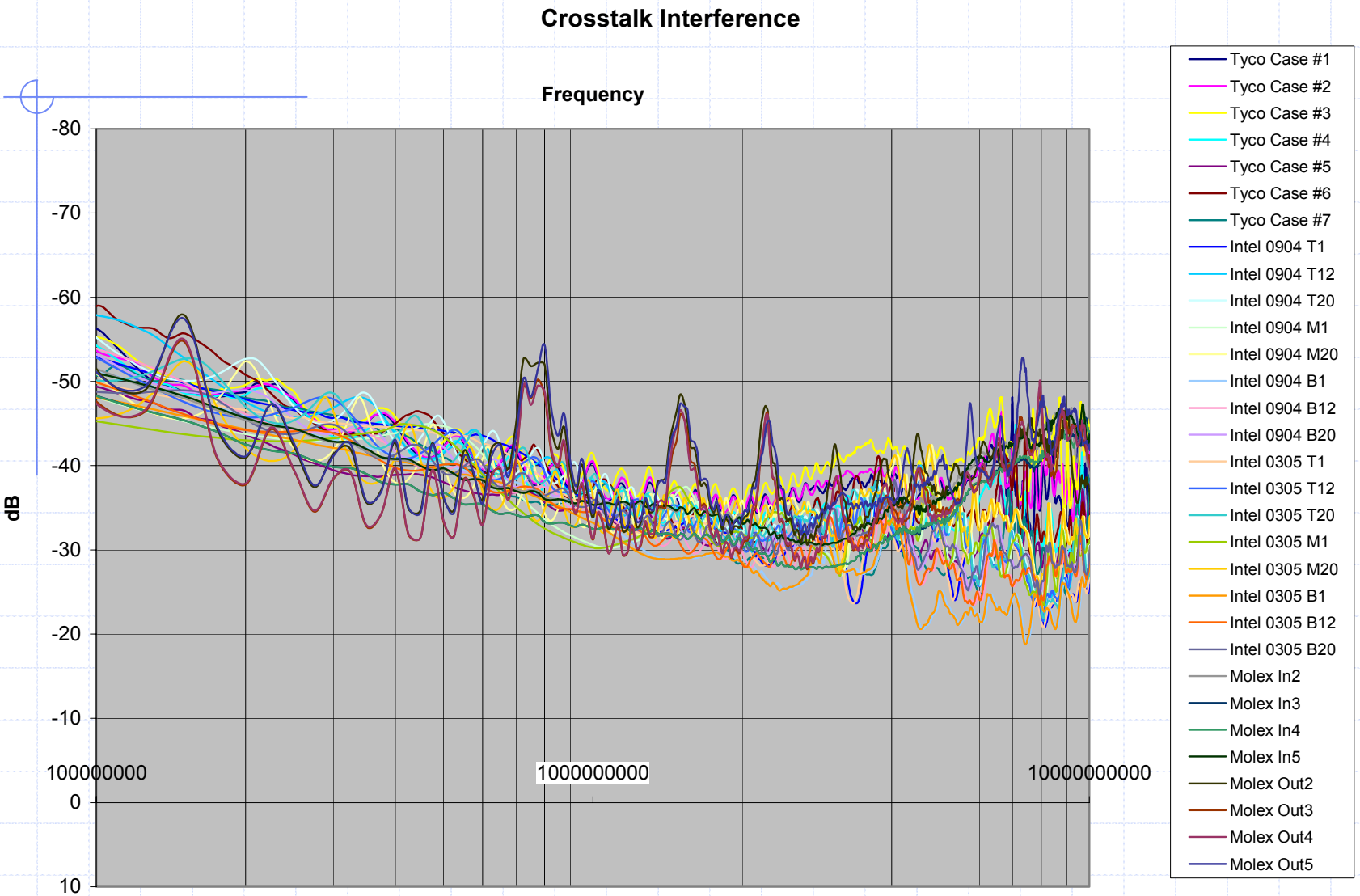
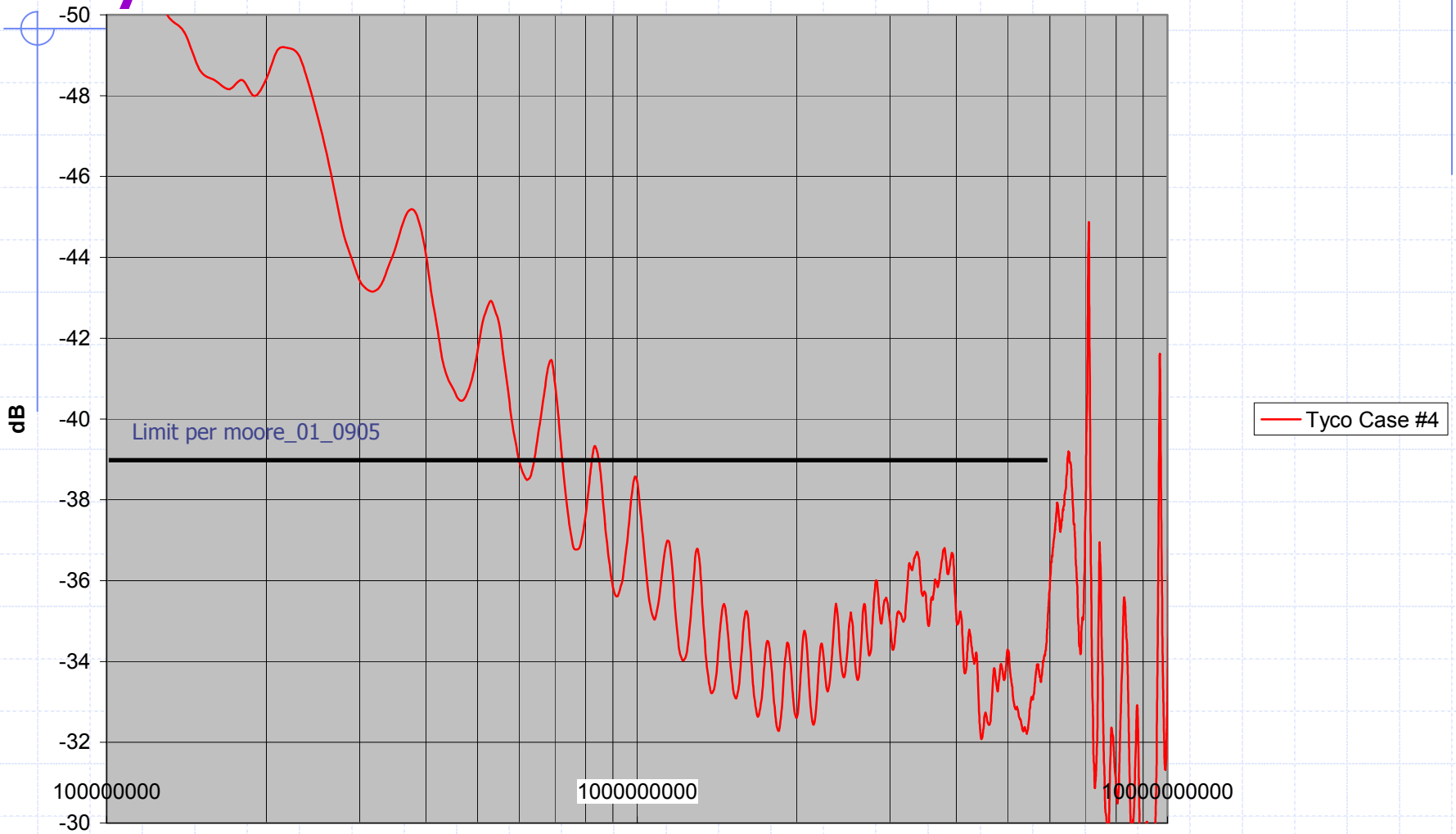
Intro

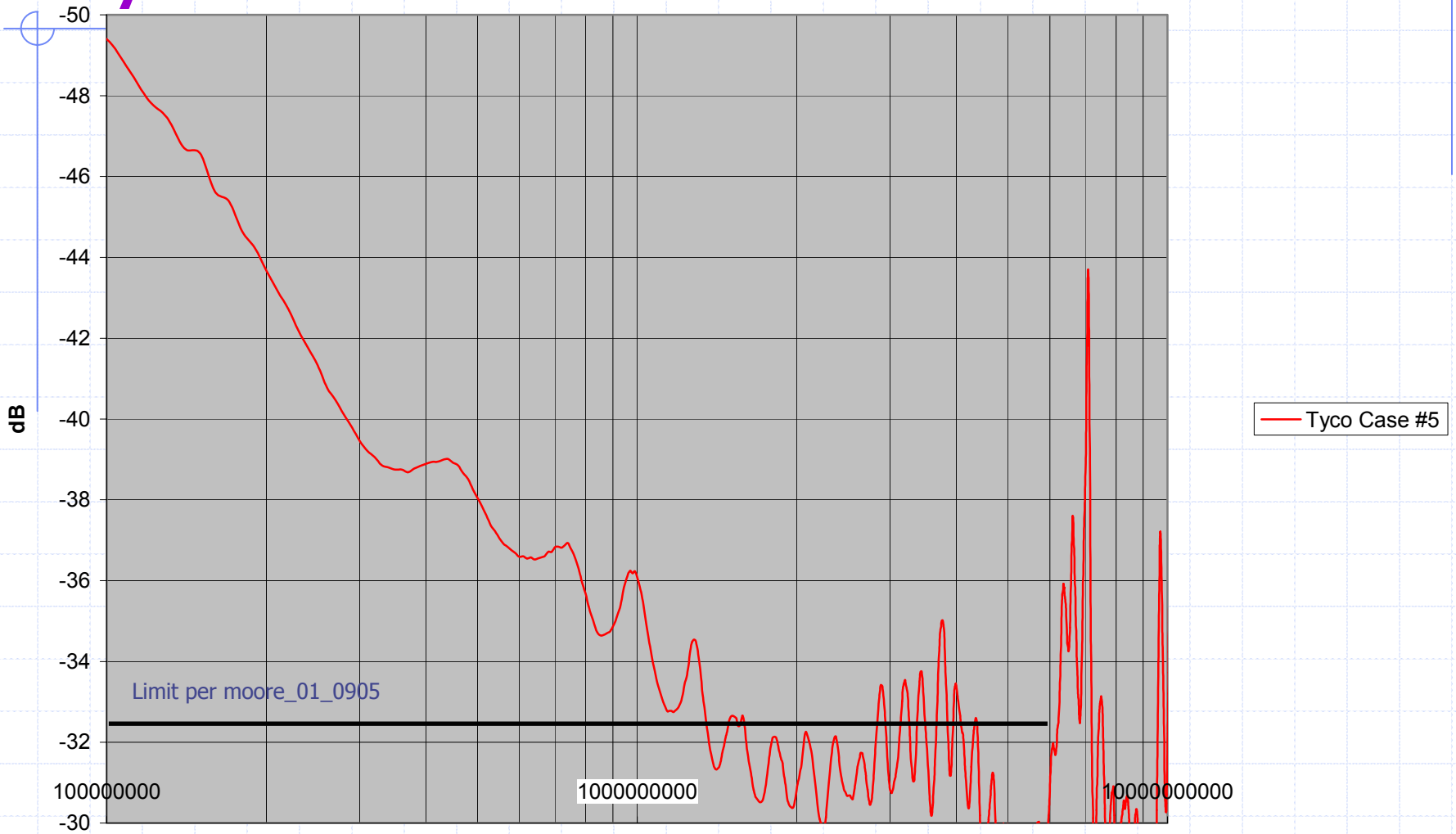
- See moore_01_0905


Crosstalk Interference
Frequency
dB
-80
-70
-60
-50
-40
-30
-20
-10
0
10
100000000
1000000000
10000000000
Tyco Case #1
Tyco Case #2
Tyco Case #3
Tyco Case #4
Tyco Case #5
Tyco Case #6
Tyco Case #7
Intel 0904 T1
Intel 0904 T12
Intel 0904 T20
Intel 0904 M1
Intel 0904 M20
Intel 0904 B1
Intel 0904 B12
Intel 0904 B20
Intel 0305 T1
Intel 0305 T12
Intel 0305 T20
Intel 0305 M1
Intel 0305 M20
Intel 0305 B1
Intel 0305 B12
Intel 0305 B20
Molex In2
Molex In3
Molex In4
Molex In5
Molex Out2
Molex Out3
Molex Out4
Molex Out5

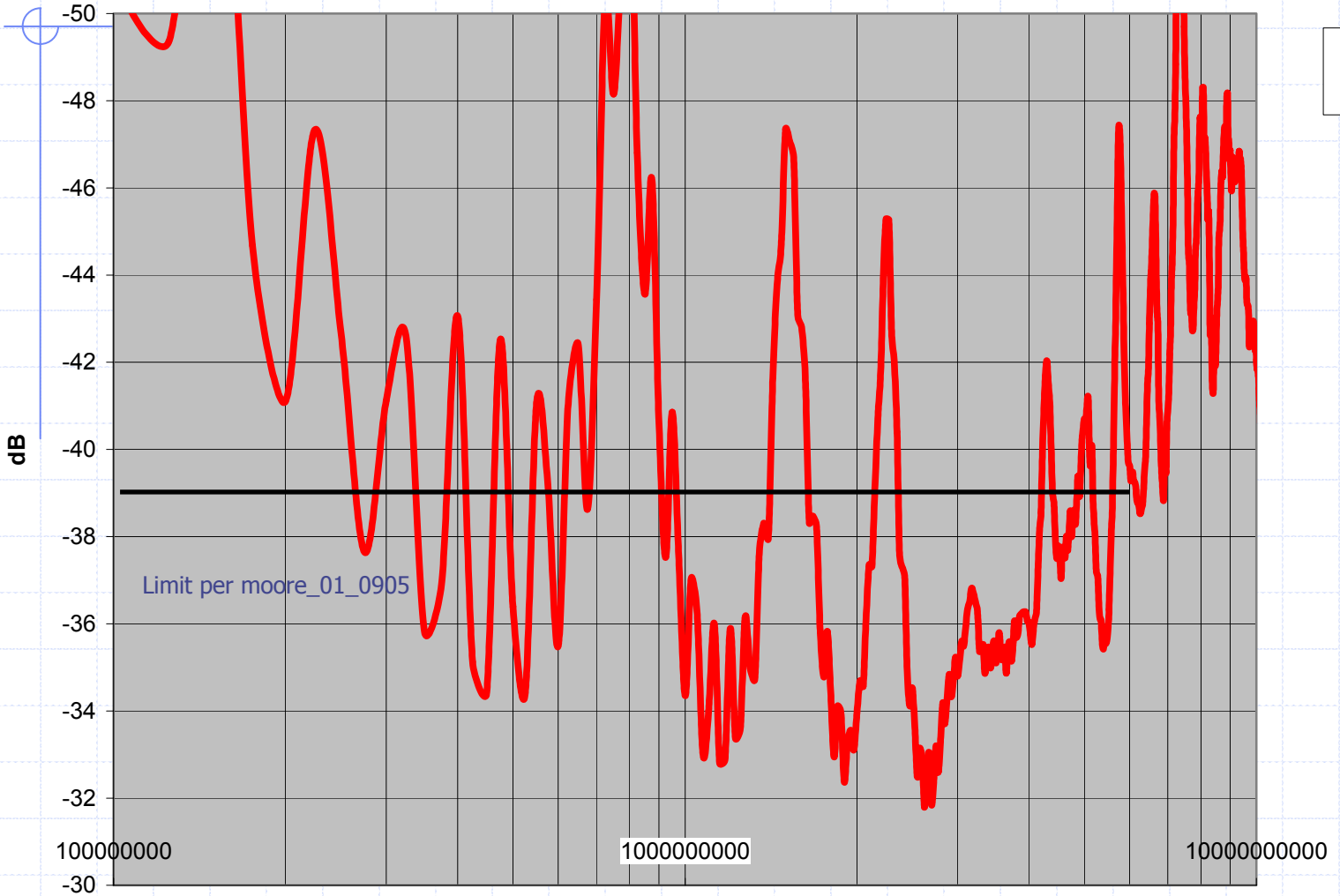
Tyco Case #4


-50
-48
-46
-44
-42
-40
-38
-36
-34
-32
-30
dB
Limit per moore_01_0905
100000000
1000000000
10000000000
Tyco Case #4

Tyco Case #5


-50
-48
-46
-44
-42
-40
-38
-36
-34
-32
-30
dB
Limit per moore_01_0905
100000000
1000000000
10000000000
Tyco Case #5

Molex Out 5


-50
-48
-46
-44
-42
-40
-38
-36
-34
-32
-30
dB
Limit per moore_01_0905
100000000
1000000000
10000000000
Molex Out5

Channel Findings

- Crosstalk spectra of channel is not flat
- 15 channels considered
  - 7 cases from Tyco
  - 8 cases from Molex
  - (Intel analysis not completed due to findings of first 15 cases
  - No channel, regardless of SDD21 profile, came close to meeting moore_01_0905 proposal

Conclusions

- Per moore_01_0905

  ”Therefore I think that the total crosstalk spec should be flat. This ensures that the informative crosstalk spec allows the maximal possible crosstalk that the Rx can handle.”

- Crosstalk is function of transmitter pulse shaping filter and crosstalk channel transfer function (healey_c1_0505)

- Moore_01_0905 does not bound crosstalk to SDD21 over entire frequency range as current ICR approach
  - Moore_01_0905 proposal would actually allow lower frequency channel crosstalk to increase. Amount of increase and to what frequency is channel dependent

Recommendation

- Reject moore_01_0905 proposal