# 2 tones except

filter

M\_PROBE ID=VP1

SUBCKT ID=S1

NET="Common Mode part"

1 2

M\_PROBE ID=VP2

ACVS ID=V1

Mag=0 V

Ang=0 Deg Offset=0 V DCVal=0 V

RES ID=R1 R=50 Ohm

AC\_V ID=V2

Signal=Pulse SpecType=Specify freq

SpecBW=Use doc # harms Sweep=None

Tone=2 Freq=10 MHz HI=1 V

LO=-0.5 V TW=50 ns

TR=3 ns TF=3 ns TD=0 ns

WINDOW=NONE DCVal=0 V ACMag=1 V

ACAng=0 Deg

AC\_V ID=V3

Signal=Pulse SpecType=Specify freq SpecBW=Use doc # harms Sweep=None

Tone=3 Freq=30 MHz HI=0.5 V

LO=-0.5 V TW=50 ns

TR=5 ns TF=5 ns TD=0 ns

WINDOW=DEFAULT DCVal=0 V

ACMag=1 V

ACAng=0 Deg

|  |  |  |
| --- | --- | --- |
| **TD\_CMP\_Multi** |  | |
| Vtime(M\_PROBE.VP1,1)[\*] (V)  TD\_CMP\_Multi.AP\_TR | |
| 1.5  1  0.5  0  p1  -0.5  -1  0 100 200 300 400 | | |
| Time (ns) | | p1: Freq = 5 MHz |

### 1.5

**TD\_CMP\_Vfft**

|Vfft(M\_PROBE.VP1,0,3,100,3,10,0,4,0)|[\*] (V)

TD\_CMP\_Multi.AP\_TR

|Vfft(M\_PROBE.VP1,0,3,100,3,10,0,4,0)|[\*] (V)

TD\_CMP\_Multi.AP\_HB

1 **1st Harmonic**

0.5

**2nd Harmonic**

**3rd Harmonic**

**4th harmonics**

**Spurious harmonics Spurious harmonics purious harmonics Spurious harmonics**

p1 p2

0

0 20 40 60 80 100

Frequency (MHz)

p2: Freq = 10 MHz p1: Freq = 10 MHz

2 tones with

filter

M\_PROBE ID=VP1

SUBCKT

NET="Common Mode part"

1 2

M\_PROBE ID=VP2

ACVS ID=V1

Mag=0 V

Ang=0 Deg Offset=0 V DCVal=0 V

RES ID=R1 R=50 Ohm

AC\_V ID=V2

Signal=Pulse SpecType=Specify freq

SpecBW=Use doc # harms Sweep=None

Tone=2 Freq=10 MHz HI=1 V

LO=-0.5 V TW=50 ns

TR=3 ns TF=3 ns TD=0 ns

WINDOW=NONE DCVal=0 V ACMag=1 V

ACAng=0 Deg

AC\_V ID=V3

Signal=Pulse SpecType=Specify freq SpecBW=Use doc # harms Sweep=None

Tone=3 Freq=30 MHz HI=0.5 V

LO=-0.5 V TW=50 ns

TR=5 ns TF=5 ns TD=0 ns

WINDOW=DEFAULT DCVal=0 V

ACMag=1 V

ACAng=0 Deg

0.1

|  |  |
| --- | --- |
| Vtime(M\_PROBE.VP1,1)[\*] (L, V)  **TD\_CMP\_Multi** TD\_CMP\_Multi.AP\_TR  1.5 Vtime(M\_PROBE.VP2,1)[\*] (R, V)7  TD\_CMP\_Multi.AP\_HB  1 0.162  0.5 0.154  0 0.146  p1  -0.5 0.138  p2  -1 0.13  0 100 200 300 400 | |
| Time (ns) | p2: Freq = 5 MHz  p1: Freq = 5 MHz |

1.5

**TD\_CMP\_Multi**

##### Vtime(M\_PROBE.VP1,1)[\*] (L, V)

TD\_CMP\_Multi.AP\_TR

Vtime(M\_PROBE.VP2,1)[\*] (R, V)

TD\_CMP\_Multi.AP\_TR

-0.36

1 -0.37

0.5

-0.38

p2

0 -0.39

p1

-0.5

-0.4

-1

0 100 200 300 400

-0.41

Time (ns)

p1: Freq = 5 MHz

p2: Freq = 5 MHz

0.4

**TD\_CMP\_Vfft**

|Vfft(M\_PROBE.VP2,0,3,100,3,10,0,4,0)|[\*] (V)

TD\_CMP\_Multi.AP\_HB

|Vfft(M\_PROBE.VP2,0,3,100,3,10,0,4,0)|[\*] (V)

TD\_CMP\_Multi.AP\_TR

0.3

0.2

0.1

p1

0

0 20 40 60 80 100

Frequency (MHz)

p1: Freq = 10 MHz p2: Freq = 10 MHz

3 tones except

filter

M\_PROBE ID=VP1

SUBCKT ID=S1

NET="Common Mode part"

1 2

M\_PROBE ID=VP2

AC\_V ID=V2

Signal=Pulse

SpecType=Specify freq SpecBW=Use doc # harms

Sweep=None Tone=2 Freq=10 MHz

HI=1 V LO=-0.5 V TW=50 ns

TR=3 ns

TF=3 ns TD=0 ns

WINDOW=NONE

DCVal=0 V ACMag=1 V

ACAng=0 Deg

ACVS ID=V1

Mag=0 V Ang=0 Deg Offset=0 V DCVal=0 V

AC\_V ID=V3

Signal=Pulse SpecType=Specify freq SpecBW=Use doc # harms

Sweep=None Tone=3 Freq=30 MHz

HI=1 V LO=-0.5 V TW=50 ns

TR=3 ns

TF=3 ns TD=0 ns

WINDOW=DEFAULT

DCVal=0 V ACMag=1 V

ACAng=0 Deg

RES ID=R1 R=50 Ohm

**lti**

|  |  |  |  |
| --- | --- | --- | --- |
| **TD\_CMP\_Mu** | Vtime(M\_PROBE.VP1,1)[\*] (V)  TD\_CMP\_Multi.AP\_TR | |  |
|  |
| 3  2  1  0  p1  -1  -2  0 100 200 300 400 | | | |
| Time (ns) | | p1: Freq = 5 MHz | |

**TD\_CMP\_Vfft**

2

|Vfft(M\_PROBE.VP1,0,3,100,3,80,0,4,0)|[\*] (V)

TD\_CMP\_Multi.AP\_TR

|Vfft(M\_PROBE.VP1,0,3,100,3,10,0,4,0)|[\*] (V)

TD\_CMP\_Multi.AP\_TR

1.5

1

0.5

p2

0

0 20 40 60 80 100

Frequency (MHz)

p2: Freq = 10 MHz p1: Freq = 10 MHz

3 tones with

filter

M\_PROBE

SUBCKT

NET="Common Mode part"

1 2

M\_PROBE

AC\_V ID=V2

Signal=Pulse

SpecType=Specify freq SpecBW=Use doc # harms

Sweep=None Tone=2 Freq=10 MHz

HI=1 V LO=-0.5 V TW=50 ns

TR=3 ns

TF=3 ns TD=0 ns

WINDOW=NONE

DCVal=0 V ACMag=1 V

ACAng=0 Deg

ACVS ID=V1

Mag=0 V Ang=0 Deg Offset=0 V DCVal=0 V

AC\_V ID=V3

Signal=Pulse SpecType=Specify freq SpecBW=Use doc # harms

Sweep=None Tone=3 Freq=30 MHz

HI=1 V LO=-0.5 V TW=50 ns

TR=3 ns

TF=3 ns TD=0 ns

WINDOW=DEFAULT

DCVal=0 V ACMag=1 V

ACAng=0 Deg

RES ID=R1 R=50 Ohm

**TD\_CMP\_Multi**

3

Vtime(M\_PROBE.VP1,1)[\*] (L, V)

TD\_CMP\_Multi.AP\_TR

Vtime(M\_PROBE.VP2,1)[\*] (R, V)

TD\_CMP\_Multi.AP\_HB

0.53

2 0.522

1 0.514

0 0.506

p1

-1 0.498

p2

-2

0 100 200 300 400

0.49

Time (ns)

p2: Freq = 5 MHz

p1: Freq = 5 MHz

**TD\_CMP\_Multi**

3

Vtime(M\_PROBE.VP1,1)[\*] (L, V)

TD\_CMP\_Multi.AP\_TR

Vtime(M\_PROBE.VP2,1)[\*] (R, V)

TD\_CMP\_Multi.AP\_TR

-0.72

2 -0.74

1 -0.76

p2

0 -0.78

p1

-1 -0.8

-2

0 100 200 300 400

-0.82

Time (ns)

p1: Freq = 5 MHz

p2: Freq = 5 MHz

0.8

**TD\_CMP\_Vfft**

|Vfft(M\_PROBE.VP2,0,3,100,3,10,0,4,0)|[\*] (V)

TD\_CMP\_Multi.AP\_HB

|Vfft(M\_PROBE.VP2,0,3,100,3,10,0,4,0)|[\*] (V)

TD\_CMP\_Multi.AP\_TR

0.6

0.4

0.2

p1

0

0 20 40 60 80 100

Frequency (MHz)

p1: Freq = 10 MHz p2: Freq = 10 MHz