Coverage Report for FM_Modulation_Demodulation_03

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Analysis Information

Coverage Data Information

Collected in version	(R2021b)

Model Information

Model version	1.3
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Last saved	Sat Mar 26 22:48:14 2022

Simulation Optimization Options

Default parameter behavior	tunable
Block reduction	forced off
Conditional branch optimization	on

Coverage Options

Analyzed model	FM_Modulation_Demodulation_03
Logic block short circuiting	off

Tests

Test	Started execution	Ended execution
Run 1	26-Mar-2022 23:17:52	26-Mar-2022 23:17:57

Summary

Model Hierarchy/Complexity		Run 1 Decision	Execution
1. FM_Modulation_Demodulation_03	2	100%	100%
2. . . . FM Demodulator Passband	1	100%	100%
3. . . . . Analytic Signal		NA	100%
4. . . . . Check Signal Attributes		NA	100%
5. . . . . Check Signal Attributes		NA	100%
6. . . . . Output zeros until signal is available (Ho)	1	100%	100%
7. . . . . Subsystem		NA	100%
8. . . . . Subsystem1		NA	100%
9. . . . . Difference		NA	100%
10. . . . . Time and Sample time		NA	100%
11. . . . . Difference		NA	100%
12. . . . Subsystem(Indirect FM)		NA	100%
13. . . . Subsystem(Phase lock loop)		NA	100%
14. . . . . Continuous-Time VCO		NA	100%
15. . . . . Check Signal Attributes		NA	100%
16. . . . . Modulo Integrator		NA	100%

Details

1. Model "FM_Modulation_Demodulation_03"

Child Systems: FM Demodulator Passband , Subsystem(Indirect FM) , Subsystem(Phase lock loop)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	1	2
Decision	NA	100% (2/2) decision outcomes
Execution	NA	100% (39/39) objective outcomes

Full Coverage

Model Object	Metric
Sin block "Sin Wave"	Execution
SpectrumAnalyzer block "Spectrum Analyzer(demodulation) "	Execution
SpectrumAnalyzer block "Spectrum Analyzer (modulation)"	Execution

2. SubSystem block "FM Demodulator Passband "

Justify or Exclude

Parent: /FM_Modulation_Demodulation_03

Child Systems: Analytic Signal, Check Signal Attributes, Output zeros until signal is available (Ho), Subsystem, Subsystem1, Time and Sample time

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	1
Decision	NA	100% (2/2) decision outcomes
Execution	NA	100% (19/19) objective outcomes

Full Coverage

Model Object	Metric
Product block "Product"	Execution
Product block "Product1"	Execution
Product block "Product3"	Execution
Constant block "Constant"	Execution

3. SubSystem block "Analytic Signal"

Justify or Exclude

Parent: FM_Modulation_Demodulation_03/FM Demodulator Passband

Child Systems: Check Signal Attributes

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	0
Execution	NA	100% (4/4) objective outcomes

Full Coverage

Model Object	Metric
DiscreteFir block "Digital Filter"	Execution
S-Function block "Delay"	Execution
RealImagToComplex block "Join"	Execution

4. SubSystem block "Check Signal Attributes"

Justify or Exclude

Parent: FM_Modulation_Demodulation_03/FM Demodulator Passband /Analytic Signal

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	0
Execution	NA	100% (1/1) objective outcomes

Full Coverage

Model Object	Metric
S-Function block "Check Signal Attributes"	Execution

5. SubSystem block "Check Signal Attributes"

Justify or Exclude

Parent: FM_Modulation_Demodulation_03/FM Demodulator Passband

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	0
Execution	NA	100% (1/1) objective outcomes

Full Coverage

Model Object	Metric
S-Function block "Check Signal Attributes"	Execution

6. SubSystem block "Output zeros until signal is available ..."

Justify or Exclude

Parent: FM_Modulation_Demodulation_03/FM Demodulator Passband

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	1
Decision	NA	100% (2/2) decision outcomes
Execution	NA	100% (2/2) objective outcomes

Full Coverage

Model Object	Metric
Switch block "Switch"	Decision, Execution
S-Function block "N-Sample Enable"	Execution

7. SubSystem block "Subsystem"

Justify or Exclude

Parent: FM_Modulation_Demodulation_03/FM Demodulator Passband

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	0
Execution	NA	100% (3/3) objective outcomes

Full Coverage

Model Object	Metric
Gain block "Gain"	Execution
S-Function block "Delay"	Execution
Trigonometry block "Complex Exponential"	Execution

8. SubSystem block "Subsystem1"

Justify or Exclude

Parent: FM_Modulation_Demodulation_03/FM Demodulator Passband
Child Systems: Difference

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	0
Execution	NA	100% (3/3) objective outcomes

Full Coverage

Model Object	Metric
S-Function block "Unwrap"	Execution
ComplexToMagnitudeAngle block "Complex to	Execution

Magnitude-Angle"

9. SubSystem block "Difference"

Justify or Exclude

Parent: FM_Modulation_Demodulation_03/FM Demodulator Passband /Subsystem1

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	0
Execution	NA	100% (1/1) objective outcomes

Full Coverage

Model Object	Metric
Sum block "Diff"	Execution

10. SubSystem block "Time and Sample time"

Justify or Exclude

Parent: FM_Modulation_Demodulation_03/FM Demodulator Passband

Child Systems: Difference

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	0
Execution	NA	100% (2/2) objective outcomes

Full Coverage

Model Object	Metric
S-Function block "Time"	Execution

11. SubSystem block "Difference"

Justify or Exclude

Parent: FM_Modulation_Demodulation_03/FM Demodulator Passband /Time and Sample time

Metric	Coverage (this object)	Coverage (inc. descendants)

Cyclomatic Complexity	0	0
Execution	NA	100% (1/1) objective outcomes

Full Coverage

Model Object	Metric
Sum block "Diff"	Execution

12. SubSystem block "Subsystem(Indirect FM) "

Justify or Exclude

Parent: /FM_Modulation_Demodulation_03

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	0
Execution	NA	100% (7/7) objective outcomes

Full Coverage

Model Object	Metric
DiscreteIntegrator block "Discrete-Time Integrator "	Execution
Gain block "Gain1"	Execution
Gain block "Gain2 "	Execution
Gain block "Kf Gain"	Execution
Sum block "Sum"	Execution
Trigonometry block "Trignometric Function"	Execution
Constant block "fc constant"	Execution

13. SubSystem block "Subsystem(Phase lock loop) "

Justify or Exclude

Parent: /FM_Modulation_Demodulation_03

Child Systems: Continuous-Time VCO

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	0
Execution	NA	100% (10/10) objective outcomes

Full Coverage

Model Object	Metric
Gain block "Gain3 "	Execution
Product block "MatrixMultiply"	Execution
StateSpace block "Analog Filter Design "	Execution

14. SubSystem block "Continuous-Time VCO "

Justify or Exclude

Parent: FM_Modulation_Demodulation_03/Subsystem(Phase lock loop)
Child Systems: Check Signal Attributes, Modulo Integrator

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	0
Execution	NA	100% (7/7) objective outcomes

Full Coverage

Model Object	Metric
Fcn block "sin"	Execution
Gain block "Sensitivity"	Execution
Sum block "Sum"	Execution
S-Function block "Inherit Shape"	Execution
Constant block "Carrier frequency1"	Execution

15. SubSystem block "Check Signal Attributes"

Justify or Exclude

Parent: FM_Modulation_Demodulation_03/Subsystem(Phase lock loop) /Continuous-Time VCO

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	0
Execution	NA	100% (1/1) objective outcomes

Full Coverage

Model Object	Metric
S-Function block "Check Signal Attributes"	Execution

16. SubSystem block "Modulo Integrator"

Justify or Exclude

Parent: FM_Modulation_Demodulation_03/Subsystem(Phase lock loop) /Continuous-Time VCO

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	0
Execution	NA	100% (1/1) objective outcomes

Full Coverage

Model Object	Metric
Integrator block "Modulo Integrator"	Execution