Coverage Report for FBFunctions

Table of Contents

Analysis Information

Model Information

Model version	1.67
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Harness information

Harness model(s)	FBFunctions_Harness_NOT
Harness model owner	FBFunctions

Simulation Optimization Options

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

Coverage Options

Analyzed model	FBFunctions_Harness_NOT/NOT_DUPLEX
Logic block short circuiting	off
MCDC mode	masking

Tests

Test#	Started execution	Ended execution
Test 1	03-Feb-2019 15:27:36	03-Feb-2019 15:28:04

Summary

Model Hierarchy/Complexity		Test 1							
		Decision		Condition		MCDC		Execution	
1. NOT_DUPLEX	18	94%	▬▬	98%	▬▬	90%	▬▬	99%	▬▬
2. . . . NOT	8	100%	▬▬	100%	▬▬	100%	▬▬	100%	▬▬
3. . . . . 1_val_shift_register	2	NA		NA		NA		100%	▬▬
4. . . . . Data 1	1	NA		NA		NA		100%	▬▬
5. . . . . Unit Delay Enabled Resettable	1	NA		NA		NA		100%	▬▬
6. . . . . Type 1	1	NA		NA		NA		100%	▬▬
7. . . . . Unit Delay Enabled Resettable	1	NA		NA		NA		100%	▬▬
8. . . . . . . TypeCheck1T2D	1	100%	▬▬	100%	▬▬	100%	▬▬	100%	▬▬
9. . . . . code_type_bit		NA		NA		NA		100%	▬▬
10. . . . . cond_generate_error_code	1	100%	▬▬	NA		NA		100%	▬▬
11. . . . . code_no_error		NA		NA		NA		100%	▬▬
12. . . . . isType2		NA		100%	▬▬	NA		100%	▬▬
13. . . . . isType		NA		100%	▬▬	NA		100%	▬▬
14. . . . . typeMask		NA		NA		NA		100%	▬▬
15. . . . . isType1		NA		100%	▬▬	NA		100%	▬▬
16. . . . . typeMask		NA		NA		NA		100%	▬▬
17. . . . . . . Unit Delay Enabled Resettable Synchronous8	1	NA		NA		NA		100%	▬▬
18. . . . . Unit Delay Enabled Resettable	1	NA		NA		NA		100%	▬▬
19. . . . . . . Unit Delay Enabled Resettable Synchronous9	1	NA		NA		NA		100%	▬▬
20. . . . . Unit Delay Enabled Resettable	1	NA		NA		NA		100%	▬▬
21. . . . . bool type		NA		NA		NA		100%	▬▬
22. . . . . . . isType		NA		100%	▬▬	NA		100%	▬▬
23. . . . . typeMask		NA		NA		NA		100%	▬▬
24. . . . . . . safebool type		NA		NA		NA		100%	▬▬
25. . . . . . . safebool type1		NA		NA		NA		100%	▬▬
26. . . . NOT1	8	100%	▬▬	100%	▬▬	100%	▬▬	100%	▬▬
27. . . . . . . 1_val_shift_register	2	NA		NA		NA		100%	▬▬
28. . . . . Data 1	1	NA		NA		NA		100%	▬▬
29. . . . . Unit Delay Enabled Resettable	1	NA		NA		NA		100%	▬▬
30. . . . . Type 1	1	NA		NA		NA		100%	▬▬

#		C.C.	Condition		Decision		MCDC		Execution	
31.	Unit Delay Enabled Resettable	1	NA		NA		NA		100%	▬
32.	TypeCheck1T2D	1	100%	▬	100%	▬	100%	▬	100%	▬
33.	code_type_bit		NA		NA		NA		100%	▬
34.	cond_generate_error_code	1	100%	▬	NA		NA		100%	▬
35.	code_no_error		NA		NA		NA		100%	▬
36.	isType2		NA		100%	▬	NA		100%	▬
37.	isType		NA		100%	▬	NA		100%	▬
38.	typeMask		NA		NA		NA		100%	▬
39.	isType1		NA		100%	▬	NA		100%	▬
40.	typeMask		NA		NA		NA		100%	▬
41.	Unit Delay Enabled Resettable Synchronous8	1	NA		NA		NA		100%	▬
42.	Unit Delay Enabled Resettable	1	NA		NA		NA		100%	▬
43.	Unit Delay Enabled Resettable Synchronous9	1	NA		NA		NA		100%	▬
44.	Unit Delay Enabled Resettable	1	NA		NA		NA		100%	▬
45.	bool type		NA		NA		NA		100%	▬
46.	isType		NA		100%	▬	NA		100%	▬
47.	typeMask		NA		NA		NA		100%	▬
48.	safebool type		NA		NA		NA		100%	▬
49.	safebool type1		NA		NA		NA		100%	▬
50. . . .	State Comparator	1	50%	▬	100%	▬	NA		80%	▬
51.	Compare To Zero		NA		100%	▬	NA		100%	▬
52. . . .	combine_error_codes		NA		NA		NA		100%	▬

Details

1. SubSystem block "NOT_DUPLEX"

Child Systems: NOT, NOT1, State Comparator, combine_error_codes

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	1	18
Condition	NA	98% (78/80) condition outcomes
Decision	NA	94% (17/18) decision outcomes
MCDC	NA	90% (18/20) conditions reversed the outcome
Execution	NA	99% (70/71) objective outcomes

Logic block "Logical Operator"

Parent: FBFunctions_Harness_NOT/NOT_DUPLEX
Uncovered Links: ➡

Metric	Coverage
Cyclomatic Complexity	0
Condition	50% (2/4) condition outcomes
MCDC	0% (0/2) conditions reversed the outcome
Execution	100% (1/1) objective outcomes

Conditions analyzed

Description	True	False
input port 1	88	0
input port 2	88	0

MC/DC analysis (combinations in parentheses did not occur)

Decision/Condition	True Out	False Out
expression for output		
input port 1	**T**T	(**F**T)
input port 2	T**T**	(T**F**)

Full Coverage

Model Object	Metric
RelationalOperator block "Relational Operator"	Condition, Execution
Constant block "Num Ins"	Execution
Constant block "Num Outs"	Execution
Constant block "fb_num_constant"	Execution

2. SubSystem block "NOT"

Parent: FBFunctions_Harness_NOT/NOT_DUPLEX
                  1_val_shift_register, TypeCheck1T2D, Unit Delay Enabled Resettable

Child Systems: Synchronous8, Unit Delay Enabled Resettable Synchronous9, bool type, isType, safebool type, safebool type1

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	8
Condition	NA	100% (32/32) condition outcomes
Decision	NA	100% (8/8) decision outcomes
MCDC	NA	100% (9/9) conditions reversed the outcome
Execution	NA	100% (30/30) objective outcomes

Logic block "Logical Operator3"

Justify or Exclude

Parent: FBFunctions_Harness_NOT/NOT_DUPLEX/NOT

Metric	Coverage
Cyclomatic Complexity	0
Condition	100% (4/4) condition outcomes
MCDC	see Logical Operator
Execution	100% (1/1) objective outcomes

Full Coverage

Model Object	Metric
Logic block "Logical Operator"	Condition, MCDC, Execution
Logic block "Logical Operator1"	Condition, MCDC, Execution
Logic block "Logical Operator2"	Condition, MCDC, Execution
Logic block "Logical Operator4"	Condition, Execution
Logic block "Logical Operator6"	Condition, Execution
Switch block "Switch"	Decision, Execution
Switch block "Switch1"	Decision, Execution
Switch block "Switch2"	Decision, Execution
S-Function block "Bitwise Operator"	Execution
Constant block "Constant"	Execution
Constant block "Constant1"	Execution

3. SubSystem block "1_val_shift_register"

[Justify or Exclude](#)

Parent:	FBFunctions_Harness_NOT/NOT_DUPLEX/NOT
Child Systems:	Data 1, Type 1

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

4. SubSystem block "Data 1"

[Justify or Exclude](#)

Parent:	FBFunctions_Harness_NOT/NOT_DUPLEX/NOT/1_val_shift_register
Child Systems:	Unit Delay Enabled Resettable

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

5. SubSystem block "Unit Delay Enabled Resettable"

[Justify or Exclude](#)

Parent:	FBFunctions_Harness_NOT/NOT_DUPLEX/NOT/1_val_shift_register/Data 1

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

Full Coverage

Model Object	Metric
Delay block "Enabled Resettable Delay"	Execution

6. SubSystem block "Type 1"

Parent: FBFunctions_Harness_NOT/NOT_DUPLEX/NOT/1_val_shift_register
Child Systems: Unit Delay Enabled Resettable

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

7. SubSystem block "Unit Delay Enabled Resettable"

Parent: FBFunctions_Harness_NOT/NOT_DUPLEX/NOT/1_val_shift_register/Type 1

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

Full Coverage

Model Object	Metric
Delay block "Enabled Resettable Delay"	Execution

8. SubSystem block "TypeCheck1T2D"

Parent: FBFunctions_Harness_NOT/NOT_DUPLEX/NOT
Child Systems: code_type_bit, cond_generate_error_code, isType2

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	1
Condition	NA	100% (10/10) condition outcomes
Decision	NA	100% (2/2) decision outcomes
MCDC	NA	100% (2/2) conditions reversed the outcome
Execution	NA	100% (9/9) objective outcomes

Full Coverage

Model Object	Metric
Logic block "Logical Operator"	Condition, MCDC, Execution

9. SubSystem block "code_type_bit"

Justify or Exclude

Parent: FBFunctions_Harness_NOT/NOT_DUPLEX/NOT/TypeCheck1T2D

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

Full Coverage

Model Object	Metric
Constant block "type1"	Execution

10. SubSystem block "cond_generate_error_code"

Justify or Exclude

Parent: FBFunctions_Harness_NOT/NOT_DUPLEX/NOT/TypeCheck1T2D
Child Systems: code_no_error

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

11. SubSystem block "code_no_error"

Parent: FBFunctions_Harness_NOT/NOT_DUPLEX/NOT/TypeCheck1T2D/cond_generate_error_code

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

Full Coverage

Model Object	Metric
Constant block "type1"	Execution

12. SubSystem block "isType2"

Parent:	FBFunctions_Harness_NOT/NOT_DUPLEX/NOT/TypeCheck1T2D
Child Systems:	isType, isType1

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	0
Condition	NA	100% (8/8) condition outcomes
Execution	NA	100% (5/5) objective outcomes

Logic block "Logical Operator"

Parent:	FBFunctions_Harness_NOT/NOT_DUPLEX/NOT/TypeCheck1T2D/isType2

Metric	Coverage
Cyclomatic Comple	