

Column 1	Test Name	Description	RST	CE	INP_VALID	MODE	CMD	OPA	OPB	CIN	Expected RES	COUT	OFLOW	T _r	G/L/E	ERR	Comments/Check	STATUS
Dir	ADD	Add two positives	0	1	11	1	ADD	10	20	0	30	0	0	0		0		PASS
Dir	SUB	Subtract positives	0	1	11	1	SUB	25	10	0	15	0	0	0		0		PASS
Dir	ADD_CIN	Add with carry-in	0	1	11	1	ADD_CIN	5	7	1	13	0	0	0		0		PASS
Dir	SUB_CIN	Sub with carry-in	0	1	11	1	SUB_CIN	20	4	1	15	0	0	0		0		PASS
Dir	CMP_EQ	Compare equal	0	1	11	1	CMP	10	10	0	0	0	0	001		0		PASS
Dir	CMP_GT	Compare greater	0	1	11	1	CMP	15	10	0	0	0	0	100		0		PASS
Dir	CMP_LT	Compare less	0	1	11	1	CMP	7	20	0	0	0	0	010		0		PASS
Dir	INC_A	Increment A	0	1	1	1	INC_A	8	X	0	9	0	0	0		0		PASS
Dir	DEC_A	Decrement A	0	1	1	1	DEC_A	8	X	0	7	0	0	0		0		PASS
Dir	INC_B	Increment B	0	1	10	1	INC_B	X	4	0	5	0	0	0		0		PASS
Dir	DEC_B	Decrement B	0	1	10	1	DEC_B	X	9	0	8	0	0	0		0		PASS
Dir	NOT_A	Bitwise NOT A	0	1	1	0	NOT_A	8'hAA	X	0	8'h55	0	0	0		0		PASS
Dir	SHL1_A	Shift left A	0	1	1	0	SHL1_A	8'h05	X	0	8'h0A	0	0	0		0		PASS
Dir	SHR1_A	Shift right A	0	1	1	0	SHR1_A	8'h08	X	0	8'h04	0	0	0		0		PASS
Dir	AND	Bitwise AND	0	1	11	0	AND	8'hF0	8'h0F	0	8'h00	0	0	0		0		PASS
Dir	OR	Bitwise OR	0	1	11	0	OR	8'hF0	8'h0F	0	8'hFF	0	0	0		0		PASS
Dir	XOR	Bitwise XOR	0	1	11	0	XOR	8'hF0	8'h0F	0	8'hFF	0	0	0		0		PASS
Dir	INC_MUL	Add and Mul	0	1	11	1	INC_MUL	8	2	0	27	0	0	0		0		PASS
Dir	SHL_MUL	Shift and Mul	0	1	11	1	SHL_MUL	3	2	0	12	0	0	0		0		PASS
Dir	ROL	Rotate left	0	1	11	0	ROL	8'h81	1	0	8'h03	0	0	0		0		PASS
Dir	ROR	Rotate right	0	1	11	0	ROR	8'h03	1	0	8'h81	0	0	0		0		PASS
Dir	ADD_SIGN1	Add signed +ve + -ve	0	1	11	1	ADD_SIGN	50	-10	0	40	0	0	100		0		PASS
Dir	ADD_SIGN_NEG	Add signed +ve + +ve	0	1	11	1	ADD_SIGN	-10	20	0	10	0	0	010		0	To hit lesser tha	PASS
Dir	ADD_SIGN_EQ	Add signed +ve + +ve	0	1	11	1	ADD_SIGN	20	20	0	40	0	0	001		0	To hit equal to	PASS
Dir	SUB_SIGN1	Sub signed +ve - +ve	0	1	11	1	SUB_SIGN	70	20	0	50	0	0	100		0		PASS
Dir	SUB_SIGN2	Sub signed -ve - +ve	0	1	11	1	SUB_SIGN	-10	20	0	-30	0	0	010		0		PASS
Dir	SUB_SIGN_EQ	Sub signed +ve - +ve	0	1	11	1	SUB_SIGN	20	20	0	0	0	0	001		0	To hit equal to	PASS
Dir	NAND	Bitwise NAND	0	1	11	0	NAND	8'hAA	8'h0F	0	8'hF5	0	0	-		0		PASS
Dir	NOR	Bitwise NOR	0	1	11	0	NOR	8'hAA	8'h0F	0	8'h50	0	0	-		0		PASS
Dir	XNOR	Bitwise XNOR	0	1	11	0	XNOR	8'hF0	8'h0F	0	8'h00	0	0	-		0		PASS
Dir	NOT_B	Bitwise NOT_B	0	1	10	0	NOT_B	X	8'h3C	0	8'hC3	0	0	-		0		PASS
Dir	SHR1_B	Shift right opB by 1	0	1	10	0	SHR1_B	X	8'hB2	0	8'h59	0	0	-		0		PASS
Dir	SHL1_B	Shift left opB by 1	0	1	10	0	SHL1_B	X	8'h55	0	8'hFF	0	0	-		0		PASS
Error	ROL_ERR	Rotate left	0	1	11	0	ROL	8'h81	8'hF1	0	8'h03	0	0	0		1		PASS
Error	ROR_ERR	Rotate right	0	1	11	0	ROR	8'h03	8'hF1	0	8'h81	0	0	0		1		PASS
Error	ERR_CMD	Invalid CMD (out of range)	0	1	11	1	4'b1111	5	5	0	X	X	X	XXX		1	Should raise ERI	PASS
Error	ERR_INP_VALID	Invalid inp_valid for 2-op	0	1	10	1	ADD	10	10	0	X	X	X	XXX		1	ERR for two op i	PASS
Error	ERR_INP_VALIDA	Invalid inp_valid for opA only	0	1	10	1	INC_A	15	X	0	X	X	X	XXX		1	ERR: B only valic	PASS

