

A	B	C	D	F
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	0	1	1	0
0	1	0	0	0
0	1	0	1	1
0	1	1	0	1
0	1	1	1	1
1	0	0	0	1
1	0	0	1	1
1	0	1	0	1
1	0	1	1	1
1	1	0	0	0
1	1	0	1	0
1	1	1	0	0
1	1	1	1	0

$\sim AB\sim CD + \sim ABC\sim D + \sim ABCD + A\sim B\sim C\sim D + A\sim B\sim CD + A\sim BC\sim D + A\sim BCD =$
 $\sim AB\sim CD + \sim ABC + A\sim B = \sim AB\sim CD + \sim ABC + A\sim B + \sim ABCD =$
 $A\sim B + \sim ABC + \sim ABD =$
 $NAND(NAND(A, \sim B, 1), NAND(\sim A, B, C), NAND(\sim A, B, D))$