



**b**

| Steps | Operation          | Voltage Pulses |            |             |
|-------|--------------------|----------------|------------|-------------|
|       |                    | $V_A$          | $V_B$      | $V_C$       |
| 1     | $C=0$              | HZ             | HZ         | $V_{clear}$ |
| 2     | $A \text{ IMP } C$ | $V_{cond}$     | HZ         | $V_{set}$   |
| 3     | $B \text{ IMP } C$ | HZ             | $V_{cond}$ | $V_{set}$   |

HZ=High Impedance

**c**

| Step 1 |   |   |   | Step 2 |     |      | Step 3 |      |       | NAND Truth Table |     |       |
|--------|---|---|---|--------|-----|------|--------|------|-------|------------------|-----|-------|
| $C$    |   |   |   | $A$    | $C$ | $C'$ | $B$    | $C'$ | $C''$ | $A$              | $B$ | $C''$ |
| 0      | 0 | 0 | 1 | 0      | 0   | 1    | 0      | 1    | 1     | 0                | 0   | 1     |
| 0      | 0 | 0 | 1 | 0      | 0   | 1    | 1      | 1    | 1     | 0                | 1   | 1     |
| 0      | 1 | 0 | 0 | 0      | 1   | 0    | 0      | 0    | 1     | 1                | 0   | 1     |
| 0      | 1 | 0 | 0 | 0      | 1   | 0    | 1      | 0    | 0     | 1                | 1   | 0     |

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