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ENTITY xr2_x1 IS
GENERIC (
    CONSTANT area           : NATURAL := 2250;
    CONSTANT cin_i0         : NATURAL := 21;
    CONSTANT cin_i1         : NATURAL := 22;
    CONSTANT rdown_i0_q     : NATURAL := 2850;
    CONSTANT rdown_i1_q     : NATURAL := 2850;
    CONSTANT rup_i0_q       : NATURAL := 3210;
    CONSTANT rup_i1_q       : NATURAL := 3210;
    CONSTANT tplh_i1_q      : NATURAL := 261;
    CONSTANT tphl_i0_q      : NATURAL := 292;
    CONSTANT tplh_i0_q      : NATURAL := 293;
    CONSTANT tphh_i0_q      : NATURAL := 366;
    CONSTANT tphl_i1_q      : NATURAL := 377;
    CONSTANT tpll_i1_q      : NATURAL := 388;
    CONSTANT tpll_i0_q      : NATURAL := 389;
    CONSTANT tphh_i1_q      : NATURAL := 405;
    CONSTANT transistors    : NATURAL := 12
);
PORT (
    i0      : IN  BIT;
    i1      : IN  BIT;
    q       : OUT BIT;
    vdd     : IN  BIT;
    vss     : IN  BIT
);
END xr2_x1;

ARCHITECTURE vbe OF xr2_x1 IS

BEGIN
    ASSERT ((vdd AND NOT (vss)) = '1')
    REPORT "power supply is missing on xr2_x1"
    SEVERITY WARNING;
    q <= (i0 XOR i1) AFTER 1000 ps;
END;

```