```
MODULE BLK0 ;
TYPE GENERAL;
DIMENSIONS   1314 0  1314 2280   0 2280 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  A<0>  I  121.25  0  2 METAL2 ;
  A<1>  I  100.75  0  2 METAL2 ;
  A<2>  I  80.25  0  2 METAL2 ;
  A<3>  I  59.75  0  2 METAL2 ;
  A<4>  I  23.75  0  2 METAL2 ;
  A<5>  I  18.75  0  2 METAL2 ;
  Din<0>  I  239.75  0  2 METAL2 ;
  Din<1>  I  261.25  0  2 METAL2 ;
  Din<10>  I  454.75  0  2 METAL2 ;
  Din<11>  I  476.25  0  2 METAL2 ;
  Din<12>  I  497.75  0  2 METAL2 ;
  Din<13>  I  519.25  0  2 METAL2 ;
  Din<14>  I  540.75  0  2 METAL2 ;
  Din<15>  I  562.25  0  2 METAL2 ;
  Din<16>  I  583.75  0  2 METAL2 ;
  Din<17>  I  605.25  0  2 METAL2 ;
  Din<18>  I  626.75  0  2 METAL2 ;
  Din<19>  I  648.25  0  2 METAL2 ;
  Din<2>  I  282.75  0  2 METAL2 ;
  Din<20>  I  669.75  0  2 METAL2 ;
  Din<21>  I  691.25  0  2 METAL2 ;
  Din<22>  I  712.75  0  2 METAL2 ;
  Din<23>  I  734.25  0  2 METAL2 ;
  Din<24>  I  755.75  0  2 METAL2 ;
  Din<25>  I  777.25  0  2 METAL2 ;
  Din<26>  I  798.75  0  2 METAL2 ;
  Din<27>  I  820.25  0  2 METAL2 ;
  Din<28>  I  841.75  0  2 METAL2 ;
  Din<29>  I  863.25  0  2 METAL2 ;
  Din<3>  I  304.25  0  2 METAL2 ;
  Din<30>  I  884.75  0  2 METAL2 ;
  Din<31>  I  906.25  0  2 METAL2 ;
  Din<32>  I  927.75  0  2 METAL2 ;
  Din<33>  I  949.25  0  2 METAL2 ;
  Din<34>  I  970.75  0  2 METAL2 ;
  Din<35>  I  992.25  0  2 METAL2 ;
  Din<36>  I  1013.75  0  2 METAL2 ;
  Din<37>  I  1035.25  0  2 METAL2 ;
  Din<38>  I  1056.75  0  2 METAL2 ;
  Din<39>  I  1078.25  0  2 METAL2 ;
  Din<4>  I  325.75  0  2 METAL2 ;
  Din<40>  I  1099.75  0  2 METAL2 ;
  Din<41>  I  1121.25  0  2 METAL2 ;
  Din<42>  I  1142.75  0  2 METAL2 ;
  Din<43>  I  1164.25  0  2 METAL2 ;
  Din<44>  I  1185.75  0  2 METAL2 ;
  Din<45>  I  1207.25  0  2 METAL2 ;
  Din<46>  I  1228.75  0  2 METAL2 ;
  Din<47>  I  1250.25  0  2 METAL2 ;
  Din<48>  I  1271.75  0  2 METAL2 ;
  Din<49>  I  1293.25  0  2 METAL2 ;
  Din<5>  I  347.25  0  2 METAL2 ;
  Din<6>  I  368.75  0  2 METAL2 ;
  Din<7>  I  390.25  0  2 METAL2 ;
  Din<8>  I  411.75  0  2 METAL2 ;
  Din<9>  I  433.25  0  2 METAL2 ;
  Dout<0>  O  246.25  0  4 METAL2 ;
  Dout<1>  O  267.75  0  4 METAL2 ;
  Dout<10>  O  461.25  0  4 METAL2 ;
  Dout<11>  O  482.75  0  4 METAL2 ;
  Dout<12>  O  504.25  0  4 METAL2 ;
  Dout<13>  O  525.75  0  4 METAL2 ;
  Dout<14>  O  547.25  0  4 METAL2 ;
  Dout<15>  O  568.75  0  4 METAL2 ;
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```
    Dout<16>  O  590.25  0  4 METAL2 ;
    Dout<17>  O  611.75  0  4 METAL2 ;
    Dout<18>  O  633.25  0  4 METAL2 ;
    Dout<19>  O  654.75  0  4 METAL2 ;
    Dout<2>  O  289.25  0  4 METAL2 ;
    Dout<20>  O  676.25  0  4 METAL2 ;
    Dout<21>  O  697.75  0  4 METAL2 ;
    Dout<22>  O  719.25  0  4 METAL2 ;
    Dout<23>  O  740.75  0  4 METAL2 ;
    Dout<24>  O  762.25  0  4 METAL2 ;
    Dout<25>  O  783.75  0  4 METAL2 ;
    Dout<26>  O  805.25  0  4 METAL2 ;
    Dout<27>  O  826.75  0  4 METAL2 ;
    Dout<28>  O  848.25  0  4 METAL2 ;
    Dout<29>  O  869.75  0  4 METAL2 ;
    Dout<3>  O  310.75  0  4 METAL2 ;
    Dout<30>  O  891.25  0  4 METAL2 ;
    Dout<31>  O  912.75  0  4 METAL2 ;
    Dout<32>  O  934.25  0  4 METAL2 ;
    Dout<33>  O  955.75  0  4 METAL2 ;
    Dout<34>  O  977.25  0  4 METAL2 ;
    Dout<35>  O  998.75  0  4 METAL2 ;
    Dout<36>  O  1020.25  0  4 METAL2 ;
    Dout<37>  O  1041.75  0  4 METAL2 ;
    Dout<38>  O  1063.25  0  4 METAL2 ;
    Dout<39>  O  1084.75  0  4 METAL2 ;
    Dout<4>  O  332.25  0  4 METAL2 ;
    Dout<40>  O  1106.25  0  4 METAL2 ;
    Dout<41>  O  1127.75  0  4 METAL2 ;
    Dout<42>  O  1149.25  0  4 METAL2 ;
    Dout<43>  O  1170.75  0  4 METAL2 ;
    Dout<44>  O  1192.25  0  4 METAL2 ;
    Dout<45>  O  1213.75  0  4 METAL2 ;
    Dout<46>  O  1235.25  0  4 METAL2 ;
    Dout<47>  O  1256.75  0  4 METAL2 ;
    Dout<48>  O  1278.25  0  4 METAL2 ;
    Dout<49>  O  1299.75  0  4 METAL2 ;
    Dout<5>  O  353.75  0  4 METAL2 ;
    Dout<6>  O  375.25  0  4 METAL2 ;
    Dout<7>  O  396.75  0  4 METAL2 ;
    Dout<8>  O  418.25  0  4 METAL2 ;
    Dout<9>  O  439.75  0  4 METAL2 ;
    Wr  I  13.75  0  4 METAL2 ;
    Vdd  PWR  1309  0  10 METAL1 ;
    Vdd  PWR  1309  2280  10 METAL1 ;
    GND  PWR  5  0  10 METAL1 ;
    GND  PWR  5  2280  10 METAL1 ;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK1 ;
  TYPE GENERAL;
  DIMENSIONS   146.75 0  146.75 273.5   0 273.5 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    N$97  O  146.75  261.5  2 METAL2 ;
    B<0>  O  0  47  2 METAL2 ;
    B<1>  O  0  114.5  2 METAL2 ;
    B<2>  O  0  182  2 METAL2 ;
    D<0>  I  146.75  53  2 METAL2 ;
    D<1>  I  146.75  120.5  2 METAL2 ;
    D<2>  I  146.75  188  2 METAL2 ;
    D<3>  I  146.75  255.5  2 METAL2 ;
    MRB  I  61.75  0  2 METAL2 ;
    MRB  I  61.75  273.5  2 METAL2 ;
    PROG4CLK  I  55.75  0  2 METAL2 ;
    PROG4CLK  I  55.75  273.5  2 METAL2 ;
    Vdd0  PWR  12.75  273.5  3 METAL1 ;
    Vdd0  PWR  12.75  0  3 METAL1 ;
    Vdd1  PWR  91  273.5  3 METAL1 ;
```

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    Vdd1  PWR  91  0  3 METAL1 ;
    GND0  PWR  36.75  273.5  3 METAL1 ;
    GND0  PWR  36.75  0  3 METAL1 ;
    GND1  PWR  129.75  273.5  3 METAL1 ;
    GND1  PWR  129.75  0  3 METAL1 ;
  ptTerm#3 F 146.75 15 3 METAL2;
  ptTerm#4 F 146.75 20 3 METAL2;
  ptTerm#5 F 146.75 25 3 METAL2;
  ptTerm#6 F 146.75 30 3 METAL2;
  ptTerm#7 F 146.75 35 3 METAL2;
  ptTerm#8 F 146.75 40 3 METAL2;
  ptTerm#16 F 146.75 80 3 METAL2;
  ptTerm#17 F 146.75 85 3 METAL2;
  ptTerm#18 F 146.75 90 3 METAL2;
  ptTerm#19 F 146.75 95 3 METAL2;
  ptTerm#20 F 146.75 100 3 METAL2;
  ptTerm#21 F 146.75 105 3 METAL2;
  ptTerm#30 F 146.75 150 3 METAL2;
  ptTerm#31 F 146.75 155 3 METAL2;
  ptTerm#32 F 146.75 160 3 METAL2;
  ptTerm#33 F 146.75 165 3 METAL2;
  ptTerm#34 F 146.75 170 3 METAL2;
  ptTerm#35 F 146.75 175 3 METAL2;
  ptTerm#43 F 146.75 215 3 METAL2;
  ptTerm#44 F 146.75 220 3 METAL2;
  ptTerm#45 F 146.75 225 3 METAL2;
  ptTerm#46 F 146.75 230 3 METAL2;
  ptTerm#47 F 146.75 235 3 METAL2;
  ptTerm#48 F 146.75 240 3 METAL2;
  ptTerm#49 F 146.75 245 3 METAL2;
  ptTerm#3 F 0 15 3 METAL2;
  ptTerm#4 F 0 20 3 METAL2;
  ptTerm#5 F 0 25 3 METAL2;
  ptTerm#6 F 0 30 3 METAL2;
  ptTerm#7 F 0 35 3 METAL2;
  ptTerm#8 F 0 40 3 METAL2;
  ptTerm#16 F 0 80 3 METAL2;
  ptTerm#17 F 0 85 3 METAL2;
  ptTerm#18 F 0 90 3 METAL2;
  ptTerm#19 F 0 95 3 METAL2;
  ptTerm#20 F 0 100 3 METAL2;
  ptTerm#21 F 0 105 3 METAL2;
  ptTerm#30 F 0 150 3 METAL2;
  ptTerm#31 F 0 155 3 METAL2;
  ptTerm#32 F 0 160 3 METAL2;
  ptTerm#33 F 0 165 3 METAL2;
  ptTerm#34 F 0 170 3 METAL2;
  ptTerm#35 F 0 175 3 METAL2;
  ptTerm#43 F 0 215 3 METAL2;
  ptTerm#44 F 0 220 3 METAL2;
  ptTerm#45 F 0 225 3 METAL2;
  ptTerm#46 F 0 230 3 METAL2;
  ptTerm#47 F 0 235 3 METAL2;
  ptTerm#48 F 0 240 3 METAL2;
  ptTerm#49 F 0 245 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK6 ;
  TYPE GENERAL;
  DIMENSIONS   196 0  196 239.5   0 239.5 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  94.25  0  4 METAL2 ;
    in1  I  76.25  0  4 METAL2 ;
    in2  I  64.25  0  4 METAL2 ;
    in3  I  46.25  0  4 METAL2 ;
    in4  I  34.25  0  4 METAL2 ;
    out0  O  196  47.75  4 METAL2 ;
    out1  O  196  56.25  4 METAL2 ;
```

```
    out10  O  196  150.25  4 METAL2 ;
    out11  O  196  158.75  4 METAL2 ;
    out12  O  196  170.75  4 METAL2 ;
    out13  O  196  179.25  4 METAL2 ;
    out14  O  196  191.25  4 METAL2 ;
    out15  O  196  199.75  4 METAL2 ;
    out2  O  196  68.25  4 METAL2 ;
    out3  O  196  76.75  4 METAL2 ;
    out4  O  196  88.75  4 METAL2 ;
    out5  O  196  97.25  4 METAL2 ;
    out6  O  196  109.25  4 METAL2 ;
    out7  O  196  117.75  4 METAL2 ;
    out8  O  196  129.75  4 METAL2 ;
    out9  O  196  138.25  4 METAL2 ;
    Vdd  PWR  4.5  239.5  5 METAL1 ;
    Vdd  PWR  4.5  0  5 METAL1 ;
    GND  PWR  193.5  239.5  5 METAL1 ;
    GND  PWR  193.5  0  5 METAL1 ;
  ptTerm#1 F 5 239.5 3 METAL2;
  ptTerm#2 F 10 239.5 3 METAL2;
  ptTerm#3 F 15 239.5 3 METAL2;
  ptTerm#4 F 20 239.5 3 METAL2;
  ptTerm#21 F 105 239.5 3 METAL2;
  ptTerm#22 F 110 239.5 3 METAL2;
  ptTerm#23 F 115 239.5 3 METAL2;
  ptTerm#24 F 120 239.5 3 METAL2;
  ptTerm#25 F 125 239.5 3 METAL2;
  ptTerm#26 F 130 239.5 3 METAL2;
  ptTerm#27 F 135 239.5 3 METAL2;
  ptTerm#28 F 140 239.5 3 METAL2;
  ptTerm#29 F 145 239.5 3 METAL2;
  ptTerm#30 F 150 239.5 3 METAL2;
  ptTerm#31 F 155 239.5 3 METAL2;
  ptTerm#32 F 160 239.5 3 METAL2;
  ptTerm#33 F 165 239.5 3 METAL2;
  ptTerm#37 F 185 239.5 3 METAL2;
  ptTerm#1 F 5 0 3 METAL2;
  ptTerm#2 F 10 0 3 METAL2;
  ptTerm#3 F 15 0 3 METAL2;
  ptTerm#4 F 20 0 3 METAL2;
  ptTerm#21 F 105 0 3 METAL2;
  ptTerm#22 F 110 0 3 METAL2;
  ptTerm#23 F 115 0 3 METAL2;
  ptTerm#24 F 120 0 3 METAL2;
  ptTerm#25 F 125 0 3 METAL2;
  ptTerm#26 F 130 0 3 METAL2;
  ptTerm#27 F 135 0 3 METAL2;
  ptTerm#28 F 140 0 3 METAL2;
  ptTerm#29 F 145 0 3 METAL2;
  ptTerm#30 F 150 0 3 METAL2;
  ptTerm#31 F 155 0 3 METAL2;
  ptTerm#32 F 160 0 3 METAL2;
  ptTerm#33 F 165 0 3 METAL2;
  ptTerm#37 F 185 0 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK7 ;
  TYPE GENERAL;
  DIMENSIONS   594.75 0  594.75 424   0 424 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    N$2041  I  284.25  0  2 METAL2 ;
    N$2041  I  284.25  424  2 METAL2 ;
    CNT6C  I  449.75  0  2 METAL2 ;
    CNT6C  I  449.75  424  2 METAL2 ;
    IB2TT  I  232.25  0  2 METAL2 ;
    IB2TT  I  232.25  424  2 METAL2 ;
    IINIT1  I  20.75  0  2 METAL2 ;
    IINIT1  I  20.75  424  2 METAL2 ;
```

```
    INIT0B  I  455.75  0  2 METAL2 ;
    INIT0B  I  455.75  424  2 METAL2 ;
    IPLB  I  66.75  0  2 METAL2 ;
    IPLB  I  66.75  424  2 METAL2 ;
    TTDI<0>  O  0  44.5  2 METAL2 ;
    TTDI<1>  O  0  113  2 METAL2 ;
    TTDI<2>  O  0  181.5  2 METAL2 ;
    TTDI<3>  O  0  256  2 METAL2 ;
    TTDI<4>  O  0  312.5  2 METAL2 ;
    TTDI<5>  O  0  387  2 METAL2 ;
    TTDO<0>  I  0  38.5  2 METAL2 ;
    TTDO<1>  I  0  101  2 METAL2 ;
    TTDO<2>  I  0  169.5  2 METAL2 ;
    TTDO<3>  I  0  238  2 METAL2 ;
    TTDO<4>  I  0  306.5  2 METAL2 ;
    TTDO<5>  I  0  375  2 METAL2 ;
    TTRDB  I  151.25  0  2 METAL2 ;
    TTRDB  I  151.25  424  2 METAL2 ;
    TIMBUS<10>  I  382.25  0  2 METAL2 ;
    TIMBUS<10>  I  382.25  424  2 METAL2 ;
    TIMBUS<3>  I  330.25  0  2 METAL2 ;
    TIMBUS<3>  I  330.25  424  2 METAL2 ;
    TIMBUS<6>  I  126.75  0  2 METAL2 ;
    TIMBUS<6>  I  126.75  424  2 METAL2 ;
    TT<0>  B  594.75  50.5  2 METAL2 ;
    TT<1>  B  594.75  119  2 METAL2 ;
    TT<2>  B  594.75  187.5  2 METAL2 ;
    TT<3>  B  0  244  2 METAL2 ;
    TT<4>  B  594.75  318.5  2 METAL2 ;
    TT<5>  B  0  381  2 METAL2 ;
    UCODE<36>  I  594.75  44.5  2 METAL2 ;
    UCODE<37>  I  594.75  131  2 METAL2 ;
    UCODE<37>  I  0  131  2 METAL2 ;
    UCODE<38>  I  594.75  193.5  2 METAL2 ;
    UCODE<39>  I  594.75  262  2 METAL2 ;
    UCODE<40>  I  594.75  324.5  2 METAL2 ;
    UCODE<41>  I  594.75  393  2 METAL2 ;
    A<0>  I  594.75  32.5  2 METAL2 ;
    A<0>  I  0  32.5  2 METAL2 ;
    A<1>  I  0  107  2 METAL2 ;
    A<2>  I  0  175.5  2 METAL2 ;
    A<3>  I  0  250  2 METAL2 ;
    A<4>  I  0  318.5  2 METAL2 ;
    A<5>  I  0  393  2 METAL2 ;
    URADD<0>  O  594.75  62.5  2 METAL2 ;
    URADD<1>  O  0  137  2 METAL2 ;
    URADD<2>  O  0  205.5  2 METAL2 ;
    URADD<3>  O  0  274  2 METAL2 ;
    URADD<4>  O  594.75  336.5  2 METAL2 ;
    URADD<5>  O  594.75  405  2 METAL2 ;
    Vdd0  PWR  35.75  424  3 METAL1 ;
    Vdd0  PWR  35.75  0  3 METAL1 ;
    Vdd1  PWR  81.75  424  3 METAL1 ;
    Vdd1  PWR  81.75  0  3 METAL1 ;
    Vdd10  PWR  560.5  424  3 METAL1 ;
    Vdd10  PWR  560.5  0  3 METAL1 ;
    Vdd2  PWR  111.75  424  3 METAL1 ;
    Vdd2  PWR  111.75  0  3 METAL1 ;
    Vdd3  PWR  156.75  424  3 METAL1 ;
    Vdd3  PWR  156.75  0  3 METAL1 ;
    Vdd4  PWR  217.25  424  3 METAL1 ;
    Vdd4  PWR  217.25  0  3 METAL1 ;
    Vdd5  PWR  269.25  424  3 METAL1 ;
    Vdd5  PWR  269.25  0  3 METAL1 ;
    Vdd6  PWR  315.25  424  3 METAL1 ;
    Vdd6  PWR  315.25  0  3 METAL1 ;
    Vdd7  PWR  367.25  424  3 METAL1 ;
    Vdd7  PWR  367.25  0  3 METAL1 ;
    Vdd8  PWR  406.75  424  3 METAL1 ;
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    Vdd8  PWR  406.75  0  3 METAL1 ;
    Vdd9  PWR  475.75  424  3 METAL1 ;
    Vdd9  PWR  475.75  0  3 METAL1 ;
    GND0  PWR  8.75  424  3 METAL1 ;
    GND0  PWR  8.75  0  3 METAL1 ;
    GND1  PWR  54.75  424  3 METAL1 ;
    GND1  PWR  54.75  0  3 METAL1 ;
    GND10  PWR  528.5  424  3 METAL1 ;
    GND10  PWR  528.5  0  3 METAL1 ;
    GND2  PWR  138.75  424  3 METAL1 ;
    GND2  PWR  138.75  0  3 METAL1 ;
    GND3  PWR  192.25  424  3 METAL1 ;
    GND3  PWR  192.25  0  3 METAL1 ;
    GND4  PWR  244.25  424  3 METAL1 ;
    GND4  PWR  244.25  0  3 METAL1 ;
    GND5  PWR  296.25  424  3 METAL1 ;
    GND5  PWR  296.25  0  3 METAL1 ;
    GND6  PWR  342.25  424  3 METAL1 ;
    GND6  PWR  342.25  0  3 METAL1 ;
    GND7  PWR  394.25  424  3 METAL1 ;
    GND7  PWR  394.25  0  3 METAL1 ;
    GND8  PWR  430.75  424  3 METAL1 ;
    GND8  PWR  430.75  0  3 METAL1 ;
    GND9  PWR  496.25  424  3 METAL1 ;
    GND9  PWR  496.25  0  3 METAL1 ;
  ptTerm#1 F 594.75 20 3 METAL2;
  ptTerm#2 F 594.75 25 3 METAL2;
  ptTerm#15 F 594.75 85 3 METAL2;
  ptTerm#29 F 594.75 155 3 METAL2;
  ptTerm#38 F 594.75 225 3 METAL2;
  ptTerm#57 F 594.75 290 3 METAL2;
  ptTerm#70 F 594.75 360 3 METAL2;
  ptTerm#1 F 0 5 3 METAL2;
  ptTerm#2 F 0 10 3 METAL2;
  ptTerm#15 F 0 75 3 METAL2;
  ptTerm#29 F 0 145 3 METAL2;
  ptTerm#38 F 0 215 3 METAL2;
  ptTerm#57 F 0 285 3 METAL2;
  ptTerm#70 F 0 350 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK12 ;
  TYPE GENERAL;
  DIMENSIONS   256 0  256 106.5   0 106.5 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  154.25  0  4 METAL2 ;
    in1  I  136.25  0  4 METAL2 ;
    in2  I  124.25  0  4 METAL2 ;
    in3  I  106.25  0  4 METAL2 ;
    in4  I  94.25  0  4 METAL2 ;
    in5  I  76.25  0  4 METAL2 ;
    in6  I  64.25  0  4 METAL2 ;
    in7  I  46.25  0  4 METAL2 ;
    in8  I  34.25  0  4 METAL2 ;
    out0  O  256  43.75  4 METAL2 ;
    out1  O  256  52.25  4 METAL2 ;
    out2  O  256  64.25  4 METAL2 ;
    Vdd  PWR  5.25  106.5  3 METAL1 ;
    Vdd  PWR  5.25  0  3 METAL1 ;
    GND  PWR  252.75  106.5  3 METAL1 ;
    GND  PWR  252.75  0  3 METAL1 ;
  ptTerm#1 F 5 106.5 3 METAL2;
  ptTerm#2 F 10 106.5 3 METAL2;
  ptTerm#3 F 15 106.5 3 METAL2;
  ptTerm#4 F 20 106.5 3 METAL2;
  ptTerm#5 F 25 106.5 3 METAL2;
  ptTerm#11 F 55 106.5 3 METAL2;
  ptTerm#17 F 85 106.5 3 METAL2;
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ptTerm#23 F 115 106.5 3 METAL2;
ptTerm#29 F 145 106.5 3 METAL2;
ptTerm#33 F 165 106.5 3 METAL2;
ptTerm#34 F 170 106.5 3 METAL2;
ptTerm#35 F 175 106.5 3 METAL2;
ptTerm#36 F 180 106.5 3 METAL2;
ptTerm#37 F 185 106.5 3 METAL2;
ptTerm#38 F 190 106.5 3 METAL2;
ptTerm#39 F 195 106.5 3 METAL2;
ptTerm#40 F 200 106.5 3 METAL2;
ptTerm#41 F 205 106.5 3 METAL2;
ptTerm#42 F 210 106.5 3 METAL2;
ptTerm#43 F 215 106.5 3 METAL2;
ptTerm#44 F 220 106.5 3 METAL2;
ptTerm#45 F 225 106.5 3 METAL2;
ptTerm#49 F 245 106.5 3 METAL2;
ptTerm#1 F 5 0 3 METAL2;
ptTerm#2 F 10 0 3 METAL2;
ptTerm#3 F 15 0 3 METAL2;
ptTerm#4 F 20 0 3 METAL2;
ptTerm#5 F 25 0 3 METAL2;
ptTerm#11 F 55 0 3 METAL2;
ptTerm#17 F 85 0 3 METAL2;
ptTerm#23 F 115 0 3 METAL2;
ptTerm#29 F 145 0 3 METAL2;
ptTerm#33 F 165 0 3 METAL2;
ptTerm#34 F 170 0 3 METAL2;
ptTerm#35 F 175 0 3 METAL2;
ptTerm#36 F 180 0 3 METAL2;
ptTerm#37 F 185 0 3 METAL2;
ptTerm#38 F 190 0 3 METAL2;
ptTerm#39 F 195 0 3 METAL2;
ptTerm#40 F 200 0 3 METAL2;
ptTerm#41 F 205 0 3 METAL2;
ptTerm#42 F 210 0 3 METAL2;
ptTerm#43 F 215 0 3 METAL2;
ptTerm#44 F 220 0 3 METAL2;
ptTerm#45 F 225 0 3 METAL2;
ptTerm#49 F 245 0 3 METAL2;
ENDIOLIST ;
ENDMODULE ;
MODULE BLK13 ;
TYPE GENERAL;
DIMENSIONS   196 0  196 239.5   0 239.5 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  in0  I  94.25  0  4 METAL2 ;
  in1  I  76.25  0  4 METAL2 ;
  in2  I  64.25  0  4 METAL2 ;
  in3  I  46.25  0  4 METAL2 ;
  in4  I  34.25  0  4 METAL2 ;
  out0  O  196  47.75  4 METAL2 ;
  out1  O  196  56.25  4 METAL2 ;
  out10  O  196  150.25  4 METAL2 ;
  out11  O  196  158.75  4 METAL2 ;
  out12  O  196  170.75  4 METAL2 ;
  out13  O  196  179.25  4 METAL2 ;
  out14  O  196  191.25  4 METAL2 ;
  out15  O  196  199.75  4 METAL2 ;
  out2  O  196  68.25  4 METAL2 ;
  out3  O  196  76.75  4 METAL2 ;
  out4  O  196  88.75  4 METAL2 ;
  out5  O  196  97.25  4 METAL2 ;
  out6  O  196  109.25  4 METAL2 ;
  out7  O  196  117.75  4 METAL2 ;
  out8  O  196  129.75  4 METAL2 ;
  out9  O  196  138.25  4 METAL2 ;
  Vdd  PWR  4.5  239.5  5 METAL1 ;
  Vdd  PWR  4.5  0  5 METAL1 ;
```

```
    GND  PWR  193.5  239.5  5 METAL1 ;
    GND  PWR  193.5  0  5 METAL1 ;
  ptTerm#1 F 5 239.5 3 METAL2;
  ptTerm#2 F 10 239.5 3 METAL2;
  ptTerm#3 F 15 239.5 3 METAL2;
  ptTerm#4 F 20 239.5 3 METAL2;
  ptTerm#21 F 105 239.5 3 METAL2;
  ptTerm#22 F 110 239.5 3 METAL2;
  ptTerm#23 F 115 239.5 3 METAL2;
  ptTerm#24 F 120 239.5 3 METAL2;
  ptTerm#25 F 125 239.5 3 METAL2;
  ptTerm#26 F 130 239.5 3 METAL2;
  ptTerm#27 F 135 239.5 3 METAL2;
  ptTerm#28 F 140 239.5 3 METAL2;
  ptTerm#29 F 145 239.5 3 METAL2;
  ptTerm#30 F 150 239.5 3 METAL2;
  ptTerm#31 F 155 239.5 3 METAL2;
  ptTerm#32 F 160 239.5 3 METAL2;
  ptTerm#33 F 165 239.5 3 METAL2;
  ptTerm#37 F 185 239.5 3 METAL2;
  ptTerm#1 F 5 0 3 METAL2;
  ptTerm#2 F 10 0 3 METAL2;
  ptTerm#3 F 15 0 3 METAL2;
  ptTerm#4 F 20 0 3 METAL2;
  ptTerm#21 F 105 0 3 METAL2;
  ptTerm#22 F 110 0 3 METAL2;
  ptTerm#23 F 115 0 3 METAL2;
  ptTerm#24 F 120 0 3 METAL2;
  ptTerm#25 F 125 0 3 METAL2;
  ptTerm#26 F 130 0 3 METAL2;
  ptTerm#27 F 135 0 3 METAL2;
  ptTerm#28 F 140 0 3 METAL2;
  ptTerm#29 F 145 0 3 METAL2;
  ptTerm#30 F 150 0 3 METAL2;
  ptTerm#31 F 155 0 3 METAL2;
  ptTerm#32 F 160 0 3 METAL2;
  ptTerm#33 F 165 0 3 METAL2;
  ptTerm#37 F 185 0 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK14 ;
  TYPE GENERAL;
  DIMENSIONS   138.5 0  138.5 314.5   0 314.5 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    ADD1<1>  I  0  15.5  2 METAL2 ;
    ADD1<2>  I  0  76.5  2 METAL2 ;
    ADD1<3>  I  0  137.5  2 METAL2 ;
    ADD1<4>  I  0  198.5  2 METAL2 ;
    ADD1<5>  I  0  259.5  2 METAL2 ;
    BIM<1>  I  17.25  0  2 METAL2 ;
    BIM<1>  I  17.25  314.5  2 METAL2 ;
    A<0>  O  0  57.5  2 METAL2 ;
    A<1>  O  0  118.5  2 METAL2 ;
    A<2>  O  0  179.5  2 METAL2 ;
    A<3>  O  0  240.5  2 METAL2 ;
    A<4>  O  0  301.5  2 METAL2 ;
    N$82  I  123.25  0  2 METAL2 ;
    N$82  I  123.25  314.5  2 METAL2 ;
    PRW  I  63.25  0  2 METAL2 ;
    PRW  I  63.25  314.5  2 METAL2 ;
    PRD<0>  I  0  27.5  2 METAL2 ;
    PRD<1>  I  0  88.5  2 METAL2 ;
    PRD<2>  I  0  143.5  2 METAL2 ;
    PRD<3>  I  0  204.5  2 METAL2 ;
    PRD<4>  I  0  265.5  2 METAL2 ;
    PWR<0>  I  0  21.5  2 METAL2 ;
    PWR<1>  I  0  82.5  2 METAL2 ;
    PWR<2>  I  0  149.5  2 METAL2 ;
```

```
    PWR<3>  I  0  210.5  2 METAL2 ;
    PWR<4>  I  0  271.5  2 METAL2 ;
    Vdd0  PWR  32.25  314.5  3 METAL1 ;
    Vdd0  PWR  32.25  0  3 METAL1 ;
    Vdd1  PWR  78.25  314.5  3 METAL1 ;
    Vdd1  PWR  78.25  0  3 METAL1 ;
    Vdd2  PWR  108.25  314.5  3 METAL1 ;
    Vdd2  PWR  108.25  0  3 METAL1 ;
    GND0  PWR  4.75  314.5  3 METAL1 ;
    GND0  PWR  4.75  0  3 METAL1 ;
    GND1  PWR  51.25  314.5  3 METAL1 ;
    GND1  PWR  51.25  0  3 METAL1 ;
    GND2  PWR  135.25  314.5  3 METAL1 ;
    GND2  PWR  135.25  0  3 METAL1 ;
  ptTerm#7 F 138.5 35 3 METAL2;
  ptTerm#8 F 138.5 40 3 METAL2;
  ptTerm#9 F 138.5 45 3 METAL2;
  ptTerm#10 F 138.5 50 3 METAL2;
  ptTerm#19 F 138.5 95 3 METAL2;
  ptTerm#20 F 138.5 100 3 METAL2;
  ptTerm#21 F 138.5 105 3 METAL2;
  ptTerm#22 F 138.5 110 3 METAL2;
  ptTerm#32 F 138.5 160 3 METAL2;
  ptTerm#33 F 138.5 165 3 METAL2;
  ptTerm#34 F 138.5 170 3 METAL2;
  ptTerm#44 F 138.5 220 3 METAL2;
  ptTerm#45 F 138.5 225 3 METAL2;
  ptTerm#46 F 138.5 230 3 METAL2;
  ptTerm#56 F 138.5 280 3 METAL2;
  ptTerm#57 F 138.5 285 3 METAL2;
  ptTerm#58 F 138.5 290 3 METAL2;
  ptTerm#59 F 138.5 295 3 METAL2;
  ptTerm#7 F 0 35 3 METAL2;
  ptTerm#8 F 0 40 3 METAL2;
  ptTerm#9 F 0 45 3 METAL2;
  ptTerm#10 F 0 50 3 METAL2;
  ptTerm#19 F 0 95 3 METAL2;
  ptTerm#20 F 0 100 3 METAL2;
  ptTerm#21 F 0 105 3 METAL2;
  ptTerm#22 F 0 110 3 METAL2;
  ptTerm#32 F 0 160 3 METAL2;
  ptTerm#33 F 0 165 3 METAL2;
  ptTerm#34 F 0 170 3 METAL2;
  ptTerm#44 F 0 220 3 METAL2;
  ptTerm#45 F 0 225 3 METAL2;
  ptTerm#46 F 0 230 3 METAL2;
  ptTerm#56 F 0 280 3 METAL2;
  ptTerm#57 F 0 285 3 METAL2;
  ptTerm#58 F 0 290 3 METAL2;
  ptTerm#59 F 0 295 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK17 ;
  TYPE GENERAL;
  DIMENSIONS   199.75 0  199.75 277   0 277 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    SEQADD/INIT0B  I  50.5  0  2 METAL2 ;
    SEQADD/INIT0B  I  50.5  277  2 METAL2 ;
    SEQADD/MCLK  I  62.5  0  2 METAL2 ;
    SEQADD/MCLK  I  62.5  277  2 METAL2 ;
    SEQADD/MCLR  I  56.5  0  2 METAL2 ;
    SEQADD/MCLR  I  56.5  277  2 METAL2 ;
    SEQADD/MLCOUT<0>  O  199.75  68.5  2 METAL2 ;
    SEQADD/MLCOUT<1>  O  199.75  136  2 METAL2 ;
    SEQADD/MLCOUT<2>  O  199.75  203.5  2 METAL2 ;
    SEQADD/MLCOUT<3>  O  199.75  271  2 METAL2 ;
    Vdd0  PWR  30.5  277  3 METAL1 ;
    Vdd0  PWR  30.5  0  3 METAL1 ;
```

```
    Vdd1  PWR  105.5  277  3 METAL1 ;
    Vdd1  PWR  105.5  0  3 METAL1 ;
    Vdd2  PWR  141.5  277  3 METAL1 ;
    Vdd2  PWR  141.5  0  3 METAL1 ;
    GND0  PWR  10  277  3 METAL1 ;
    GND0  PWR  10  0  3 METAL1 ;
    GND1  PWR  81.5  277  3 METAL1 ;
    GND1  PWR  81.5  0  3 METAL1 ;
    GND2  PWR  173.5  277  3 METAL1 ;
    GND2  PWR  173.5  0  3 METAL1 ;
  ptTerm#4 F 199.75 20 3 METAL2;
  ptTerm#5 F 199.75 25 3 METAL2;
  ptTerm#6 F 199.75 30 3 METAL2;
  ptTerm#7 F 199.75 35 3 METAL2;
  ptTerm#8 F 199.75 40 3 METAL2;
  ptTerm#9 F 199.75 45 3 METAL2;
  ptTerm#10 F 199.75 50 3 METAL2;
  ptTerm#11 F 199.75 55 3 METAL2;
  ptTerm#17 F 199.75 85 3 METAL2;
  ptTerm#18 F 199.75 90 3 METAL2;
  ptTerm#19 F 199.75 95 3 METAL2;
  ptTerm#20 F 199.75 100 3 METAL2;
  ptTerm#21 F 199.75 105 3 METAL2;
  ptTerm#22 F 199.75 110 3 METAL2;
  ptTerm#23 F 199.75 115 3 METAL2;
  ptTerm#24 F 199.75 120 3 METAL2;
  ptTerm#31 F 199.75 155 3 METAL2;
  ptTerm#32 F 199.75 160 3 METAL2;
  ptTerm#33 F 199.75 165 3 METAL2;
  ptTerm#34 F 199.75 170 3 METAL2;
  ptTerm#35 F 199.75 175 3 METAL2;
  ptTerm#36 F 199.75 180 3 METAL2;
  ptTerm#37 F 199.75 185 3 METAL2;
  ptTerm#38 F 199.75 190 3 METAL2;
  ptTerm#44 F 199.75 220 3 METAL2;
  ptTerm#45 F 199.75 225 3 METAL2;
  ptTerm#46 F 199.75 230 3 METAL2;
  ptTerm#47 F 199.75 235 3 METAL2;
  ptTerm#48 F 199.75 240 3 METAL2;
  ptTerm#49 F 199.75 245 3 METAL2;
  ptTerm#50 F 199.75 250 3 METAL2;
  ptTerm#51 F 199.75 255 3 METAL2;
  ptTerm#4 F 0 20 3 METAL2;
  ptTerm#5 F 0 25 3 METAL2;
  ptTerm#6 F 0 30 3 METAL2;
  ptTerm#7 F 0 35 3 METAL2;
  ptTerm#8 F 0 40 3 METAL2;
  ptTerm#9 F 0 45 3 METAL2;
  ptTerm#10 F 0 50 3 METAL2;
  ptTerm#11 F 0 55 3 METAL2;
  ptTerm#17 F 0 85 3 METAL2;
  ptTerm#18 F 0 90 3 METAL2;
  ptTerm#19 F 0 95 3 METAL2;
  ptTerm#20 F 0 100 3 METAL2;
  ptTerm#21 F 0 105 3 METAL2;
  ptTerm#22 F 0 110 3 METAL2;
  ptTerm#23 F 0 115 3 METAL2;
  ptTerm#24 F 0 120 3 METAL2;
  ptTerm#31 F 0 155 3 METAL2;
  ptTerm#32 F 0 160 3 METAL2;
  ptTerm#33 F 0 165 3 METAL2;
  ptTerm#34 F 0 170 3 METAL2;
  ptTerm#35 F 0 175 3 METAL2;
  ptTerm#36 F 0 180 3 METAL2;
  ptTerm#37 F 0 185 3 METAL2;
  ptTerm#38 F 0 190 3 METAL2;
  ptTerm#44 F 0 220 3 METAL2;
  ptTerm#45 F 0 225 3 METAL2;
  ptTerm#46 F 0 230 3 METAL2;
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ptTerm#47 F 0 235 3 METAL2;
ptTerm#48 F 0 240 3 METAL2;
ptTerm#49 F 0 245 3 METAL2;
ptTerm#50 F 0 250 3 METAL2;
ptTerm#51 F 0 255 3 METAL2;
ENDIOLIST ;
ENDMODULE ;
MODULE BLK26 ;
TYPE GENERAL;
DIMENSIONS   241.5 0  241.5 248.5   0 248.5 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  pl1  I  54  0  4 METAL2 ;
  pl2  I  69.5  0  4 METAL2 ;
  pl3  I  85  0  4 METAL2 ;
  plb  I  38.5  0  4 METAL2 ;
  t1  O  105.5  0  4 METAL2 ;
  t12  O  159  0  4 METAL2 ;
  t15  O  173.5  0  4 METAL2 ;
  t2  O  111  0  4 METAL2 ;
  t3  O  119.5  0  4 METAL2 ;
  t3456  O  213  0  4 METAL2 ;
  t37  O  179  0  4 METAL2 ;
  t45  O  187.5  0  4 METAL2 ;
  t48  O  193  0  4 METAL2 ;
  t5  O  125  0  4 METAL2 ;
  t56  O  207.5  0  4 METAL2 ;
  t6  O  139.5  0  4 METAL2 ;
  t7  O  145  0  4 METAL2 ;
  t8  O  153.5  0  4 METAL2 ;
  Vdd  PWR  6.5  0  10 METAL1 ;
  Vdd  PWR  6.5  248.5  10 METAL1 ;
  GND  PWR  235  0  10 METAL1 ;
  GND  PWR  235  248.5  10 METAL1 ;
ptTerm#1 F 5 248.5 3 METAL2;
ptTerm#2 F 10 248.5 3 METAL2;
ptTerm#3 F 15 248.5 3 METAL2;
ptTerm#4 F 20 248.5 3 METAL2;
ptTerm#5 F 25 248.5 3 METAL2;
ptTerm#1 F 5 0 3 METAL2;
ptTerm#2 F 10 0 3 METAL2;
ptTerm#3 F 15 0 3 METAL2;
ptTerm#4 F 20 0 3 METAL2;
ptTerm#5 F 25 0 3 METAL2;
ENDIOLIST ;
ENDMODULE ;
MODULE BLK27 ;
TYPE GENERAL;
DIMENSIONS   75.25 0  75.25 452.5   0 452.5 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  LPPRG<0>  O  75.25  188  2 METAL2 ;
  LPPRG<1>  O  75.25  242.5  2 METAL2 ;
  LPPRG<2>  O  75.25  297  2 METAL2 ;
  LPPRG<3>  I  75.25  351.5  2 METAL2 ;
  LPPRG<3>  I  0  342.5  2 METAL2 ;
  A<0>  I  75.25  15  2 METAL2 ;
  A<1>  I  75.25  69.5  2 METAL2 ;
  A<1>  I  0  60.5  2 METAL2 ;
  A<2>  I  75.25  124  2 METAL2 ;
  A<2>  I  0  115  2 METAL2 ;
  A<7>  I  0  400.5  2 METAL2 ;
  B<0>  I  0  51  2 METAL2 ;
  B<1>  I  0  105.5  2 METAL2 ;
  B<2>  I  0  160  2 METAL2 ;
  B<7>  I  0  445.5  2 METAL2 ;
  C<3>  O  0  218  2 METAL2 ;
  C<4>  O  0  272.5  2 METAL2 ;
  C<5>  O  0  327  2 METAL2 ;
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    C<6>  O  0  381.5  2 METAL2 ;
    C<7>  O  0  439.5  2 METAL2 ;
    TIMBUS<13>  I  0  394.5  2 METAL2 ;
    UCODE<42>  I  0  224  2 METAL2 ;
    UCODE<43>  I  0  278.5  2 METAL2 ;
    UCODE<44>  I  0  333  2 METAL2 ;
    UCODE<45>  I  0  387.5  2 METAL2 ;
    UCODE<46>  I  0  173  2 METAL2 ;
    PLB  I  35.5  0  2 METAL2 ;
    PLB  I  56.5  452.5  2 METAL2 ;
    Vdd0  PWR  17.5  452.5  3 METAL1 ;
    Vdd0  PWR  17.5  0  3 METAL1 ;
    GND0  PWR  49.5  452.5  3 METAL1 ;
    GND0  PWR  49.5  0  3 METAL1 ;
  ptTerm#5 F 75.25 25 3 METAL2;
  ptTerm#6 F 75.25 30 3 METAL2;
  ptTerm#7 F 75.25 35 3 METAL2;
  ptTerm#8 F 75.25 40 3 METAL2;
  ptTerm#16 F 75.25 80 3 METAL2;
  ptTerm#17 F 75.25 85 3 METAL2;
  ptTerm#18 F 75.25 90 3 METAL2;
  ptTerm#19 F 75.25 95 3 METAL2;
  ptTerm#27 F 75.25 135 3 METAL2;
  ptTerm#28 F 75.25 140 3 METAL2;
  ptTerm#29 F 75.25 145 3 METAL2;
  ptTerm#30 F 75.25 150 3 METAL2;
  ptTerm#39 F 75.25 195 3 METAL2;
  ptTerm#40 F 75.25 200 3 METAL2;
  ptTerm#41 F 75.25 205 3 METAL2;
  ptTerm#42 F 75.25 210 3 METAL2;
  ptTerm#50 F 75.25 250 3 METAL2;
  ptTerm#51 F 75.25 255 3 METAL2;
  ptTerm#52 F 75.25 260 3 METAL2;
  ptTerm#53 F 75.25 265 3 METAL2;
  ptTerm#61 F 75.25 305 3 METAL2;
  ptTerm#62 F 75.25 310 3 METAL2;
  ptTerm#63 F 75.25 315 3 METAL2;
  ptTerm#64 F 75.25 320 3 METAL2;
  ptTerm#72 F 75.25 360 3 METAL2;
  ptTerm#73 F 75.25 365 3 METAL2;
  ptTerm#74 F 75.25 370 3 METAL2;
  ptTerm#75 F 75.25 375 3 METAL2;
  ptTerm#82 F 75.25 410 3 METAL2;
  ptTerm#83 F 75.25 415 3 METAL2;
  ptTerm#84 F 75.25 420 3 METAL2;
  ptTerm#85 F 75.25 425 3 METAL2;
  ptTerm#86 F 75.25 430 3 METAL2;
  ptTerm#5 F 0 25 3 METAL2;
  ptTerm#6 F 0 30 3 METAL2;
  ptTerm#7 F 0 35 3 METAL2;
  ptTerm#8 F 0 40 3 METAL2;
  ptTerm#16 F 0 80 3 METAL2;
  ptTerm#17 F 0 85 3 METAL2;
  ptTerm#18 F 0 90 3 METAL2;
  ptTerm#19 F 0 95 3 METAL2;
  ptTerm#27 F 0 135 3 METAL2;
  ptTerm#28 F 0 140 3 METAL2;
  ptTerm#29 F 0 145 3 METAL2;
  ptTerm#30 F 0 150 3 METAL2;
  ptTerm#39 F 0 195 3 METAL2;
  ptTerm#40 F 0 200 3 METAL2;
  ptTerm#41 F 0 205 3 METAL2;
  ptTerm#42 F 0 210 3 METAL2;
  ptTerm#50 F 0 250 3 METAL2;
  ptTerm#51 F 0 255 3 METAL2;
  ptTerm#52 F 0 260 3 METAL2;
  ptTerm#53 F 0 265 3 METAL2;
  ptTerm#61 F 0 305 3 METAL2;
  ptTerm#62 F 0 310 3 METAL2;
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  ptTerm#63 F 0 315 3 METAL2;
  ptTerm#64 F 0 320 3 METAL2;
  ptTerm#72 F 0 360 3 METAL2;
  ptTerm#73 F 0 365 3 METAL2;
  ptTerm#74 F 0 370 3 METAL2;
  ptTerm#75 F 0 375 3 METAL2;
  ptTerm#82 F 0 410 3 METAL2;
  ptTerm#83 F 0 415 3 METAL2;
  ptTerm#84 F 0 420 3 METAL2;
  ptTerm#85 F 0 425 3 METAL2;
  ptTerm#86 F 0 430 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK28 ;
  TYPE GENERAL;
  DIMENSIONS   139.5 0  139.5 219   0 219 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    A<0>  O  139.5  71  2 METAL2 ;
    A<1>  O  139.5  142  2 METAL2 ;
    A<2>  O  139.5  213  2 METAL2 ;
    INIT0B  I  58.25  0  2 METAL2 ;
    INIT0B  I  58.25  219  2 METAL2 ;
    TIMBUS<6>  I  139.5  6  2 METAL2 ;
    Vdd0  PWR  9.25  219  3 METAL1 ;
    Vdd0  PWR  9.25  0  3 METAL1 ;
    Vdd1  PWR  87.5  219  3 METAL1 ;
    Vdd1  PWR  87.5  0  3 METAL1 ;
    GND0  PWR  33.25  219  3 METAL1 ;
    GND0  PWR  33.25  0  3 METAL1 ;
    GND1  PWR  126.25  219  3 METAL1 ;
    GND1  PWR  126.25  0  3 METAL1 ;
  ptTerm#4 F 139.5 20 3 METAL2;
  ptTerm#5 F 139.5 25 3 METAL2;
  ptTerm#6 F 139.5 30 3 METAL2;
  ptTerm#7 F 139.5 35 3 METAL2;
  ptTerm#8 F 139.5 40 3 METAL2;
  ptTerm#9 F 139.5 45 3 METAL2;
  ptTerm#10 F 139.5 50 3 METAL2;
  ptTerm#11 F 139.5 55 3 METAL2;
  ptTerm#18 F 139.5 90 3 METAL2;
  ptTerm#19 F 139.5 95 3 METAL2;
  ptTerm#20 F 139.5 100 3 METAL2;
  ptTerm#21 F 139.5 105 3 METAL2;
  ptTerm#22 F 139.5 110 3 METAL2;
  ptTerm#23 F 139.5 115 3 METAL2;
  ptTerm#24 F 139.5 120 3 METAL2;
  ptTerm#25 F 139.5 125 3 METAL2;
  ptTerm#33 F 139.5 165 3 METAL2;
  ptTerm#34 F 139.5 170 3 METAL2;
  ptTerm#35 F 139.5 175 3 METAL2;
  ptTerm#36 F 139.5 180 3 METAL2;
  ptTerm#37 F 139.5 185 3 METAL2;
  ptTerm#38 F 139.5 190 3 METAL2;
  ptTerm#39 F 139.5 195 3 METAL2;
  ptTerm#40 F 139.5 200 3 METAL2;
  ptTerm#4 F 0 20 3 METAL2;
  ptTerm#5 F 0 25 3 METAL2;
  ptTerm#6 F 0 30 3 METAL2;
  ptTerm#7 F 0 35 3 METAL2;
  ptTerm#8 F 0 40 3 METAL2;
  ptTerm#9 F 0 45 3 METAL2;
  ptTerm#10 F 0 50 3 METAL2;
  ptTerm#11 F 0 55 3 METAL2;
  ptTerm#18 F 0 90 3 METAL2;
  ptTerm#19 F 0 95 3 METAL2;
  ptTerm#20 F 0 100 3 METAL2;
  ptTerm#21 F 0 105 3 METAL2;
  ptTerm#22 F 0 110 3 METAL2;
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  ptTerm#23 F 0 115 3 METAL2;
  ptTerm#24 F 0 120 3 METAL2;
  ptTerm#25 F 0 125 3 METAL2;
  ptTerm#33 F 0 165 3 METAL2;
  ptTerm#34 F 0 170 3 METAL2;
  ptTerm#35 F 0 175 3 METAL2;
  ptTerm#36 F 0 180 3 METAL2;
  ptTerm#37 F 0 185 3 METAL2;
  ptTerm#38 F 0 190 3 METAL2;
  ptTerm#39 F 0 195 3 METAL2;
  ptTerm#40 F 0 200 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK29 ;
  TYPE GENERAL;
  DIMENSIONS   98 0  98 221.5   0 221.5 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    ADD1<1>  I  98  15  2 METAL2 ;
    ADD1<1>  I  0  6  2 METAL2 ;
    ADD1<2>  I  98  69.5  2 METAL2 ;
    ADD1<2>  I  0  60.5  2 METAL2 ;
    ADD1<3>  I  98  124  2 METAL2 ;
    ADD1<3>  I  0  115  2 METAL2 ;
    ADD1<4>  I  98  178.5  2 METAL2 ;
    ADD1<4>  I  0  169.5  2 METAL2 ;
    LPPRG<0>  I  98  21  2 METAL2 ;
    LPPRG<1>  I  98  75.5  2 METAL2 ;
    LPPRG<2>  I  98  130  2 METAL2 ;
    LPPRG<3>  I  98  184.5  2 METAL2 ;
    SEQADD/IHOLD  I  30.75  0  2 METAL2 ;
    SEQADD/IHOLD  I  30.75  221.5  2 METAL2 ;
    SEQADD/MUXSEL  I  79.25  0  2 METAL2 ;
    SEQADD/MUXSEL  I  79.25  221.5  2 METAL2 ;
    SEQADD/TTADD<0>  O  98  51  2 METAL2 ;
    SEQADD/TTADD<1>  O  98  105.5  2 METAL2 ;
    SEQADD/TTADD<2>  O  98  160  2 METAL2 ;
    SEQADD/TTADD<3>  O  98  214.5  2 METAL2 ;
    UCODE<42>  I  98  45  2 METAL2 ;
    UCODE<43>  I  98  99.5  2 METAL2 ;
    UCODE<44>  I  98  154  2 METAL2 ;
    UCODE<45>  I  98  208.5  2 METAL2 ;
    Vdd0  PWR  15.75  221.5  3 METAL1 ;
    Vdd0  PWR  15.75  0  3 METAL1 ;
    Vdd1  PWR  61.25  221.5  3 METAL1 ;
    Vdd1  PWR  61.25  0  3 METAL1 ;
    GND0  PWR  42.75  221.5  3 METAL1 ;
    GND0  PWR  42.75  0  3 METAL1 ;
    GND1  PWR  93.25  221.5  3 METAL1 ;
    GND1  PWR  93.25  0  3 METAL1 ;
  ptTerm#6 F 98 30 3 METAL2;
  ptTerm#7 F 98 35 3 METAL2;
  ptTerm#17 F 98 85 3 METAL2;
  ptTerm#18 F 98 90 3 METAL2;
  ptTerm#28 F 98 140 3 METAL2;
  ptTerm#29 F 98 145 3 METAL2;
  ptTerm#39 F 98 195 3 METAL2;
  ptTerm#40 F 98 200 3 METAL2;
  ptTerm#6 F 0 30 3 METAL2;
  ptTerm#7 F 0 35 3 METAL2;
  ptTerm#17 F 0 85 3 METAL2;
  ptTerm#18 F 0 90 3 METAL2;
  ptTerm#28 F 0 140 3 METAL2;
  ptTerm#29 F 0 145 3 METAL2;
  ptTerm#39 F 0 195 3 METAL2;
  ptTerm#40 F 0 200 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK30 ;
```

```
TYPE GENERAL;
DIMENSIONS   166 0  166 93.5   0 93.5 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  in0  I  64.25  0  4 METAL2 ;
  in1  I  46.25  0  4 METAL2 ;
  in2  I  34.25  0  4 METAL2 ;
  out0  O  166  43.75  4 METAL2 ;
  out1  O  166  52.25  4 METAL2 ;
  Vdd  PWR  5.25  93.5  3 METAL1 ;
  Vdd  PWR  5.25  0  3 METAL1 ;
  GND  PWR  162.75  93.5  3 METAL1 ;
  GND  PWR  162.75  0  3 METAL1 ;
ptTerm#1 F 5 93.5 3 METAL2;
ptTerm#2 F 10 93.5 3 METAL2;
ptTerm#3 F 15 93.5 3 METAL2;
ptTerm#4 F 20 93.5 3 METAL2;
ptTerm#5 F 25 93.5 3 METAL2;
ptTerm#11 F 55 93.5 3 METAL2;
ptTerm#15 F 75 93.5 3 METAL2;
ptTerm#16 F 80 93.5 3 METAL2;
ptTerm#17 F 85 93.5 3 METAL2;
ptTerm#18 F 90 93.5 3 METAL2;
ptTerm#19 F 95 93.5 3 METAL2;
ptTerm#20 F 100 93.5 3 METAL2;
ptTerm#21 F 105 93.5 3 METAL2;
ptTerm#22 F 110 93.5 3 METAL2;
ptTerm#23 F 115 93.5 3 METAL2;
ptTerm#24 F 120 93.5 3 METAL2;
ptTerm#25 F 125 93.5 3 METAL2;
ptTerm#26 F 130 93.5 3 METAL2;
ptTerm#27 F 135 93.5 3 METAL2;
ptTerm#31 F 155 93.5 3 METAL2;
ptTerm#1 F 5 0 3 METAL2;
ptTerm#2 F 10 0 3 METAL2;
ptTerm#3 F 15 0 3 METAL2;
ptTerm#4 F 20 0 3 METAL2;
ptTerm#5 F 25 0 3 METAL2;
ptTerm#11 F 55 0 3 METAL2;
ptTerm#15 F 75 0 3 METAL2;
ptTerm#16 F 80 0 3 METAL2;
ptTerm#17 F 85 0 3 METAL2;
ptTerm#18 F 90 0 3 METAL2;
ptTerm#19 F 95 0 3 METAL2;
ptTerm#20 F 100 0 3 METAL2;
ptTerm#21 F 105 0 3 METAL2;
ptTerm#22 F 110 0 3 METAL2;
ptTerm#23 F 115 0 3 METAL2;
ptTerm#24 F 120 0 3 METAL2;
ptTerm#25 F 125 0 3 METAL2;
ptTerm#26 F 130 0 3 METAL2;
ptTerm#27 F 135 0 3 METAL2;
ptTerm#31 F 155 0 3 METAL2;
ENDIOLIST ;
ENDMODULE ;
MODULE BLK31 ;
TYPE GENERAL;
DIMENSIONS   211 0  211 153   0 153 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  in0  I  109.25  0  4 METAL2 ;
  in1  I  91.25  0  4 METAL2 ;
  in2  I  79.25  0  4 METAL2 ;
  in3  I  61.25  0  4 METAL2 ;
  in4  I  49.25  0  4 METAL2 ;
  in5  I  31.25  0  4 METAL2 ;
  out0  O  211  43.75  4 METAL2 ;
  out1  O  211  52.25  4 METAL2 ;
  out2  O  211  64.25  4 METAL2 ;
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    out3  O  211  72.75  4 METAL2 ;
    out4  O  211  84.75  4 METAL2 ;
    out5  O  211  93.25  4 METAL2 ;
    out6  O  211  105.25  4 METAL2 ;
    out7  O  211  113.75  4 METAL2 ;
    Vdd  PWR  5.25  153  3 METAL1 ;
    Vdd  PWR  5.25  0  3 METAL1 ;
    GND  PWR  207.75  153  3 METAL1 ;
    GND  PWR  207.75  0  3 METAL1 ;
  ptTerm#1 F 5 153 3 METAL2;
  ptTerm#2 F 10 153 3 METAL2;
  ptTerm#3 F 15 153 3 METAL2;
  ptTerm#4 F 20 153 3 METAL2;
  ptTerm#8 F 40 153 3 METAL2;
  ptTerm#14 F 70 153 3 METAL2;
  ptTerm#20 F 100 153 3 METAL2;
  ptTerm#24 F 120 153 3 METAL2;
  ptTerm#25 F 125 153 3 METAL2;
  ptTerm#26 F 130 153 3 METAL2;
  ptTerm#27 F 135 153 3 METAL2;
  ptTerm#28 F 140 153 3 METAL2;
  ptTerm#29 F 145 153 3 METAL2;
  ptTerm#30 F 150 153 3 METAL2;
  ptTerm#31 F 155 153 3 METAL2;
  ptTerm#32 F 160 153 3 METAL2;
  ptTerm#33 F 165 153 3 METAL2;
  ptTerm#34 F 170 153 3 METAL2;
  ptTerm#35 F 175 153 3 METAL2;
  ptTerm#36 F 180 153 3 METAL2;
  ptTerm#40 F 200 153 3 METAL2;
  ptTerm#1 F 5 0 3 METAL2;
  ptTerm#2 F 10 0 3 METAL2;
  ptTerm#3 F 15 0 3 METAL2;
  ptTerm#4 F 20 0 3 METAL2;
  ptTerm#8 F 40 0 3 METAL2;
  ptTerm#14 F 70 0 3 METAL2;
  ptTerm#20 F 100 0 3 METAL2;
  ptTerm#24 F 120 0 3 METAL2;
  ptTerm#25 F 125 0 3 METAL2;
  ptTerm#26 F 130 0 3 METAL2;
  ptTerm#27 F 135 0 3 METAL2;
  ptTerm#28 F 140 0 3 METAL2;
  ptTerm#29 F 145 0 3 METAL2;
  ptTerm#30 F 150 0 3 METAL2;
  ptTerm#31 F 155 0 3 METAL2;
  ptTerm#32 F 160 0 3 METAL2;
  ptTerm#33 F 165 0 3 METAL2;
  ptTerm#34 F 170 0 3 METAL2;
  ptTerm#35 F 175 0 3 METAL2;
  ptTerm#36 F 180 0 3 METAL2;
  ptTerm#40 F 200 0 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK32 ;
  TYPE GENERAL;
  DIMENSIONS   296.5 0  296.5 582.75   0 582.75 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    P  O  296.5  289.5  2 METAL2 ;
    PWN<0>  I  296.5  49.25  2 METAL2 ;
    PWN<1>  I  296.5  108.25  2 METAL2 ;
    PWN<2>  I  296.5  170.5  2 METAL2 ;
    PWN<3>  I  296.5  253.5  2 METAL2 ;
    PWN<4>  I  296.5  315.75  2 METAL2 ;
    PWN<5>  I  296.5  398.75  2 METAL2 ;
    PWN<6>  I  296.5  457.75  2 METAL2 ;
    PWN<7>  I  296.5  522.75  2 METAL2 ;
    UCODE<20>  I  296.5  487.75  2 METAL2 ;
    UCODE<20>  I  0  487.75  2 METAL2 ;
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    UCODE<21>  I  296.5  416.75  2 METAL2 ;
    UCODE<21>  I  0  416.75  2 METAL2 ;
    UCODE<22>  I  296.5  271.5  2 METAL2 ;
    UCODE<22>  I  0  271.5  2 METAL2 ;
    UCODE<31>  I  115  0  2 METAL2 ;
    UCODE<31>  I  22.75  582.75  2 METAL2 ;
    DIV2  I  126.5  0  2 METAL2 ;
    DIV2  I  126.5  582.75  2 METAL2 ;
    PINI<0>  I  296.5  43.25  2 METAL2 ;
    PINI<1>  I  296.5  126.25  2 METAL2 ;
    PINI<2>  I  296.5  200.5  2 METAL2 ;
    PINI<3>  I  0  283.5  2 METAL2 ;
    PINI<4>  I  296.5  345.75  2 METAL2 ;
    PINI<5>  I  296.5  410.75  2 METAL2 ;
    PINI<6>  I  0  499.75  2 METAL2 ;
    PINI<7>  I  0  570.75  2 METAL2 ;
    PINO<0>  O  0  61.25  2 METAL2 ;
    PINO<1>  O  0  138.25  2 METAL2 ;
    PINO<2>  O  0  212.5  2 METAL2 ;
    PINO<3>  O  0  277.5  2 METAL2 ;
    PINO<4>  O  296.5  339.75  2 METAL2 ;
    PINO<5>  O  296.5  404.75  2 METAL2 ;
    PINO<6>  O  0  493.75  2 METAL2 ;
    PINO<7>  O  0  564.75  2 METAL2 ;
    RST  I  61.75  0  2 METAL2 ;
    RST  I  61.75  582.75  2 METAL2 ;
    Vdd0  PWR  12.75  582.75  3 METAL1 ;
    Vdd0  PWR  12.75  0  3 METAL1 ;
    Vdd1  PWR  81.75  582.75  3 METAL1 ;
    Vdd1  PWR  81.75  0  3 METAL1 ;
    Vdd2  PWR  132  582.75  3 METAL1 ;
    Vdd2  PWR  132  0  3 METAL1 ;
    Vdd3  PWR  243.75  582.75  3 METAL1 ;
    Vdd3  PWR  243.75  0  3 METAL1 ;
    GND0  PWR  36.75  582.75  3 METAL1 ;
    GND0  PWR  36.75  0  3 METAL1 ;
    GND1  PWR  102.25  582.75  3 METAL1 ;
    GND1  PWR  102.25  0  3 METAL1 ;
    GND2  PWR  211.75  582.75  3 METAL1 ;
    GND2  PWR  211.75  0  3 METAL1 ;
    GND3  PWR  275.75  582.75  3 METAL1 ;
    GND3  PWR  275.75  0  3 METAL1 ;
  ptTerm#4 F 296.5 20 3 METAL2;
  ptTerm#5 F 296.5 25 3 METAL2;
  ptTerm#6 F 296.5 30 3 METAL2;
  ptTerm#7 F 296.5 35 3 METAL2;
  ptTerm#18 F 296.5 75 3 METAL2;
  ptTerm#23 F 296.5 115 3 METAL2;
  ptTerm#24 F 296.5 120 3 METAL2;
  ptTerm#37 F 296.5 185 3 METAL2;
  ptTerm#38 F 296.5 190 3 METAL2;
  ptTerm#39 F 296.5 195 3 METAL2;
  ptTerm#52 F 296.5 260 3 METAL2;
  ptTerm#53 F 296.5 265 3 METAL2;
  ptTerm#65 F 296.5 325 3 METAL2;
  ptTerm#66 F 296.5 330 3 METAL2;
  ptTerm#95 F 296.5 475 3 METAL2;
  ptTerm#96 F 296.5 480 3 METAL2;
  ptTerm#106 F 296.5 530 3 METAL2;
  ptTerm#107 F 296.5 535 3 METAL2;
  ptTerm#108 F 296.5 540 3 METAL2;
  ptTerm#109 F 296.5 545 3 METAL2;
  ptTerm#110 F 296.5 550 3 METAL2;
  ptTerm#111 F 296.5 555 3 METAL2;
  ptTerm#4 F 0 20 3 METAL2;
  ptTerm#5 F 0 25 3 METAL2;
  ptTerm#6 F 0 30 3 METAL2;
  ptTerm#7 F 0 35 3 METAL2;
  ptTerm#18 F 0 95 3 METAL2;
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  ptTerm#23 F 0 115 3 METAL2;
  ptTerm#24 F 0 120 3 METAL2;
  ptTerm#37 F 0 185 3 METAL2;
  ptTerm#38 F 0 190 3 METAL2;
  ptTerm#39 F 0 195 3 METAL2;
  ptTerm#52 F 0 260 3 METAL2;
  ptTerm#53 F 0 265 3 METAL2;
  ptTerm#65 F 0 325 3 METAL2;
  ptTerm#66 F 0 330 3 METAL2;
  ptTerm#95 F 0 475 3 METAL2;
  ptTerm#96 F 0 480 3 METAL2;
  ptTerm#106 F 0 530 3 METAL2;
  ptTerm#107 F 0 535 3 METAL2;
  ptTerm#108 F 0 540 3 METAL2;
  ptTerm#109 F 0 545 3 METAL2;
  ptTerm#110 F 0 550 3 METAL2;
  ptTerm#111 F 0 555 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK46 ;
  TYPE GENERAL;
  DIMENSIONS   427 0  427 557.75   0 557.75 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    A<0>  I  80.25  0  2 METAL2 ;
    A<1>  I  59.75  0  2 METAL2 ;
    A<2>  I  23.75  0  2 METAL2 ;
    A<3>  I  18.75  0  2 METAL2 ;
    Din<0>  I  179.25  0  2 METAL2 ;
    Din<1>  I  222.25  0  2 METAL2 ;
    Din<2>  I  265.25  0  2 METAL2 ;
    Din<3>  I  308.25  0  2 METAL2 ;
    Din<4>  I  351.25  0  2 METAL2 ;
    Din<5>  I  394.25  0  2 METAL2 ;
    Dout<0>  O  187.75  0  4 METAL2 ;
    Dout<1>  O  230.75  0  4 METAL2 ;
    Dout<2>  O  273.75  0  4 METAL2 ;
    Dout<3>  O  316.75  0  4 METAL2 ;
    Dout<4>  O  359.75  0  4 METAL2 ;
    Dout<5>  O  402.75  0  4 METAL2 ;
    Wr  I  13.75  0  4 METAL2 ;
    Vdd  PWR  422  0  10 METAL1 ;
    Vdd  PWR  422  557.75  10 METAL1 ;
    GND  PWR  5  0  10 METAL1 ;
    GND  PWR  5  557.75  10 METAL1 ;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK47 ;
  TYPE GENERAL;
  DIMENSIONS   878 0  878 797.75   0 797.75 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    A<0>  I  100.75  0  2 METAL2 ;
    A<1>  I  80.25  0  2 METAL2 ;
    A<2>  I  59.75  0  2 METAL2 ;
    A<3>  I  23.75  0  2 METAL2 ;
    A<4>  I  18.75  0  2 METAL2 ;
    Din<0>  I  200.25  0  2 METAL2 ;
    Din<1>  I  243.25  0  2 METAL2 ;
    Din<10>  I  630.25  0  2 METAL2 ;
    Din<11>  I  673.25  0  2 METAL2 ;
    Din<12>  I  716.25  0  2 METAL2 ;
    Din<13>  I  759.25  0  2 METAL2 ;
    Din<14>  I  802.25  0  2 METAL2 ;
    Din<15>  I  845.25  0  2 METAL2 ;
    Din<2>  I  286.25  0  2 METAL2 ;
    Din<3>  I  329.25  0  2 METAL2 ;
    Din<4>  I  372.25  0  2 METAL2 ;
    Din<5>  I  415.25  0  2 METAL2 ;
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    Din<6>  I  458.25  0  2 METAL2 ;
    Din<7>  I  501.25  0  2 METAL2 ;
    Din<8>  I  544.25  0  2 METAL2 ;
    Din<9>  I  587.25  0  2 METAL2 ;
    Dout<0>  O  208.75  0  4 METAL2 ;
    Dout<1>  O  251.75  0  4 METAL2 ;
    Dout<10>  O  638.75  0  4 METAL2 ;
    Dout<11>  O  681.75  0  4 METAL2 ;
    Dout<12>  O  724.75  0  4 METAL2 ;
    Dout<13>  O  767.75  0  4 METAL2 ;
    Dout<14>  O  810.75  0  4 METAL2 ;
    Dout<15>  O  853.75  0  4 METAL2 ;
    Dout<2>  O  294.75  0  4 METAL2 ;
    Dout<3>  O  337.75  0  4 METAL2 ;
    Dout<4>  O  380.75  0  4 METAL2 ;
    Dout<5>  O  423.75  0  4 METAL2 ;
    Dout<6>  O  466.75  0  4 METAL2 ;
    Dout<7>  O  509.75  0  4 METAL2 ;
    Dout<8>  O  552.75  0  4 METAL2 ;
    Dout<9>  O  595.75  0  4 METAL2 ;
    Wr  I  13.75  0  4 METAL2 ;
    Vdd  PWR  873  0  10 METAL1 ;
    Vdd  PWR  873  797.75  10 METAL1 ;
    GND  PWR  5  0  10 METAL1 ;
    GND  PWR  5  797.75  10 METAL1 ;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK65 ;
  TYPE GENERAL;
  DIMENSIONS   316.5 0  316.5 473.75   0 473.75 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    FIFO1/CLK  I  94.5  0  2 METAL2 ;
    FIFO1/CLK  I  94.5  473.75  2 METAL2 ;
    FIFO1/ISELD  I  133  0  2 METAL2 ;
    FIFO1/ISELD  I  133  473.75  2 METAL2 ;
    UCODE<36>  O  316.5  451.5  2 METAL2 ;
    UCODE<36>  O  0  451.5  2 METAL2 ;
    UCODE<37>  O  316.5  445.5  2 METAL2 ;
    UCODE<37>  O  0  457.5  2 METAL2 ;
    UCODE<38>  O  316.5  386.25  2 METAL2 ;
    UCODE<38>  O  0  386.25  2 METAL2 ;
    UCODE<39>  O  316.5  421.5  2 METAL2 ;
    UCODE<39>  O  0  421.5  2 METAL2 ;
    UCODE<40>  O  316.5  321  2 METAL2 ;
    UCODE<40>  O  0  321  2 METAL2 ;
    UCODE<41>  O  316.5  356.25  2 METAL2 ;
    UCODE<41>  O  0  356.25  2 METAL2 ;
    UCODE<42>  O  0  252.25  2 METAL2 ;
    UCODE<43>  O  0  285  2 METAL2 ;
    UCODE<44>  O  316.5  187  2 METAL2 ;
    UCODE<44>  O  0  187  2 METAL2 ;
    UCODE<45>  O  316.5  222.25  2 METAL2 ;
    UCODE<45>  O  0  222.25  2 METAL2 ;
    UCODE<46>  O  316.5  121.75  2 METAL2 ;
    UCODE<46>  O  0  121.75  2 METAL2 ;
    UCODE<47>  O  316.5  157  2 METAL2 ;
    UCODE<47>  O  0  157  2 METAL2 ;
    UCODE<48>  O  316.5  56.5  2 METAL2 ;
    UCODE<48>  O  0  56.5  2 METAL2 ;
    UCODE<49>  O  316.5  91.75  2 METAL2 ;
    UCODE<49>  O  0  91.75  2 METAL2 ;
    URAM<36>  I  316.5  457.5  2 METAL2 ;
    URAM<37>  I  316.5  439.5  2 METAL2 ;
    URAM<38>  I  316.5  392.25  2 METAL2 ;
    URAM<39>  I  316.5  380.25  2 METAL2 ;
    URAM<40>  I  316.5  327  2 METAL2 ;
    URAM<41>  I  316.5  315  2 METAL2 ;
    URAM<42>  I  316.5  258.25  2 METAL2 ;
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    URAM<43>  I  316.5  246.25  2 METAL2 ;
    URAM<44>  I  316.5  193  2 METAL2 ;
    URAM<45>  I  316.5  181  2 METAL2 ;
    URAM<46>  I  316.5  127.75  2 METAL2 ;
    URAM<47>  I  316.5  115.75  2 METAL2 ;
    URAM<48>  I  316.5  62.5  2 METAL2 ;
    URAM<49>  I  316.5  50.5  2 METAL2 ;
    D<0>  I  316.5  32.5  2 METAL2 ;
    D<0>  I  0  32.5  2 METAL2 ;
    D<1>  I  316.5  26.5  2 METAL2 ;
    D<1>  I  0  26.5  2 METAL2 ;
    Vdd0  PWR  89  473.75  3 METAL1 ;
    Vdd0  PWR  89  0  3 METAL1 ;
    Vdd1  PWR  118  473.75  3 METAL1 ;
    Vdd1  PWR  118  0  3 METAL1 ;
    Vdd2  PWR  169  473.75  3 METAL1 ;
    Vdd2  PWR  169  0  3 METAL1 ;
    Vdd3  PWR  300.75  473.75  3 METAL1 ;
    Vdd3  PWR  300.75  0  3 METAL1 ;
    GND0  PWR  9.25  473.75  3 METAL1 ;
    GND0  PWR  9.25  0  3 METAL1 ;
    GND1  PWR  145  473.75  3 METAL1 ;
    GND1  PWR  145  0  3 METAL1 ;
    GND2  PWR  255.25  473.75  3 METAL1 ;
    GND2  PWR  255.25  0  3 METAL1 ;
    GND3  PWR  273.75  473.75  3 METAL1 ;
    GND3  PWR  273.75  0  3 METAL1 ;
  ptTerm#14 F 316.5 70 3 METAL2;
  ptTerm#15 F 316.5 75 3 METAL2;
  ptTerm#20 F 316.5 100 3 METAL2;
  ptTerm#27 F 316.5 135 3 METAL2;
  ptTerm#28 F 316.5 140 3 METAL2;
  ptTerm#33 F 316.5 165 3 METAL2;
  ptTerm#40 F 316.5 200 3 METAL2;
  ptTerm#41 F 316.5 205 3 METAL2;
  ptTerm#46 F 316.5 230 3 METAL2;
  ptTerm#53 F 316.5 265 3 METAL2;
  ptTerm#59 F 316.5 295 3 METAL2;
  ptTerm#60 F 316.5 300 3 METAL2;
  ptTerm#67 F 316.5 335 3 METAL2;
  ptTerm#68 F 316.5 340 3 METAL2;
  ptTerm#73 F 316.5 365 3 METAL2;
  ptTerm#80 F 316.5 400 3 METAL2;
  ptTerm#81 F 316.5 405 3 METAL2;
  ptTerm#14 F 0 70 3 METAL2;
  ptTerm#15 F 0 75 3 METAL2;
  ptTerm#20 F 0 100 3 METAL2;
  ptTerm#27 F 0 135 3 METAL2;
  ptTerm#28 F 0 140 3 METAL2;
  ptTerm#33 F 0 165 3 METAL2;
  ptTerm#40 F 0 200 3 METAL2;
  ptTerm#41 F 0 205 3 METAL2;
  ptTerm#46 F 0 230 3 METAL2;
  ptTerm#53 F 0 265 3 METAL2;
  ptTerm#59 F 0 295 3 METAL2;
  ptTerm#60 F 0 300 3 METAL2;
  ptTerm#67 F 0 335 3 METAL2;
  ptTerm#68 F 0 340 3 METAL2;
  ptTerm#73 F 0 365 3 METAL2;
  ptTerm#80 F 0 400 3 METAL2;
  ptTerm#81 F 0 405 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK66 ;
  TYPE GENERAL;
  DIMENSIONS   315 0  315 395   0 395 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    CLK0  I  163.5  0  2 METAL2 ;
```

```
    CLK0  I  163.5  395  2 METAL2 ;
    CLK1  I  94.5  0  2 METAL2 ;
    CLK1  I  94.5  395  2 METAL2 ;
    D0  O  315  40.5  2 METAL2 ;
    D0  O  0  40.5  2 METAL2 ;
    D1  O  315  81.75  2 METAL2 ;
    D1  O  0  81.75  2 METAL2 ;
    D10  O  315  372.75  2 METAL2 ;
    D10  O  0  372.75  2 METAL2 ;
    D11  O  315  360.75  2 METAL2 ;
    D11  O  0  378.75  2 METAL2 ;
    D2  O  315  105.75  2 METAL2 ;
    D2  O  0  105.75  2 METAL2 ;
    D3  O  315  147  2 METAL2 ;
    D3  O  0  147  2 METAL2 ;
    D4  O  315  171  2 METAL2 ;
    D4  O  0  171  2 METAL2 ;
    D5  O  315  212.25  2 METAL2 ;
    D5  O  0  212.25  2 METAL2 ;
    D6  O  315  236.25  2 METAL2 ;
    D6  O  0  236.25  2 METAL2 ;
    D7  O  315  277.5  2 METAL2 ;
    D7  O  0  277.5  2 METAL2 ;
    D8  O  315  301.5  2 METAL2 ;
    D8  O  0  301.5  2 METAL2 ;
    D9  O  315  342.75  2 METAL2 ;
    D9  O  0  342.75  2 METAL2 ;
    DATA0  I  315  16.5  2 METAL2 ;
    DATA0  I  0  16.5  2 METAL2 ;
    DATA1  I  315  22.5  2 METAL2 ;
    DATA1  I  0  22.5  2 METAL2 ;
    SEL0  I  279.25  0  2 METAL2 ;
    SEL0  I  279.25  395  2 METAL2 ;
    SEL1  I  133  0  2 METAL2 ;
    SEL1  I  133  395  2 METAL2 ;
    UD0  I  315  34.5  2 METAL2 ;
    UD0  I  0  34.5  2 METAL2 ;
    UD1  I  315  46.5  2 METAL2 ;
    UD1  I  0  46.5  2 METAL2 ;
    UD10  I  315  354.75  2 METAL2 ;
    UD10  I  0  354.75  2 METAL2 ;
    UD11  I  315  366.75  2 METAL2 ;
    UD11  I  0  366.75  2 METAL2 ;
    UD2  I  315  99.75  2 METAL2 ;
    UD2  I  0  99.75  2 METAL2 ;
    UD3  I  315  111.75  2 METAL2 ;
    UD3  I  0  111.75  2 METAL2 ;
    UD4  I  315  165  2 METAL2 ;
    UD4  I  0  165  2 METAL2 ;
    UD5  I  315  177  2 METAL2 ;
    UD5  I  0  177  2 METAL2 ;
    UD6  I  315  230.25  2 METAL2 ;
    UD6  I  0  230.25  2 METAL2 ;
    UD7  I  315  242.25  2 METAL2 ;
    UD7  I  0  242.25  2 METAL2 ;
    UD8  I  315  295.5  2 METAL2 ;
    UD8  I  0  295.5  2 METAL2 ;
    UD9  I  315  307.5  2 METAL2 ;
    UD9  I  0  307.5  2 METAL2 ;
    Vdd0  PWR  89  395  3 METAL1 ;
    Vdd0  PWR  89  0  3 METAL1 ;
    Vdd1  PWR  118  395  3 METAL1 ;
    Vdd1  PWR  118  0  3 METAL1 ;
    Vdd2  PWR  169  395  3 METAL1 ;
    Vdd2  PWR  169  0  3 METAL1 ;
    Vdd3  PWR  294.25  395  3 METAL1 ;
    Vdd3  PWR  294.25  0  3 METAL1 ;
    GND0  PWR  9.25  395  3 METAL1 ;
    GND0  PWR  9.25  0  3 METAL1 ;
```

```
    GND1  PWR  145  395  3 METAL1 ;
    GND1  PWR  145  0  3 METAL1 ;
    GND2  PWR  248.75  395  3 METAL1 ;
    GND2  PWR  248.75  0  3 METAL1 ;
    GND3  PWR  267.25  395  3 METAL1 ;
    GND3  PWR  267.25  0  3 METAL1 ;
  ptTerm#12 F 315 60 3 METAL2;
  ptTerm#13 F 315 65 3 METAL2;
  ptTerm#25 F 315 125 3 METAL2;
  ptTerm#26 F 315 130 3 METAL2;
  ptTerm#38 F 315 190 3 METAL2;
  ptTerm#39 F 315 195 3 METAL2;
  ptTerm#51 F 315 255 3 METAL2;
  ptTerm#52 F 315 260 3 METAL2;
  ptTerm#64 F 315 320 3 METAL2;
  ptTerm#65 F 315 325 3 METAL2;
  ptTerm#12 F 0 60 3 METAL2;
  ptTerm#13 F 0 65 3 METAL2;
  ptTerm#25 F 0 125 3 METAL2;
  ptTerm#26 F 0 130 3 METAL2;
  ptTerm#38 F 0 190 3 METAL2;
  ptTerm#39 F 0 195 3 METAL2;
  ptTerm#51 F 0 255 3 METAL2;
  ptTerm#52 F 0 260 3 METAL2;
  ptTerm#64 F 0 320 3 METAL2;
  ptTerm#65 F 0 325 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK67 ;
  TYPE GENERAL;
  DIMENSIONS   102.25 0  102.25 525.5   0 525.5 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    ADD1<1>  O  102.25  117.75  2 METAL2 ;
    ADD1<2>  O  102.25  183  2 METAL2 ;
    ADD1<3>  O  102.25  248.25  2 METAL2 ;
    ADD1<4>  O  102.25  313.5  2 METAL2 ;
    ADD1<5>  O  102.25  378.75  2 METAL2 ;
    ADD1<6>  O  102.25  444  2 METAL2 ;
    ADDL<7>  O  102.25  509.25  2 METAL2 ;
    BIM/CSE  I  7.25  0  2 METAL2 ;
    BIM/CSE  I  7.25  525.5  2 METAL2 ;
    A<0>  I  102.25  46.5  2 METAL2 ;
    A<0>  I  0  52.5  2 METAL2 ;
    A<1>  I  102.25  111.75  2 METAL2 ;
    A<2>  I  102.25  177  2 METAL2 ;
    A<3>  I  102.25  242.25  2 METAL2 ;
    A<4>  I  102.25  307.5  2 METAL2 ;
    A<5>  I  102.25  372.75  2 METAL2 ;
    A<6>  I  0  444  2 METAL2 ;
    A<7>  I  0  509.25  2 METAL2 ;
    Vdd0  PWR  12.75  525.5  3 METAL1 ;
    Vdd0  PWR  12.75  0  3 METAL1 ;
    GND0  PWR  99  525.5  3 METAL1 ;
    GND0  PWR  99  0  3 METAL1 ;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK68 ;
  TYPE GENERAL;
  DIMENSIONS   109.5 0  109.5 517   0 517 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    BXC0  I  90.75  0  2 METAL2 ;
    BXC0  I  61.25  517  2 METAL2 ;
    EXECUTE/BUS<0>  O  109.5  60.5  2 METAL2 ;
    EXECUTE/BUS<1>  O  109.5  124.5  2 METAL2 ;
    EXECUTE/BUS<2>  O  109.5  188.5  2 METAL2 ;
    EXECUTE/BUS<3>  O  109.5  252.5  2 METAL2 ;
    EXECUTE/BUS<4>  O  109.5  316.5  2 METAL2 ;
```

```
    EXECUTE/BUS<5>  O  109.5  380.5  2 METAL2 ;
    EXECUTE/DOUT<0>  I  109.5  54.5  2 METAL2 ;
    EXECUTE/DOUT<1>  I  109.5  118.5  2 METAL2 ;
    EXECUTE/DOUT<2>  I  109.5  182.5  2 METAL2 ;
    EXECUTE/DOUT<3>  I  109.5  246.5  2 METAL2 ;
    EXECUTE/DOUT<4>  I  109.5  310.5  2 METAL2 ;
    EXECUTE/DOUT<5>  I  109.5  374.5  2 METAL2 ;
    EXECUTE/DOUT<6>  I  109.5  442  2 METAL2 ;
    EXECUTE/DOUT<7>  I  109.5  505  2 METAL2 ;
    NBTTW1  I  7.25  0  2 METAL2 ;
    NBTTW1  I  7.25  517  2 METAL2 ;
    TT<0>  B  109.5  48.5  2 METAL2 ;
    TT<0>  B  0  48.5  2 METAL2 ;
    TT<1>  B  109.5  112.5  2 METAL2 ;
    TT<1>  B  0  112.5  2 METAL2 ;
    TT<2>  B  109.5  176.5  2 METAL2 ;
    TT<2>  B  0  176.5  2 METAL2 ;
    TT<3>  B  0  210.5  2 METAL2 ;
    TT<4>  B  109.5  304.5  2 METAL2 ;
    TT<4>  B  0  304.5  2 METAL2 ;
    TT<5>  B  0  338.5  2 METAL2 ;
    TT<6>  B 0  394  2 METAL2 ;
    TT<7>  B 0  457  2 METAL2 ;
    D<0>  I  109.5  24.5  2 METAL2 ;
    D<0>  I  0  24.5  2 METAL2 ;
    D<1>  I  109.5  88.5  2 METAL2 ;
    D<1>  I  0  88.5  2 METAL2 ;
    D<2>  I  109.5  152.5  2 METAL2 ;
    D<2>  I  0  152.5  2 METAL2 ;
    D<3>  I  109.5  216.5  2 METAL2 ;
    D<4>  I  109.5  280.5  2 METAL2 ;
    D<5>  I  109.5  344.5  2 METAL2 ;
    Vdd0  PWR  12.75  517  3 METAL1 ;
    Vdd0  PWR  12.75  0  3 METAL1 ;
    Vdd1  PWR  72.75  517  3 METAL1 ;
    Vdd1  PWR  72.75  0  3 METAL1 ;
    GND0  PWR  48.25  517  3 METAL1 ;
    GND0  PWR  48.25  0  3 METAL1 ;
    GND1  PWR  104.75  517  3 METAL1 ;
    GND1  PWR  104.75  0  3 METAL1 ;
  ptTerm#1 F 109.5 5 3 METAL2;
  ptTerm#7 F 109.5 35 3 METAL2;
  ptTerm#8 F 109.5 40 3 METAL2;
  ptTerm#14 F 109.5 70 3 METAL2;
  ptTerm#19 F 109.5 95 3 METAL2;
  ptTerm#20 F 109.5 100 3 METAL2;
  ptTerm#21 F 109.5 105 3 METAL2;
  ptTerm#27 F 109.5 135 3 METAL2;
  ptTerm#32 F 109.5 160 3 METAL2;
  ptTerm#33 F 109.5 165 3 METAL2;
  ptTerm#34 F 109.5 170 3 METAL2;
  ptTerm#39 F 109.5 195 3 METAL2;
  ptTerm#40 F 109.5 200 3 METAL2;
  ptTerm#45 F 109.5 225 3 METAL2;
  ptTerm#46 F 109.5 230 3 METAL2;
  ptTerm#47 F 109.5 235 3 METAL2;
  ptTerm#48 F 109.5 240 3 METAL2;
  ptTerm#52 F 109.5 260 3 METAL2;
  ptTerm#53 F 109.5 265 3 METAL2;
  ptTerm#58 F 109.5 290 3 METAL2;
  ptTerm#59 F 109.5 295 3 METAL2;
  ptTerm#65 F 109.5 325 3 METAL2;
  ptTerm#71 F 109.5 355 3 METAL2;
  ptTerm#72 F 109.5 360 3 METAL2;
  ptTerm#73 F 109.5 365 3 METAL2;
  ptTerm#81 F 109.5 405 3 METAL2;
  ptTerm#82 F 109.5 410 3 METAL2;
  ptTerm#83 F 109.5 415 3 METAL2;
  ptTerm#84 F 109.5 420 3 METAL2;
```

```
  ptTerm#85 F 109.5 425 3 METAL2;
  ptTerm#86 F 109.5 430 3 METAL2;
  ptTerm#87 F 109.5 435 3 METAL2;
  ptTerm#93 F 109.5 465 3 METAL2;
  ptTerm#94 F 109.5 470 3 METAL2;
  ptTerm#95 F 109.5 475 3 METAL2;
  ptTerm#96 F 109.5 480 3 METAL2;
  ptTerm#97 F 109.5 485 3 METAL2;
  ptTerm#98 F 109.5 490 3 METAL2;
  ptTerm#99 F 109.5 495 3 METAL2;
  ptTerm#1 F 0 5 3 METAL2;
  ptTerm#7 F 0 35 3 METAL2;
  ptTerm#8 F 0 40 3 METAL2;
  ptTerm#14 F 0 70 3 METAL2;
  ptTerm#19 F 0 95 3 METAL2;
  ptTerm#20 F 0 100 3 METAL2;
  ptTerm#21 F 0 105 3 METAL2;
  ptTerm#27 F 0 135 3 METAL2;
  ptTerm#32 F 0 160 3 METAL2;
  ptTerm#33 F 0 165 3 METAL2;
  ptTerm#34 F 0 170 3 METAL2;
  ptTerm#39 F 0 195 3 METAL2;
  ptTerm#40 F 0 200 3 METAL2;
  ptTerm#45 F 0 225 3 METAL2;
  ptTerm#46 F 0 230 3 METAL2;
  ptTerm#47 F 0 235 3 METAL2;
  ptTerm#48 F 0 240 3 METAL2;
  ptTerm#52 F 0 260 3 METAL2;
  ptTerm#53 F 0 265 3 METAL2;
  ptTerm#58 F 0 290 3 METAL2;
  ptTerm#59 F 0 295 3 METAL2;
  ptTerm#65 F 0 325 3 METAL2;
  ptTerm#71 F 0 355 3 METAL2;
  ptTerm#72 F 0 360 3 METAL2;
  ptTerm#73 F 0 365 3 METAL2;
  ptTerm#81 F 0 405 3 METAL2;
  ptTerm#82 F 0 410 3 METAL2;
  ptTerm#83 F 0 415 3 METAL2;
  ptTerm#84 F 0 420 3 METAL2;
  ptTerm#85 F 0 425 3 METAL2;
  ptTerm#86 F 0 430 3 METAL2;
  ptTerm#87 F 0 435 3 METAL2;
  ptTerm#93 F 0 465 3 METAL2;
  ptTerm#94 F 0 470 3 METAL2;
  ptTerm#95 F 0 475 3 METAL2;
  ptTerm#96 F 0 480 3 METAL2;
  ptTerm#97 F 0 485 3 METAL2;
  ptTerm#98 F 0 490 3 METAL2;
  ptTerm#99 F 0 495 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK69 ;
  TYPE GENERAL;
  DIMENSIONS   2147 0  2147 1231.5   0 1231.5 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    A2PR  I  1743  0  2 METAL2 ;
    A2PR  I  1743  1231.5  2 METAL2 ;
    A2T0  I  1718.5  0  2 METAL2 ;
    A2T0  I  1718.5  1231.5  2 METAL2 ;
    A2T1  I  1954.75  0  2 METAL2 ;
    A2T1  I  1954.75  1231.5  2 METAL2 ;
    A2T2  I  2014.75  0  2 METAL2 ;
    A2T2  I  2014.75  1231.5  2 METAL2 ;
    ALU2O  I  1222.75  0  2 METAL2 ;
    ALU2O  I  1222.75  1231.5  2 METAL2 ;
    BXC0  I  170.75  0  2 METAL2 ;
    BXC0  I  170.75  1231.5  2 METAL2 ;
    BXC1  I  65.75  0  2 METAL2 ;
```

```
    BXC1  I  65.75  1231.5  2 METAL2 ;
    COUT1  I  2147  1172.5  2 METAL2 ;
    EXECUTE/BUS<0>  I  2147  72  2 METAL2 ;
    EXECUTE/BUS<1>  I  2147  151  2 METAL2 ;
    EXECUTE/BUS<2>  I  2147  224.25  2 METAL2 ;
    EXECUTE/BUS<3>  I  2147  297.5  2 METAL2 ;
    EXECUTE/BUS<4>  I  2147  373  2 METAL2 ;
    EXECUTE/BUS<5>  I  2147  452  2 METAL2 ;
    EXECUTE/DOUT<0>  O  2147  66  2 METAL2 ;
    EXECUTE/DOUT<1>  O  2147  145  2 METAL2 ;
    EXECUTE/DOUT<2>  O  2147  218.25  2 METAL2 ;
    EXECUTE/DOUT<3>  O  2147  291.5  2 METAL2 ;
    EXECUTE/DOUT<4>  O  2147  367  2 METAL2 ;
    EXECUTE/DOUT<5>  O  2147  446  2 METAL2 ;
    EXECUTE/DOUT<6>  O  2147  525.25  2 METAL2 ;
    EXECUTE/DOUT<7>  O  2147  598.5  2 METAL2 ;
    LHB1  I  146.75  0  2 METAL2 ;
    LHB1  I  116.75  1231.5  2 METAL2 ;
    LLB1  I  116.75  0  2 METAL2 ;
    LLB1  I  89.75  1231.5  2 METAL2 ;
    N$250  I  642.25  0  2 METAL2 ;
    N$250  I  642.25  1231.5  2 METAL2 ;
    N$303  O  1005.75  0  2 METAL2 ;
    N$303  O  773.75  1231.5  2 METAL2 ;
    N$305  I  648.25  0  2 METAL2 ;
    N$305  I  648.25  1231.5  2 METAL2 ;
    N$308  I  716.25  0  2 METAL2 ;
    N$308  I  716.25  1231.5  2 METAL2 ;
    N$316  I  722.25  0  2 METAL2 ;
    N$316  I  722.25  1231.5  2 METAL2 ;
    N$319  I  246.25  0  2 METAL2 ;
    N$319  I  314.25  1231.5  2 METAL2 ;
    N$403  O  609.75  0  2 METAL2 ;
    N$403  O  371.75  1231.5  2 METAL2 ;
    N$404  I  1032.75  0  2 METAL2 ;
    N$404  I  1032.75  1231.5  2 METAL2 ;
    N$497  O  2147  568.5  2 METAL2 ;
    N$499  I  365.75  0  2 METAL2 ;
    N$499  I  365.75  1231.5  2 METAL2 ;
    N$500  I  240.25  0  2 METAL2 ;
    N$500  I  320.25  1231.5  2 METAL2 ;
    NA2SR  I  1493.75  0  2 METAL2 ;
    NA2SR  I  1493.75  1231.5  2 METAL2 ;
    NBIT  O  2147  1178.5  2 METAL2 ;
    ND2A  I  1282.25  0  2 METAL2 ;
    ND2A  I  1282.25  1231.5  2 METAL2 ;
    NDIV2E  I  1887.75  0  2 METAL2 ;
    NDIV2E  I  1887.75  1231.5  2 METAL2 ;
    NRHB  I  1435.75  0  2 METAL2 ;
    NRHB  I  1419.25  1231.5  2 METAL2 ;
    NRLB  I  1419.25  0  2 METAL2 ;
    NRLB  I  1434.75  1231.5  2 METAL2 ;
    RAIN<0>  O  2147  42  2 METAL2 ;
    RAIN<1>  O  2147  121  2 METAL2 ;
    RAIN<10>  O  2147  798.25  2 METAL2 ;
    RAIN<11>  O  2147  871.5  2 METAL2 ;
    RAIN<12>  O  2147  947  2 METAL2 ;
    RAIN<13>  O  2147  1026  2 METAL2 ;
    RAIN<14>  O  2147  1099.25  2 METAL2 ;
    RAIN<15>  O  2147  1184.5  2 METAL2 ;
    RAIN<2>  O  2147  194.25  2 METAL2 ;
    RAIN<3>  O  2147  267.5  2 METAL2 ;
    RAIN<4>  O  2147  343  2 METAL2 ;
    RAIN<5>  O  2147  422  2 METAL2 ;
    RAIN<6>  O  2147  495.25  2 METAL2 ;
    RAIN<7>  O  2147  580.5  2 METAL2 ;
    RAIN<8>  O  2147  652  2 METAL2 ;
    RAIN<9>  O  2147  725  2 METAL2 ;
    ROUT<0>  I  2147  48  2 METAL2 ;
```

```
    ROUT<1>  I  2147  127  2 METAL2 ;
    ROUT<10>  I  2147  804.25  2 METAL2 ;
    ROUT<11>  I  2147  877.5  2 METAL2 ;
    ROUT<12>  I  2147  953  2 METAL2 ;
    ROUT<13>  I  2147  1032  2 METAL2 ;
    ROUT<14>  I  2147  1105.25  2 METAL2 ;
    ROUT<15>  I  2147  1190.5  2 METAL2 ;
    ROUT<2>  I  2147  200.25  2 METAL2 ;
    ROUT<3>  I  2147  273.5  2 METAL2 ;
    ROUT<4>  I  2147  349  2 METAL2 ;
    ROUT<5>  I  2147  428  2 METAL2 ;
    ROUT<6>  I  2147  501.25  2 METAL2 ;
    ROUT<7>  I  2147  507.25  2 METAL2 ;
    ROUT<8>  I  2147  658  2 METAL2 ;
    ROUT<9>  I  2147  731  2 METAL2 ;
    S2B  I  1590  0  2 METAL2 ;
    S2B  I  1590  1231.5  2 METAL2 ;
    SHIFT1  I  1201.75  0  2 METAL2 ;
    SHIFT1  I  1201.75  1231.5  2 METAL2 ;
    SOUT0  O  0  121  2 METAL2 ;
    T02B  I  1686  0  2 METAL2 ;
    T02B  I  1686  1231.5  2 METAL2 ;
    T12B  I  2095.25  0  2 METAL2 ;
    T12B  I  2095.25  1231.5  2 METAL2 ;
    T22B  I  2035.75  0  2 METAL2 ;
    T22B  I  2035.75  1231.5  2 METAL2 ;
    T26  I  1920.25  0  2 METAL2 ;
    T26  I  1920.25  1231.5  2 METAL2 ;
    T37  I  1078.75  0  2 METAL2 ;
    T37  I  1078.75  1231.5  2 METAL2 ;
    N$3224  I  207.75  0  2 METAL2 ;
    N$3224  I  207.75  1231.5  2 METAL2 ;
    D<0>  B  0  682  2 METAL2 ;
    D<1>  B  2147  755  2 METAL2 ;
    D<2>  B  0  834.25  2 METAL2 ;
    D<3>  B  0  907.5  2 METAL2 ;
    D<4>  B  0  983  2 METAL2 ;
    D<5>  B  0  1062  2 METAL2 ;
    D<6>  B  2147  574.5  2 METAL2 ;
    D<6>  B  0  1135.25  2 METAL2 ;
    D<7>  B  2147  646  2 METAL2 ;
    D<7>  B  0  1208.5  2 METAL2 ;
    Vdd0  PWR  50.75  1231.5  3 METAL1 ;
    Vdd0  PWR  50.75  0  3 METAL1 ;
    Vdd1  PWR  101.75  1231.5  3 METAL1 ;
    Vdd1  PWR  101.75  0  3 METAL1 ;
    Vdd10  PWR  991.75  1231.5  3 METAL1 ;
    Vdd10  PWR  991.75  0  3 METAL1 ;
    Vdd11  PWR  1017.75  1231.5  3 METAL1 ;
    Vdd11  PWR  1017.75  0  3 METAL1 ;
    Vdd12  PWR  1063.75  1231.5  3 METAL1 ;
    Vdd12  PWR  1063.75  0  3 METAL1 ;
    Vdd13  PWR  1108.75  1231.5  3 METAL1 ;
    Vdd13  PWR  1108.75  0  3 METAL1 ;
    Vdd14  PWR  1186.75  1231.5  3 METAL1 ;
    Vdd14  PWR  1186.75  0  3 METAL1 ;
    Vdd15  PWR  1228.25  1231.5  3 METAL1 ;
    Vdd15  PWR  1228.25  0  3 METAL1 ;
    Vdd16  PWR  1287.75  1231.5  3 METAL1 ;
    Vdd16  PWR  1287.75  0  3 METAL1 ;
    Vdd17  PWR  1413.75  1231.5  3 METAL1 ;
    Vdd17  PWR  1413.75  0  3 METAL1 ;
    Vdd18  PWR  1457.75  1231.5  3 METAL1 ;
    Vdd18  PWR  1457.75  0  3 METAL1 ;
    Vdd19  PWR  1499.25  1231.5  3 METAL1 ;
    Vdd19  PWR  1499.25  0  3 METAL1 ;
    Vdd2  PWR  185.75  1231.5  3 METAL1 ;
    Vdd2  PWR  185.75  0  3 METAL1 ;
    Vdd20  PWR  1595.5  1231.5  3 METAL1 ;
```

```
    Vdd20  PWR  1595.5  0  3 METAL1 ;
    Vdd21  PWR  1680.5  1231.5  3 METAL1 ;
    Vdd21  PWR  1680.5  0  3 METAL1 ;
    Vdd22  PWR  1703.5  1231.5  3 METAL1 ;
    Vdd22  PWR  1703.5  0  3 METAL1 ;
    Vdd23  PWR  1748.5  1231.5  3 METAL1 ;
    Vdd23  PWR  1748.5  0  3 METAL1 ;
    Vdd24  PWR  1882.25  1231.5  3 METAL1 ;
    Vdd24  PWR  1882.25  0  3 METAL1 ;
    Vdd25  PWR  1905.25  1231.5  3 METAL1 ;
    Vdd25  PWR  1905.25  0  3 METAL1 ;
    Vdd26  PWR  1969.75  1231.5  3 METAL1 ;
    Vdd26  PWR  1969.75  0  3 METAL1 ;
    Vdd27  PWR  1999.75  1231.5  3 METAL1 ;
    Vdd27  PWR  1999.75  0  3 METAL1 ;
    Vdd28  PWR  2041.25  1231.5  3 METAL1 ;
    Vdd28  PWR  2041.25  0  3 METAL1 ;
    Vdd29  PWR  2100.75  1231.5  3 METAL1 ;
    Vdd29  PWR  2100.75  0  3 METAL1 ;
    Vdd3  PWR  277.75  1231.5  3 METAL1 ;
    Vdd3  PWR  277.75  0  3 METAL1 ;
    Vdd4  PWR  389.75  1231.5  3 METAL1 ;
    Vdd4  PWR  389.75  0  3 METAL1 ;
    Vdd5  PWR  476.25  1231.5  3 METAL1 ;
    Vdd5  PWR  476.25  0  3 METAL1 ;
    Vdd6  PWR  589.75  1231.5  3 METAL1 ;
    Vdd6  PWR  589.75  0  3 METAL1 ;
    Vdd7  PWR  679.75  1231.5  3 METAL1 ;
    Vdd7  PWR  679.75  0  3 METAL1 ;
    Vdd8  PWR  791.75  1231.5  3 METAL1 ;
    Vdd8  PWR  791.75  0  3 METAL1 ;
    Vdd9  PWR  878.25  1231.5  3 METAL1 ;
    Vdd9  PWR  878.25  0  3 METAL1 ;
    GND0  PWR  77.75  1231.5  3 METAL1 ;
    GND0  PWR  77.75  0  3 METAL1 ;
    GND1  PWR  128.75  1231.5  3 METAL1 ;
    GND1  PWR  128.75  0  3 METAL1 ;
    GND10  PWR  825.75  1231.5  3 METAL1 ;
    GND10  PWR  825.75  0  3 METAL1 ;
    GND11  PWR  930.75  1231.5  3 METAL1 ;
    GND11  PWR  930.75  0  3 METAL1 ;
    GND12  PWR  952.75  1231.5  3 METAL1 ;
    GND12  PWR  952.75  0  3 METAL1 ;
    GND13  PWR  1044.75  1231.5  3 METAL1 ;
    GND13  PWR  1044.75  0  3 METAL1 ;
    GND14  PWR  1090.75  1231.5  3 METAL1 ;
    GND14  PWR  1090.75  0  3 METAL1 ;
    GND15  PWR  1153.75  1231.5  3 METAL1 ;
    GND15  PWR  1153.75  0  3 METAL1 ;
    GND16  PWR  1213.75  1231.5  3 METAL1 ;
    GND16  PWR  1213.75  0  3 METAL1 ;
    GND17  PWR  1263.75  1231.5  3 METAL1 ;
    GND17  PWR  1263.75  0  3 METAL1 ;
    GND18  PWR  1323.25  1231.5  3 METAL1 ;
    GND18  PWR  1323.25  0  3 METAL1 ;
    GND19  PWR  1378.25  1231.5  3 METAL1 ;
    GND19  PWR  1378.25  0  3 METAL1 ;
    GND2  PWR  158.75  1231.5  3 METAL1 ;
    GND2  PWR  158.75  0  3 METAL1 ;
    GND20  PWR  1484.75  1231.5  3 METAL1 ;
    GND20  PWR  1484.75  0  3 METAL1 ;
    GND21  PWR  1579  1231.5  3 METAL1 ;
    GND21  PWR  1579  0  3 METAL1 ;
    GND22  PWR  1631  1231.5  3 METAL1 ;
    GND22  PWR  1631  0  3 METAL1 ;
    GND23  PWR  1645  1231.5  3 METAL1 ;
    GND23  PWR  1645  0  3 METAL1 ;
    GND24  PWR  1730.5  1231.5  3 METAL1 ;
    GND24  PWR  1730.5  0  3 METAL1 ;
```

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    GND25  PWR  1828.25  1231.5  3 METAL1 ;
    GND25  PWR  1828.25  0  3 METAL1 ;
    GND26  PWR  1846.75  1231.5  3 METAL1 ;
    GND26  PWR  1846.75  0  3 METAL1 ;
    GND27  PWR  1932.25  1231.5  3 METAL1 ;
    GND27  PWR  1932.25  0  3 METAL1 ;
    GND28  PWR  1942.75  1231.5  3 METAL1 ;
    GND28  PWR  1942.75  0  3 METAL1 ;
    GND29  PWR  2026.75  1231.5  3 METAL1 ;
    GND29  PWR  2026.75  0  3 METAL1 ;
    GND3  PWR  214.75  1231.5  3 METAL1 ;
    GND3  PWR  214.75  0  3 METAL1 ;
    GND30  PWR  2076.75  1231.5  3 METAL1 ;
    GND30  PWR  2076.75  0  3 METAL1 ;
    GND31  PWR  2136.25  1231.5  3 METAL1 ;
    GND31  PWR  2136.25  0  3 METAL1 ;
    GND4  PWR  350.25  1231.5  3 METAL1 ;
    GND4  PWR  350.25  0  3 METAL1 ;
    GND5  PWR  423.75  1231.5  3 METAL1 ;
    GND5  PWR  423.75  0  3 METAL1 ;
    GND6  PWR  528.75  1231.5  3 METAL1 ;
    GND6  PWR  528.75  0  3 METAL1 ;
    GND7  PWR  550.75  1231.5  3 METAL1 ;
    GND7  PWR  550.75  0  3 METAL1 ;
    GND8  PWR  616.75  1231.5  3 METAL1 ;
    GND8  PWR  616.75  0  3 METAL1 ;
    GND9  PWR  752.25  1231.5  3 METAL1 ;
    GND9  PWR  752.25  0  3 METAL1 ;
  ptTerm#49 F 2147 245 3 METAL2;
  ptTerm#99 F 2147 470 3 METAL2;
  ptTerm#114 F 2147 545 3 METAL2;
  ptTerm#124 F 2147 620 3 METAL2;
  ptTerm#140 F 2147 700 3 METAL2;
  ptTerm#160 F 2147 775 3 METAL2;
  ptTerm#170 F 2147 850 3 METAL2;
  ptTerm#174 F 2147 885 3 METAL2;
  ptTerm#189 F 2147 925 3 METAL2;
  ptTerm#190 F 2147 960 3 METAL2;
  ptTerm#200 F 2147 1000 3 METAL2;
  ptTerm#230 F 2147 1150 3 METAL2;
  ptTerm#49 F 0 245 3 METAL2;
  ptTerm#99 F 0 495 3 METAL2;
  ptTerm#114 F 0 570 3 METAL2;
  ptTerm#124 F 0 645 3 METAL2;
  ptTerm#140 F 0 725 3 METAL2;
  ptTerm#160 F 0 800 3 METAL2;
  ptTerm#170 F 0 850 3 METAL2;
  ptTerm#174 F 0 870 3 METAL2;
  ptTerm#189 F 0 945 3 METAL2;
  ptTerm#190 F 0 950 3 METAL2;
  ptTerm#200 F 0 1025 3 METAL2;
  ptTerm#230 F 0 1150 3 METAL2;
  ptTerm#1 F 102.25 5 3 METAL2;
  ptTerm#2 F 102.25 10 3 METAL2;
  ptTerm#3 F 102.25 15 3 METAL2;
  ptTerm#4 F 102.25 20 3 METAL2;
  ptTerm#5 F 102.25 25 3 METAL2;
  ptTerm#6 F 102.25 30 3 METAL2;
  ptTerm#7 F 102.25 35 3 METAL2;
  ptTerm#8 F 102.25 40 3 METAL2;
  ptTerm#12 F 102.25 60 3 METAL2;
  ptTerm#13 F 102.25 65 3 METAL2;
  ptTerm#14 F 102.25 70 3 METAL2;
  ptTerm#15 F 102.25 75 3 METAL2;
  ptTerm#16 F 102.25 80 3 METAL2;
  ptTerm#17 F 102.25 85 3 METAL2;
  ptTerm#18 F 102.25 90 3 METAL2;
  ptTerm#19 F 102.25 95 3 METAL2;
  ptTerm#20 F 102.25 100 3 METAL2;
```

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  ptTerm#21 F 102.25 105 3 METAL2;
  ptTerm#25 F 102.25 125 3 METAL2;
  ptTerm#26 F 102.25 130 3 METAL2;
  ptTerm#27 F 102.25 135 3 METAL2;
  ptTerm#28 F 102.25 140 3 METAL2;
  ptTerm#29 F 102.25 145 3 METAL2;
  ptTerm#30 F 102.25 150 3 METAL2;
  ptTerm#31 F 102.25 155 3 METAL2;
  ptTerm#32 F 102.25 160 3 METAL2;
  ptTerm#33 F 102.25 165 3 METAL2;
  ptTerm#34 F 102.25 170 3 METAL2;
  ptTerm#38 F 102.25 190 3 METAL2;
  ptTerm#39 F 102.25 195 3 METAL2;
  ptTerm#40 F 102.25 200 3 METAL2;
  ptTerm#41 F 102.25 205 3 METAL2;
  ptTerm#42 F 102.25 210 3 METAL2;
  ptTerm#43 F 102.25 215 3 METAL2;
  ptTerm#44 F 102.25 220 3 METAL2;
  ptTerm#45 F 102.25 225 3 METAL2;
  ptTerm#46 F 102.25 230 3 METAL2;
  ptTerm#47 F 102.25 235 3 METAL2;
  ptTerm#51 F 102.25 255 3 METAL2;
  ptTerm#52 F 102.25 260 3 METAL2;
  ptTerm#53 F 102.25 265 3 METAL2;
  ptTerm#54 F 102.25 270 3 METAL2;
  ptTerm#55 F 102.25 275 3 METAL2;
  ptTerm#56 F 102.25 280 3 METAL2;
  ptTerm#57 F 102.25 285 3 METAL2;
  ptTerm#58 F 102.25 290 3 METAL2;
  ptTerm#59 F 102.25 295 3 METAL2;
  ptTerm#60 F 102.25 300 3 METAL2;
  ptTerm#64 F 102.25 320 3 METAL2;
  ptTerm#65 F 102.25 325 3 METAL2;
  ptTerm#66 F 102.25 330 3 METAL2;
  ptTerm#67 F 102.25 335 3 METAL2;
  ptTerm#68 F 102.25 340 3 METAL2;
  ptTerm#69 F 102.25 345 3 METAL2;
  ptTerm#70 F 102.25 350 3 METAL2;
  ptTerm#71 F 102.25 355 3 METAL2;
  ptTerm#72 F 102.25 360 3 METAL2;
  ptTerm#73 F 102.25 365 3 METAL2;
  ptTerm#78 F 102.25 390 3 METAL2;
  ptTerm#79 F 102.25 395 3 METAL2;
  ptTerm#80 F 102.25 400 3 METAL2;
  ptTerm#81 F 102.25 405 3 METAL2;
  ptTerm#82 F 102.25 410 3 METAL2;
  ptTerm#83 F 102.25 415 3 METAL2;
  ptTerm#84 F 102.25 420 3 METAL2;
  ptTerm#85 F 102.25 425 3 METAL2;
  ptTerm#86 F 102.25 430 3 METAL2;
  ptTerm#87 F 102.25 435 3 METAL2;
  ptTerm#91 F 102.25 455 3 METAL2;
  ptTerm#92 F 102.25 460 3 METAL2;
  ptTerm#93 F 102.25 465 3 METAL2;
  ptTerm#94 F 102.25 470 3 METAL2;
  ptTerm#95 F 102.25 475 3 METAL2;
  ptTerm#96 F 102.25 480 3 METAL2;
  ptTerm#97 F 102.25 485 3 METAL2;
  ptTerm#98 F 102.25 490 3 METAL2;
  ptTerm#99 F 102.25 495 3 METAL2;
  ptTerm#100 F 102.25 500 3 METAL2;
  ptTerm#1 F 0 5 3 METAL2;
  ptTerm#2 F 0 10 3 METAL2;
  ptTerm#3 F 0 15 3 METAL2;
  ptTerm#4 F 0 20 3 METAL2;
  ptTerm#5 F 0 25 3 METAL2;
  ptTerm#6 F 0 30 3 METAL2;
  ptTerm#7 F 0 35 3 METAL2;
  ptTerm#8 F 0 40 3 METAL2;
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  ptTerm#12 F 0 60 3 METAL2;
  ptTerm#13 F 0 65 3 METAL2;
  ptTerm#14 F 0 70 3 METAL2;
  ptTerm#15 F 0 75 3 METAL2;
  ptTerm#16 F 0 80 3 METAL2;
  ptTerm#17 F 0 85 3 METAL2;
  ptTerm#18 F 0 90 3 METAL2;
  ptTerm#19 F 0 95 3 METAL2;
  ptTerm#20 F 0 100 3 METAL2;
  ptTerm#21 F 0 105 3 METAL2;
  ptTerm#25 F 0 125 3 METAL2;
  ptTerm#26 F 0 130 3 METAL2;
  ptTerm#27 F 0 135 3 METAL2;
  ptTerm#28 F 0 140 3 METAL2;
  ptTerm#29 F 0 145 3 METAL2;
  ptTerm#30 F 0 150 3 METAL2;
  ptTerm#31 F 0 155 3 METAL2;
  ptTerm#32 F 0 160 3 METAL2;
  ptTerm#33 F 0 165 3 METAL2;
  ptTerm#34 F 0 170 3 METAL2;
  ptTerm#38 F 0 190 3 METAL2;
  ptTerm#39 F 0 195 3 METAL2;
  ptTerm#40 F 0 200 3 METAL2;
  ptTerm#41 F 0 205 3 METAL2;
  ptTerm#42 F 0 210 3 METAL2;
  ptTerm#43 F 0 215 3 METAL2;
  ptTerm#44 F 0 220 3 METAL2;
  ptTerm#45 F 0 225 3 METAL2;
  ptTerm#46 F 0 230 3 METAL2;
  ptTerm#47 F 0 235 3 METAL2;
  ptTerm#51 F 0 255 3 METAL2;
  ptTerm#52 F 0 260 3 METAL2;
  ptTerm#53 F 0 265 3 METAL2;
  ptTerm#54 F 0 270 3 METAL2;
  ptTerm#55 F 0 275 3 METAL2;
  ptTerm#56 F 0 280 3 METAL2;
  ptTerm#57 F 0 285 3 METAL2;
  ptTerm#58 F 0 290 3 METAL2;
  ptTerm#59 F 0 295 3 METAL2;
  ptTerm#60 F 0 300 3 METAL2;
  ptTerm#64 F 0 320 3 METAL2;
  ptTerm#65 F 0 325 3 METAL2;
  ptTerm#66 F 0 330 3 METAL2;
  ptTerm#67 F 0 335 3 METAL2;
  ptTerm#68 F 0 340 3 METAL2;
  ptTerm#69 F 0 345 3 METAL2;
  ptTerm#70 F 0 350 3 METAL2;
  ptTerm#71 F 0 355 3 METAL2;
  ptTerm#72 F 0 360 3 METAL2;
  ptTerm#73 F 0 365 3 METAL2;
  ptTerm#78 F 0 390 3 METAL2;
  ptTerm#79 F 0 395 3 METAL2;
  ptTerm#80 F 0 400 3 METAL2;
  ptTerm#81 F 0 405 3 METAL2;
  ptTerm#82 F 0 410 3 METAL2;
  ptTerm#83 F 0 415 3 METAL2;
  ptTerm#84 F 0 420 3 METAL2;
  ptTerm#85 F 0 425 3 METAL2;
  ptTerm#86 F 0 430 3 METAL2;
  ptTerm#87 F 0 435 3 METAL2;
  ptTerm#91 F 0 455 3 METAL2;
  ptTerm#92 F 0 460 3 METAL2;
  ptTerm#93 F 0 465 3 METAL2;
  ptTerm#94 F 0 470 3 METAL2;
  ptTerm#95 F 0 475 3 METAL2;
  ptTerm#96 F 0 480 3 METAL2;
  ptTerm#97 F 0 485 3 METAL2;
  ptTerm#98 F 0 490 3 METAL2;
  ptTerm#99 F 0 495 3 METAL2;
```

```
  ptTerm#100 F 0 500 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE BLK70 ;
  TYPE GENERAL;
  DIMENSIONS   173 0  173 281   0 281 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    FDIN  I  107.25  0  2 METAL2 ;
    FDIN  I  23.75  281  2 METAL2 ;
    FLAG  O  0  115.25  2 METAL2 ;
    FLC<0>  I  0  6  2 METAL2 ;
    FLC<1>  I  0  74.75  2 METAL2 ;
    FLC<2>  I  0  143.5  2 METAL2 ;
    FLC<3>  I  0  212.25  2 METAL2 ;
    UCODE<20>  I  173  190  2 METAL2 ;
    UCODE<20>  I  0  190  2 METAL2 ;
    UCODE<21>  I  173  121.25  2 METAL2 ;
    UCODE<21>  I  0  121.25  2 METAL2 ;
    Vdd0  PWR  17  281  3 METAL1 ;
    Vdd0  PWR  17  0  3 METAL1 ;
    Vdd1  PWR  125.25  281  3 METAL1 ;
    Vdd1  PWR  125.25  0  3 METAL1 ;
    GND0  PWR  96.75  281  3 METAL1 ;
    GND0  PWR  96.75  0  3 METAL1 ;
    GND1  PWR  152.25  281  3 METAL1 ;
    GND1  PWR  152.25  0  3 METAL1 ;
  ptTerm#6 F 173 30 3 METAL2;
  ptTerm#7 F 173 35 3 METAL2;
  ptTerm#8 F 173 40 3 METAL2;
  ptTerm#9 F 173 45 3 METAL2;
  ptTerm#10 F 173 50 3 METAL2;
  ptTerm#13 F 173 65 3 METAL2;
  ptTerm#18 F 173 90 3 METAL2;
  ptTerm#19 F 173 95 3 METAL2;
  ptTerm#20 F 173 100 3 METAL2;
  ptTerm#21 F 173 105 3 METAL2;
  ptTerm#34 F 173 170 3 METAL2;
  ptTerm#35 F 173 175 3 METAL2;
  ptTerm#36 F 173 180 3 METAL2;
  ptTerm#44 F 173 220 3 METAL2;
  ptTerm#45 F 173 225 3 METAL2;
  ptTerm#46 F 173 230 3 METAL2;
  ptTerm#47 F 173 235 3 METAL2;
  ptTerm#48 F 173 240 3 METAL2;
  ptTerm#49 F 173 245 3 METAL2;
  ptTerm#50 F 173 250 3 METAL2;
  ptTerm#51 F 173 255 3 METAL2;
  ptTerm#6 F 0 30 3 METAL2;
  ptTerm#7 F 0 35 3 METAL2;
  ptTerm#8 F 0 40 3 METAL2;
  ptTerm#9 F 0 45 3 METAL2;
  ptTerm#10 F 0 50 3 METAL2;
  ptTerm#13 F 0 65 3 METAL2;
  ptTerm#18 F 0 90 3 METAL2;
  ptTerm#19 F 0 95 3 METAL2;
  ptTerm#20 F 0 100 3 METAL2;
  ptTerm#21 F 0 105 3 METAL2;
  ptTerm#34 F 0 170 3 METAL2;
  ptTerm#35 F 0 175 3 METAL2;
  ptTerm#36 F 0 180 3 METAL2;
  ptTerm#44 F 0 220 3 METAL2;
  ptTerm#45 F 0 225 3 METAL2;
  ptTerm#46 F 0 230 3 METAL2;
  ptTerm#47 F 0 235 3 METAL2;
  ptTerm#48 F 0 240 3 METAL2;
  ptTerm#49 F 0 245 3 METAL2;
  ptTerm#50 F 0 250 3 METAL2;
  ptTerm#51 F 0 255 3 METAL2;
```

```
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD2 ;
  TYPE STANDARD ;
  DIMENSIONS   100.75 0  100.75 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  21.25  68  2 METAL2 ;
    in0  I  21.25  0  2 METAL2 ;
    in1  I  42.5  68  2 METAL2 ;
    in1  I  42.5  0  2 METAL2 ;
    in2  I  52  68  2 METAL2 ;
    in2  I  52  0  2 METAL2 ;
    in3  I  75.5  68  2 METAL2 ;
    in3  I  75.5  0  2 METAL2 ;
    out  O  96  68  2 METAL2 ;
    out  O  96  0  2 METAL2 ;
    s0  I  81.5  68  2 METAL2 ;
    s0  I  81.5  0  2 METAL2 ;
    s1  I  13.25  68  2 METAL2 ;
    s1  I  13.25  0  2 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 100.75 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 100.75 1.75 3 METAL1;
  ptport1 F 27.25 62.5 3 METAL2;
  ptport2 F 32.25 62.5 3 METAL2;
  ptport3 F 58 62.5 3 METAL2;
  ptport4 F 63 62.5 3 METAL2;
  ptport5 F 68 62.5 3 METAL2;
  ptport6 F 87.5 62.5 3 METAL2;
  ptport1 F 27.25 0 3 METAL2;
  ptport2 F 32.25 0 3 METAL2;
  ptport3 F 58 0 3 METAL2;
  ptport4 F 63 0 3 METAL2;
  ptport5 F 68 0 3 METAL2;
  ptport6 F 87.5 0 3 METAL2;

  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD3 ;
  TYPE STANDARD ;
  DIMENSIONS   98.75 0  98.75 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    Clk  I  4.75  68  4 METAL2 ;
    Clk  I  4.75  0  4 METAL2 ;
    Clr  I  89  68  2 METAL2 ;
    Clr  I  89  0  2 METAL2 ;
    D  I  19.75  68  4 METAL2 ;
    D  I  19.75  0  4 METAL2 ;
    Pre  I  74.25  68  4 METAL2 ;
    Pre  I  74.25  0  4 METAL2 ;
    Q  O  95  68  2 METAL2 ;
    Q  O  95  0  2 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 98.75 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 98.75 1.75 3 METAL1;
  ptport0 F 10.75 59.5 3 METAL2;
  ptport1 F 25.75 59.5 3 METAL2;
  ptport2 F 30.75 59.5 3 METAL2;
  ptport3 F 35.75 59.5 3 METAL2;
  ptport4 F 40.75 59.5 3 METAL2;
  ptport5 F 45.75 59.5 3 METAL2;
  ptport6 F 50.75 59.5 3 METAL2;
  ptport7 F 55.75 59.5 3 METAL2;
  ptport8 F 60.75 59.5 3 METAL2;
  ptport9 F 65.75 59.5 3 METAL2;
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ptport10 F 80.25 59.5 3 METAL2;
ptport0 F 10.75 0 3 METAL2;
ptport1 F 25.75 0 3 METAL2;
ptport2 F 30.75 0 3 METAL2;
ptport3 F 35.75 0 3 METAL2;
ptport4 F 40.75 0 3 METAL2;
ptport5 F 45.75 0 3 METAL2;
ptport6 F 50.75 0 3 METAL2;
ptport7 F 55.75 0 3 METAL2;
ptport8 F 60.75 0 3 METAL2;
ptport9 F 65.75 0 3 METAL2;
ptport10 F 80.25 0 3 METAL2;
ENDIOLIST ;
ENDMODULE ;
MODULE STD4 ;
TYPE STANDARD ;
DIMENSIONS   78.5 0  78.5 68   0 68 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  Clk  I  37.75  68  4 METAL2 ;
  Clk  I  37.75  0  4 METAL2 ;
  D  I  4.75  68  4 METAL2 ;
  D  I  4.75  0  4 METAL2 ;
  Q  O  72.75  68  4 METAL2 ;
  Q  O  72.75  0  4 METAL2 ;
  Vdd PWR 0 66.25 3 METAL1;
  Vdd PWR 78.5 66.25 3 METAL1;
  GND PWR 0 1.75 3 METAL1;
  GND PWR 78.5 1.75 3 METAL1;
ptport0 F 10.75 62.25 3 METAL2;
ptport1 F 15.75 62.25 3 METAL2;
ptport2 F 20.75 62.25 3 METAL2;
ptport3 F 25.75 62.25 3 METAL2;
ptport4 F 30.75 62.25 3 METAL2;
ptport5 F 43.75 62.25 3 METAL2;
ptport6 F 48.75 62.25 3 METAL2;
ptport7 F 53.75 62.25 3 METAL2;
ptport8 F 58.75 62.25 3 METAL2;
ptport9 F 63.75 62.25 3 METAL2;
ptport0 F 10.75 0 3 METAL2;
ptport1 F 15.75 0 3 METAL2;
ptport2 F 20.75 0 3 METAL2;
ptport3 F 25.75 0 3 METAL2;
ptport4 F 30.75 0 3 METAL2;
ptport5 F 43.75 0 3 METAL2;
ptport6 F 48.75 0 3 METAL2;
ptport7 F 53.75 0 3 METAL2;
ptport8 F 58.75 0 3 METAL2;
ptport9 F 63.75 0 3 METAL2;
ENDIOLIST ;
ENDMODULE ;
MODULE STD5 ;
TYPE STANDARD ;
DIMENSIONS   75.75 0  75.75 68   0 68 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  in0  I  17.5  68  2 METAL2 ;
  in0  I  17.5  0  2 METAL2 ;
  in1  I  38  68  2 METAL2 ;
  in1  I  38  0  2 METAL2 ;
  in2  I  48.5  68  2 METAL2 ;
  in2  I  48.5  0  2 METAL2 ;
  out  O  70  68  2 METAL2 ;
  out  O  70  0  2 METAL2 ;
  s0  I  62  68  2 METAL2 ;
  s0  I  62  0  2 METAL2 ;
  s1  I  11  68  2 METAL2 ;
  s1  I  11  0  2 METAL2 ;
  Vdd PWR 0 66.25 3 METAL1;
```

```
    Vdd PWR 75.75 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 75.75 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD8 ;
  TYPE STANDARD ;
  DIMENSIONS   91.25 0  91.25 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    bufon#out  O  11  68  4 METAL2 ;
    bufon#out  O  11  0  4 METAL2 ;
    bufop#out  O  80.25  68  4 METAL2 ;
    bufop#out  O  80.25  0  4 METAL2 ;
    tcout#en  I  44.25  68  4 METAL2 ;
    tcout#en  I  44.25  0  4 METAL2 ;
    tcout#in  I  51.75  68  4 METAL2 ;
    tcout#in  I  51.75  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 91.25 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 91.25 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD9 ;
  TYPE STANDARD ;
  DIMENSIONS   30.5 0  30.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  7  68  4 METAL2 ;
    in0  I  7  0  4 METAL2 ;
    in1  I  13  68  4 METAL2 ;
    in1  I  13  0  4 METAL2 ;
    in2  I  19  68  4 METAL2 ;
    in2  I  19  0  4 METAL2 ;
    out  O  25  68  4 METAL2 ;
    out  O  25  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 30.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 30.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD10 ;
  TYPE STANDARD ;
  DIMENSIONS   105.5 0  105.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    schmitt#in  I  21.25  68  4 METAL2 ;
    schmitt#in  I  21.25  0  4 METAL2 ;
    schmitt#out  O  5.25  68  4 METAL2 ;
    schmitt#out  O  5.25  0  4 METAL2 ;
    tristate#en  I  58  68  4 METAL2 ;
    tristate#en  I  58  0  4 METAL2 ;
    tristate#in  I  65.5  68  4 METAL2 ;
    tristate#in  I  65.5  0  4 METAL2 ;
    tristate#inn  I  80.25  68  4 METAL2 ;
    tristate#inn  I  80.25  0  4 METAL2 ;
    tristate#out  B 97.25  68  4 METAL2 ;
    tristate#out  B 97.25  0  4 METAL2 ;
    tristate#outn  O  48.25  68  4 METAL2 ;
    tristate#outn  O  48.25  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 105.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 105.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD11 ;
```

```
  TYPE STANDARD ;
  DIMENSIONS   30.25 0  30.25 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  15  68  4 METAL2 ;
    in0  I  15  0  4 METAL2 ;
    in1  I  21  68  4 METAL2 ;
    in1  I  21  0  4 METAL2 ;
    out  O  5.5  68  4 METAL2 ;
    out  O  5.5  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 30.25 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 30.25 1.75 3 METAL1;
  ptport0 F 24.75 62 3 METAL2;
  ptport0 F 24.75 0 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD15 ;
  TYPE STANDARD ;
  DIMENSIONS   29.5 0  29.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    bufi#in  I  5.5  68  4 METAL2 ;
    bufi#in  I  5.5  0  4 METAL2 ;
    bufi#out  O  18.5  68  4 METAL2 ;
    bufi#out  O  18.5  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 29.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 29.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD16 ;
  TYPE STANDARD ;
  DIMENSIONS   103.75 0  103.75 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    Clk  I  4.75  68  4 METAL2 ;
    Clk  I  4.75  0  4 METAL2 ;
    Clr  I  88  68  2 METAL2 ;
    Clr  I  88  0  2 METAL2 ;
    D  I  19.75  68  4 METAL2 ;
    D  I  19.75  0  4 METAL2 ;
    Q  O  94  68  2 METAL2 ;
    Q  O  94  0  2 METAL2 ;
    Qbar  O  99  68  2 METAL2 ;
    Qbar  O  99  0  2 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 103.75 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 103.75 1.75 3 METAL1;
  ptport0 F 10.75 59.5 3 METAL2;
  ptport1 F 25.75 59.5 3 METAL2;
  ptport2 F 30.75 59.5 3 METAL2;
  ptport3 F 35.75 59.5 3 METAL2;
  ptport4 F 40.75 59.5 3 METAL2;
  ptport5 F 45.75 59.5 3 METAL2;
  ptport6 F 50.75 59.5 3 METAL2;
  ptport7 F 55.75 59.5 3 METAL2;
  ptport8 F 60.75 59.5 3 METAL2;
  ptport9 F 65.75 59.5 3 METAL2;
  ptport10 F 70.75 59.5 3 METAL2;
  ptport11 F 75.75 59.5 3 METAL2;
  ptport12 F 80.75 59.5 3 METAL2;
  ptport0 F 10.75 0 3 METAL2;
  ptport1 F 25.75 0 3 METAL2;
  ptport2 F 30.75 0 3 METAL2;
  ptport3 F 35.75 0 3 METAL2;
```

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  ptport4 F 40.75 0 3 METAL2;
  ptport5 F 45.75 0 3 METAL2;
  ptport6 F 50.75 0 3 METAL2;
  ptport7 F 55.75 0 3 METAL2;
  ptport8 F 60.75 0 3 METAL2;
  ptport9 F 65.75 0 3 METAL2;
  ptport10 F 70.75 0 3 METAL2;
  ptport11 F 75.75 0 3 METAL2;
  ptport12 F 80.75 0 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD18 ;
  TYPE STANDARD ;
  DIMENSIONS   30.5 0  30.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  7  68  4 METAL2 ;
    in0  I  7  0  4 METAL2 ;
    in1  I  13  68  4 METAL2 ;
    in1  I  13  0  4 METAL2 ;
    in2  I  19  68  4 METAL2 ;
    in2  I  19  0  4 METAL2 ;
    out  O  25  68  4 METAL2 ;
    out  O  25  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 30.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 30.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD19 ;
  TYPE STANDARD ;
  DIMENSIONS   89.5 0  89.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    Clk  I  37.75  68  4 METAL2 ;
    Clk  I  37.75  0  4 METAL2 ;
    D  I  4.75  68  4 METAL2 ;
    D  I  4.75  0  4 METAL2 ;
    Q  O  73.25  68  4 METAL2 ;
    Q  O  73.25  0  4 METAL2 ;
    Qbar  O  84.25  68  4 METAL2 ;
    Qbar  O  84.25  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 89.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 89.5 1.75 3 METAL1;
  ptport0 F 10.75 62.25 3 METAL2;
  ptport1 F 15.75 62.25 3 METAL2;
  ptport2 F 20.75 62.25 3 METAL2;
  ptport3 F 25.75 62.25 3 METAL2;
  ptport4 F 30.75 62.25 3 METAL2;
  ptport5 F 43.75 62.25 3 METAL2;
  ptport6 F 48.75 62.25 3 METAL2;
  ptport7 F 53.75 62.25 3 METAL2;
  ptport8 F 58.75 62.25 3 METAL2;
  ptport9 F 63.75 62.25 3 METAL2;
  ptport0 F 10.75 0 3 METAL2;
  ptport1 F 15.75 0 3 METAL2;
  ptport2 F 20.75 0 3 METAL2;
  ptport3 F 25.75 0 3 METAL2;
  ptport4 F 30.75 0 3 METAL2;
  ptport5 F 43.75 0 3 METAL2;
  ptport6 F 48.75 0 3 METAL2;
  ptport7 F 53.75 0 3 METAL2;
  ptport8 F 58.75 0 3 METAL2;
  ptport9 F 63.75 0 3 METAL2;

  ENDIOLIST ;
```

```
ENDMODULE ;
MODULE STD20 ;
TYPE STANDARD ;
DIMENSIONS   30.25 0  30.25 68   0 68 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  in0  I  6.75  68  4 METAL2 ;
  in0  I  6.75  0  4 METAL2 ;
  in1  I  12.75  68  4 METAL2 ;
  in1  I  12.75  0  4 METAL2 ;
  in2  I  18.75  68  4 METAL2 ;
  in2  I  18.75  0  4 METAL2 ;
  out  O  25.25  68  4 METAL2 ;
  out  O  25.25  0  4 METAL2 ;
  Vdd PWR 0 66.25 3 METAL1;
  Vdd PWR 30.25 66.25 3 METAL1;
  GND PWR 0 1.75 3 METAL1;
  GND PWR 30.25 1.75 3 METAL1;
ENDIOLIST ;
ENDMODULE ;
MODULE STD21 ;
TYPE STANDARD ;
DIMENSIONS   42.5 0  42.5 68   0 68 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  in0  I  15  68  4 METAL2 ;
  in0  I  15  0  4 METAL2 ;
  in1  I  21  68  4 METAL2 ;
  in1  I  21  0  4 METAL2 ;
  in2  I  27  68  4 METAL2 ;
  in2  I  27  0  4 METAL2 ;
  in3  I  33  68  4 METAL2 ;
  in3  I  33  0  4 METAL2 ;
  out  O  5.5  68  4 METAL2 ;
  out  O  5.5  0  4 METAL2 ;
  Vdd PWR 0 66.25 3 METAL1;
  Vdd PWR 42.5 66.25 3 METAL1;
  GND PWR 0 1.75 3 METAL1;
  GND PWR 42.5 1.75 3 METAL1;
ENDIOLIST ;
ENDMODULE ;
MODULE STD22 ;
TYPE STANDARD ;
DIMENSIONS   38.25 0  38.25 68   0 68 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  in0  I  18  68  4 METAL2 ;
  in0  I  18  0  4 METAL2 ;
  in1  I  6  68  4 METAL2 ;
  in1  I  6  0  4 METAL2 ;
  out  O  26.5  68  4 METAL2 ;
  out  O  26.5  0  4 METAL2 ;
  Vdd PWR 0 66.25 3 METAL1;
  Vdd PWR 38.25 66.25 3 METAL1;
  GND PWR 0 1.75 3 METAL1;
  GND PWR 38.25 1.75 3 METAL1;
ptport0 F 12 60.5 3 METAL2;
ptport0 F 12 0 3 METAL2;
ENDIOLIST ;
ENDMODULE ;
MODULE STD23 ;
TYPE STANDARD ;
DIMENSIONS   35.75 0  35.75 68   0 68 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  in0  I  6.75  68  4 METAL2 ;
  in0  I  6.75  0  4 METAL2 ;
  in1  I  12.75  68  4 METAL2 ;
  in1  I  12.75  0  4 METAL2 ;
```

```
    in2  I  18.75  68  4 METAL2 ;
    in2  I  18.75  0  4 METAL2 ;
    in3  I  24.75  68  4 METAL2 ;
    in3  I  24.75  0  4 METAL2 ;
    out  O  30.75  68  4 METAL2 ;
    out  O  30.75  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 35.75 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 35.75 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD24 ;
  TYPE STANDARD ;
  DIMENSIONS   38 0  38 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  18  68  4 METAL2 ;
    in0  I  18  0  4 METAL2 ;
    in1  I  6  68  4 METAL2 ;
    in1  I  6  0  4 METAL2 ;
    out  O  26.5  68  4 METAL2 ;
    out  O  26.5  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 38 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 38 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD25 ;
  TYPE STANDARD ;
  DIMENSIONS   36.5 0  36.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  7  68  4 METAL2 ;
    in0  I  7  0  4 METAL2 ;
    in1  I  13  68  4 METAL2 ;
    in1  I  13  0  4 METAL2 ;
    in2  I  19  68  4 METAL2 ;
    in2  I  19  0  4 METAL2 ;
    in3  I  25  68  4 METAL2 ;
    in3  I  25  0  4 METAL2 ;
    out  O  31  68  4 METAL2 ;
    out  O  31  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 36.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 36.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD33 ;
  TYPE STANDARD ;
  DIMENSIONS   36.25 0  36.25 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  15  68  4 METAL2 ;
    in0  I  15  0  4 METAL2 ;
    in1  I  21  68  4 METAL2 ;
    in1  I  21  0  4 METAL2 ;
    in2  I  27  68  4 METAL2 ;
    in2  I  27  0  4 METAL2 ;
    out  O  5.5  68  4 METAL2 ;
    out  O  5.5  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 36.25 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 36.25 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
```

```
MODULE STD34 ;
TYPE STANDARD ;
DIMENSIONS   104.5 0  104.5 68   0 68 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  Clk  I  4.75  68  4 METAL2 ;
  Clk  I  4.75  0  4 METAL2 ;
  D  I  19.75  68  4 METAL2 ;
  D  I  19.75  0  4 METAL2 ;
  Pre  I  74.25  68  4 METAL2 ;
  Pre  I  74.25  0  4 METAL2 ;
  Q  O  94.75  68  2 METAL2 ;
  Q  O  94.75  0  2 METAL2 ;
  Qbar  O  99.75  68  2 METAL2 ;
  Qbar  O  99.75  0  2 METAL2 ;
  Vdd PWR 0 66.25 3 METAL1;
  Vdd PWR 104.5 66.25 3 METAL1;
  GND PWR 0 1.75 3 METAL1;
  GND PWR 104.5 1.75 3 METAL1;
ptport0 F 10.75 67.5 3 METAL2;
ptport1 F 25.75 67.5 3 METAL2;
ptport2 F 30.75 67.5 3 METAL2;
ptport3 F 35.75 67.5 3 METAL2;
ptport4 F 40.75 67.5 3 METAL2;
ptport5 F 45.75 67.5 3 METAL2;
ptport6 F 50.75 67.5 3 METAL2;
ptport7 F 55.75 67.5 3 METAL2;
ptport8 F 60.75 67.5 3 METAL2;
ptport9 F 65.75 67.5 3 METAL2;
ptport10 F 80.25 67.5 3 METAL2;
ptport11 F 85.25 67.5 3 METAL2;
ptport0 F 10.75 0 3 METAL2;
ptport1 F 25.75 0 3 METAL2;
ptport2 F 30.75 0 3 METAL2;
ptport3 F 35.75 0 3 METAL2;
ptport4 F 40.75 0 3 METAL2;
ptport5 F 45.75 0 3 METAL2;
ptport6 F 50.75 0 3 METAL2;
ptport7 F 55.75 0 3 METAL2;
ptport8 F 60.75 0 3 METAL2;
ptport9 F 65.75 0 3 METAL2;
ptport10 F 80.25 0 3 METAL2;
ptport11 F 85.25 0 3 METAL2;
ENDIOLIST ;
ENDMODULE ;
MODULE STD35 ;
TYPE STANDARD ;
DIMENSIONS   36.5 0  36.5 68   0 68 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  in0  I  7  68  4 METAL2 ;
  in0  I  7  0  4 METAL2 ;
  in1  I  13  68  4 METAL2 ;
  in1  I  13  0  4 METAL2 ;
  in2  I  19  68  4 METAL2 ;
  in2  I  19  0  4 METAL2 ;
  in3  I  25  68  4 METAL2 ;
  in3  I  25  0  4 METAL2 ;
  out  O  31  68  4 METAL2 ;
  out  O  31  0  4 METAL2 ;
  Vdd PWR 0 66.25 3 METAL1;
  Vdd PWR 36.5 66.25 3 METAL1;
  GND PWR 0 1.75 3 METAL1;
  GND PWR 36.5 1.75 3 METAL1;
ENDIOLIST ;
ENDMODULE ;
MODULE STD36 ;
TYPE STANDARD ;
DIMENSIONS   98.5 0  98.5 68   0 68 0 0;
```

```
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    Clk  I  4.75  68  4 METAL2 ;
    Clk  I  4.75  0  4 METAL2 ;
    D  I  19.75  68  4 METAL2 ;
    D  I  19.75  0  4 METAL2 ;
    Pre  I  74.25  68  4 METAL2 ;
    Pre  I  74.25  0  4 METAL2 ;
    Q  O  94.75  68  2 METAL2 ;
    Q  O  94.75  0  2 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 98.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 98.5 1.75 3 METAL1;
  ptport0 F 10.75 67.5 3 METAL2;
  ptport1 F 25.75 67.5 3 METAL2;
  ptport2 F 30.75 67.5 3 METAL2;
  ptport3 F 35.75 67.5 3 METAL2;
  ptport4 F 40.75 67.5 3 METAL2;
  ptport5 F 45.75 67.5 3 METAL2;
  ptport6 F 50.75 67.5 3 METAL2;
  ptport7 F 55.75 67.5 3 METAL2;
  ptport8 F 60.75 67.5 3 METAL2;
  ptport9 F 65.75 67.5 3 METAL2;
  ptport10 F 80.25 67.5 3 METAL2;
  ptport11 F 85.25 67.5 3 METAL2;
  ptport0 F 10.75 0 3 METAL2;
  ptport1 F 25.75 0 3 METAL2;
  ptport2 F 30.75 0 3 METAL2;
  ptport3 F 35.75 0 3 METAL2;
  ptport4 F 40.75 0 3 METAL2;
  ptport5 F 45.75 0 3 METAL2;
  ptport6 F 50.75 0 3 METAL2;
  ptport7 F 55.75 0 3 METAL2;
  ptport8 F 60.75 0 3 METAL2;
  ptport9 F 65.75 0 3 METAL2;
  ptport10 F 80.25 0 3 METAL2;
  ptport11 F 85.25 0 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD37 ;
  TYPE STANDARD ;
  DIMENSIONS   97.75 0  97.75 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    Clk  I  4.75  68  4 METAL2 ;
    Clk  I  4.75  0  4 METAL2 ;
    Clr  I  88  68  2 METAL2 ;
    Clr  I  88  0  2 METAL2 ;
    D  I  19.75  68  4 METAL2 ;
    D  I  19.75  0  4 METAL2 ;
    Q  O  94  68  2 METAL2 ;
    Q  O  94  0  2 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 97.75 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 97.75 1.75 3 METAL1;
  ptport0 F 10.75 59.5 3 METAL2;
  ptport1 F 25.75 59.5 3 METAL2;
  ptport2 F 30.75 59.5 3 METAL2;
  ptport3 F 35.75 59.5 3 METAL2;
  ptport4 F 40.75 59.5 3 METAL2;
  ptport5 F 45.75 59.5 3 METAL2;
  ptport6 F 50.75 59.5 3 METAL2;
  ptport7 F 55.75 59.5 3 METAL2;
  ptport8 F 60.75 59.5 3 METAL2;
  ptport9 F 65.75 59.5 3 METAL2;
  ptport10 F 70.75 59.5 3 METAL2;
  ptport11 F 75.75 59.5 3 METAL2;
```

```
ptport12 F 80.75 59.5 3 METAL2;
ptport0 F 10.75 0 3 METAL2;
ptport1 F 25.75 0 3 METAL2;
ptport2 F 30.75 0 3 METAL2;
ptport3 F 35.75 0 3 METAL2;
ptport4 F 40.75 0 3 METAL2;
ptport5 F 45.75 0 3 METAL2;
ptport6 F 50.75 0 3 METAL2;
ptport7 F 55.75 0 3 METAL2;
ptport8 F 60.75 0 3 METAL2;
ptport9 F 65.75 0 3 METAL2;
ptport10 F 70.75 0 3 METAL2;
ptport11 F 75.75 0 3 METAL2;
ptport12 F 80.75 0 3 METAL2;
ENDIOLIST ;
ENDMODULE ;
MODULE STD38 ;
TYPE STANDARD ;
DIMENSIONS   39 0  39 68   0 68 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  in0  I  4.75  68  4 METAL2 ;
  in0  I  4.75  0  4 METAL2 ;
  in1  I  15.75  68  4 METAL2 ;
  in1  I  15.75  0  4 METAL2 ;
  out  O  34.25  68  4 METAL2 ;
  out  O  34.25  0  4 METAL2 ;
  s0  I  24.25  68  4 METAL2 ;
  s0  I  24.25  0  4 METAL2 ;
  Vdd PWR 0 66.25 3 METAL1;
  Vdd PWR 39 66.25 3 METAL1;
  GND PWR 0 1.75 3 METAL1;
  GND PWR 39 1.75 3 METAL1;
ENDIOLIST ;
ENDMODULE ;
MODULE STD39 ;
TYPE STANDARD ;
DIMENSIONS   36.5 0  36.5 68   0 68 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  in0  I  15  68  4 METAL2 ;
  in0  I  15  0  4 METAL2 ;
  in1  I  21  68  4 METAL2 ;
  in1  I  21  0  4 METAL2 ;
  in2  I  27  68  4 METAL2 ;
  in2  I  27  0  4 METAL2 ;
  out  O  5.5  68  4 METAL2 ;
  out  O  5.5  0  4 METAL2 ;
  Vdd PWR 0 66.25 3 METAL1;
  Vdd PWR 36.5 66.25 3 METAL1;
  GND PWR 0 1.75 3 METAL1;
  GND PWR 36.5 1.75 3 METAL1;
ENDIOLIST ;
ENDMODULE ;
MODULE STD40 ;
TYPE STANDARD ;
DIMENSIONS   31.25 0  31.25 68   0 68 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  in0  I  7.75  68  4 METAL2 ;
  in0  I  7.75  0  4 METAL2 ;
  in1  I  13.75  68  4 METAL2 ;
  in1  I  13.75  0  4 METAL2 ;
  in2  I  19.75  68  4 METAL2 ;
  in2  I  19.75  0  4 METAL2 ;
  out  O  26.25  68  4 METAL2 ;
  out  O  26.25  0  4 METAL2 ;
  Vdd PWR 0 66.25 3 METAL1;
  Vdd PWR 31.25 66.25 3 METAL1;
```

```
    GND PWR 0 1.75 3 METAL1;
    GND PWR 31.25 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD41 ;
  TYPE STANDARD ;
  DIMENSIONS   40.5 0  40.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  6.75  68  4 METAL2 ;
    in0  I  6.75  0  4 METAL2 ;
    in1  I  12.75  68  4 METAL2 ;
    in1  I  12.75  0  4 METAL2 ;
    in2  I  18.75  68  4 METAL2 ;
    in2  I  18.75  0  4 METAL2 ;
    out  O  35.25  68  4 METAL2 ;
    out  O  35.25  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 40.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 40.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD42 ;
  TYPE STANDARD ;
  DIMENSIONS   30.5 0  30.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  15  68  4 METAL2 ;
    in0  I  15  0  4 METAL2 ;
    in1  I  21  68  4 METAL2 ;
    in1  I  21  0  4 METAL2 ;
    out  O  5.5  68  4 METAL2 ;
    out  O  5.5  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 30.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 30.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD43 ;
  TYPE STANDARD ;
  DIMENSIONS   35.75 0  35.75 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  6.75  68  4 METAL2 ;
    in0  I  6.75  0  4 METAL2 ;
    in1  I  12.75  68  4 METAL2 ;
    in1  I  12.75  0  4 METAL2 ;
    in2  I  18.75  68  4 METAL2 ;
    in2  I  18.75  0  4 METAL2 ;
    in3  I  24.75  68  4 METAL2 ;
    in3  I  24.75  0  4 METAL2 ;
    out  O  30.75  68  4 METAL2 ;
    out  O  30.75  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 35.75 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 35.75 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD44 ;
  TYPE STANDARD ;
  DIMENSIONS   30.5 0  30.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  7  68  4 METAL2 ;
    in0  I  7  0  4 METAL2 ;
    in1  I  13  68  4 METAL2 ;
```

```
    in1  I  13  0  4 METAL2 ;
    in2  I  19  68  4 METAL2 ;
    in2  I  19  0  4 METAL2 ;
    out  O  25  68  4 METAL2 ;
    out  O  25  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 30.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 30.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD45 ;
  TYPE STANDARD ;
  DIMENSIONS   24.5 0  24.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  7  68  4 METAL2 ;
    in0  I  7  0  4 METAL2 ;
    in1  I  13  68  4 METAL2 ;
    in1  I  13  0  4 METAL2 ;
    out  O  19  68  4 METAL2 ;
    out  O  19  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 24.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 24.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD48 ;
  TYPE STANDARD ;
  DIMENSIONS   36.5 0  36.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  7  68  4 METAL2 ;
    in0  I  7  0  4 METAL2 ;
    in1  I  13  68  4 METAL2 ;
    in1  I  13  0  4 METAL2 ;
    in2  I  19  68  4 METAL2 ;
    in2  I  19  0  4 METAL2 ;
    in3  I  25  68  4 METAL2 ;
    in3  I  25  0  4 METAL2 ;
    out  O  31  68  4 METAL2 ;
    out  O  31  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 36.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 36.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD49 ;
  TYPE STANDARD ;
  DIMENSIONS   30.5 0  30.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  7  68  4 METAL2 ;
    in0  I  7  0  4 METAL2 ;
    in1  I  13  68  4 METAL2 ;
    in1  I  13  0  4 METAL2 ;
    in2  I  19  68  4 METAL2 ;
    in2  I  19  0  4 METAL2 ;
    out  O  25  68  4 METAL2 ;
    out  O  25  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 30.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 30.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD50 ;
```

```
  TYPE STANDARD ;
  DIMENSIONS   24.5 0  24.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  7  68  4 METAL2 ;
    in0  I  7  0  4 METAL2 ;
    in1  I  13  68  4 METAL2 ;
    in1  I  13  0  4 METAL2 ;
    out  O  19  68  4 METAL2 ;
    out  O  19  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 24.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 24.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD51 ;
  TYPE STANDARD ;
  DIMENSIONS   30.25 0  30.25 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  15  68  4 METAL2 ;
    in0  I  15  0  4 METAL2 ;
    in1  I  21  68  4 METAL2 ;
    in1  I  21  0  4 METAL2 ;
    out  O  5.5  68  4 METAL2 ;
    out  O  5.5  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 30.25 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 30.25 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD52 ;
  TYPE STANDARD ;
  DIMENSIONS   30.5 0  30.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  15  68  4 METAL2 ;
    in0  I  15  0  4 METAL2 ;
    in1  I  21  68  4 METAL2 ;
    in1  I  21  0  4 METAL2 ;
    out  O  5.5  68  4 METAL2 ;
    out  O  5.5  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 30.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 30.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD53 ;
  TYPE STANDARD ;
  DIMENSIONS   42 0  42 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  15  68  4 METAL2 ;
    in0  I  15  0  4 METAL2 ;
    in1  I  21  68  4 METAL2 ;
    in1  I  21  0  4 METAL2 ;
    in2  I  27  68  4 METAL2 ;
    in2  I  27  0  4 METAL2 ;
    in3  I  33  68  4 METAL2 ;
    in3  I  33  0  4 METAL2 ;
    out  O  5.5  68  4 METAL2 ;
    out  O  5.5  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 42 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 42 1.75 3 METAL1;
```

```
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD54 ;
  TYPE STANDARD ;
  DIMENSIONS   22.5 0  22.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    bufo#in  I  5.5  68  4 METAL2 ;
    bufo#in  I  5.5  0  4 METAL2 ;
    bufo#out  O  11.5  68  4 METAL2 ;
    bufo#out  O  11.5  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 22.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 22.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD55 ;
  TYPE STANDARD ;
  DIMENSIONS   24.5 0  24.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  7  68  4 METAL2 ;
    in0  I  7  0  4 METAL2 ;
    in1  I  13  68  4 METAL2 ;
    in1  I  13  0  4 METAL2 ;
    out  O  19  68  4 METAL2 ;
    out  O  19  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 24.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 24.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD56 ;
  TYPE STANDARD ;
  DIMENSIONS   17 0  17 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in  I  5.5  68  4 METAL2 ;
    in  I  5.5  0  4 METAL2 ;
    out  O  11.5  68  4 METAL2 ;
    out  O  11.5  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 17 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 17 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD57 ;
  TYPE STANDARD ;
  DIMENSIONS   24.5 0  24.5 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  7  68  4 METAL2 ;
    in0  I  7  0  4 METAL2 ;
    in1  I  13  68  4 METAL2 ;
    in1  I  13  0  4 METAL2 ;
    out  O  19  68  4 METAL2 ;
    out  O  19  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 24.5 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 24.5 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD58 ;
  TYPE STANDARD ;
  DIMENSIONS   17 0  17 68   0 68 0 0;
```

```
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in  I  5.5  68  4 METAL2 ;
    in  I  5.5  0  4 METAL2 ;
    out  O  11.5  68  4 METAL2 ;
    out  O  11.5  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 17 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 17 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD59 ;
  TYPE STANDARD ;
  DIMENSIONS   55.25 0  55.25 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    en  I  18.5  68  4 METAL2 ;
    en  I  18.5  0  4 METAL2 ;
    in  I  26  68  4 METAL2 ;
    in  I  26  0  4 METAL2 ;
    inn  I  43  68  4 METAL2 ;
    inn  I  43  0  4 METAL2 ;
    out  B 49  68  4 METAL2 ;
    out  B 49  0  4 METAL2 ;
    outn  O  8.75  68  4 METAL2 ;
    outn  O  8.75  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 55.25 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 55.25 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD60 ;
  TYPE STANDARD ;
  DIMENSIONS   39 0  39 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in0  I  4.75  68  4 METAL2 ;
    in0  I  4.75  0  4 METAL2 ;
    in1  I  15.75  68  4 METAL2 ;
    in1  I  15.75  0  4 METAL2 ;
    out  O  34.25  68  4 METAL2 ;
    out  O  34.25  0  4 METAL2 ;
    s0  I  24.25  68  4 METAL2 ;
    s0  I  24.25  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 39 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 39 1.75 3 METAL1;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE STD61 ;
  TYPE STANDARD ;
  DIMENSIONS   24 0  24 68   0 68 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in  I  5.5  68  4 METAL2 ;
    in  I  5.5  0  4 METAL2 ;
    out  O  18.5  68  4 METAL2 ;
    out  O  18.5  0  4 METAL2 ;
    Vdd PWR 0 66.25 3 METAL1;
    Vdd PWR 24 66.25 3 METAL1;
    GND PWR 0 1.75 3 METAL1;
    GND PWR 24 1.75 3 METAL1;
  ptport0 F 11.5 62 3 METAL2;
  ptport0 F 11.5 0 3 METAL2;
  ENDIOLIST ;
  ENDMODULE ;
```

```
MODULE STD62 ;
TYPE STANDARD ;
DIMENSIONS   24 0  24 68   0 68 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  in  I  5.5  68  4 METAL2 ;
  in  I  5.5  0  4 METAL2 ;
  out  O  18.5  68  4 METAL2 ;
  out  O  18.5  0  4 METAL2 ;
  Vdd PWR 0 66.25 3 METAL1;
  Vdd PWR 24 66.25 3 METAL1;
  GND PWR 0 1.75 3 METAL1;
  GND PWR 24 1.75 3 METAL1;
ptport0 F 11.5 62 3 METAL2;
ptport0 F 11.5 0 3 METAL2;
ENDIOLIST ;
ENDMODULE ;
MODULE STD63 ;
TYPE STANDARD ;
DIMENSIONS   17 0  17 68   0 68 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  in  I  5.5  68  4 METAL2 ;
  in  I  5.5  0  4 METAL2 ;
  out  O  11.5  68  4 METAL2 ;
  out  O  11.5  0  4 METAL2 ;
  Vdd PWR 0 66.25 3 METAL1;
  Vdd PWR 17 66.25 3 METAL1;
  GND PWR 0 1.75 3 METAL1;
  GND PWR 17 1.75 3 METAL1;
ENDIOLIST ;
ENDMODULE ;
MODULE STD64 ;
TYPE STANDARD ;
DIMENSIONS   69.25 0  69.25 68   0 68 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  bufi#in  I  45.25  68  4 METAL2 ;
  bufi#in  I  45.25  0  4 METAL2 ;
  bufi#out  O  58.25  68  4 METAL2 ;
  bufi#out  O  58.25  0  4 METAL2 ;
  schmitt#in  I  21.25  68  4 METAL2 ;
  schmitt#in  I  21.25  0  4 METAL2 ;
  schmitt#out  O  5.25  68  4 METAL2 ;
  schmitt#out  O  5.25  0  4 METAL2 ;
  Vdd PWR 0 66.25 3 METAL1;
  Vdd PWR 69.25 66.25 3 METAL1;
  GND PWR 0 1.75 3 METAL1;
  GND PWR 69.25 1.75 3 METAL1;
ENDIOLIST ;
ENDMODULE ;
MODULE PAD71 ;
TYPE PAD ;
DIMENSIONS   140 0  140 334.5   0 334.5 0 0;
IOLIST ;
  /* signalname  termtype  x y width  layer */
  bondpin  PB  70  334.5  2 METAL1;
  Vdd  PWR  140  39.5  79 METAL1 ;
  Vdd  PWR  70  0  92 METAL1 ;
  Vdd  PWR  0  39.5  79 METAL1 ;
  GND  PWR  140  119  68 METAL1 ;
  GND  PWR  0  119  68 METAL1 ;
  GND1  PWR  140  325  19 METAL1 ;
  GND1  PWR  0  325  19 METAL1 ;
ENDIOLIST ;
ENDMODULE ;
MODULE PAD72 ;
TYPE PAD ;
DIMENSIONS   140 0  140 334.5   0 334.5 0 0;
```

```
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    bondpin  PB  70  334.5  2 METAL1;
    Vdd  PWR  140  39.5  79 METAL1 ;
    Vdd  PWR  0  39.5  79 METAL1 ;
    GND  PWR  140  119  68 METAL1 ;
    GND  PWR  70  0  92 METAL1 ;
    GND  PWR  0  119  68 METAL1 ;
    GND1  PWR  140  325  19 METAL1 ;
    GND1  PWR  0  325  19 METAL1 ;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE PAD73 ;
  TYPE PAD ;
  DIMENSIONS   140 0  140 341   0 341 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    out  O  103.25  0  4 METAL2 ;
    bondpin  PB  70  341  2 METAL1;
    Vdd  PWR  140  46  79 METAL1 ;
    Vdd  PWR  0  46  79 METAL1 ;
    GND  PWR  140  125.5  68 METAL1 ;
    GND  PWR  0  125.5  68 METAL1 ;
    GND1  PWR  140  331.5  19 METAL1 ;
    GND1  PWR  0  331.5  19 METAL1 ;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE PAD75 ;
  TYPE PAD ;
  DIMENSIONS   140 0  140 346.5   0 346.5 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    in  I  20.5  0  4 METAL2 ;
    bondpin  PB  70  346.5  2 METAL1;
    Vdd  PWR  140  51.5  79 METAL1 ;
    Vdd  PWR  0  51.5  79 METAL1 ;
    GND  PWR  140  131  68 METAL1 ;
    GND  PWR  0  131  68 METAL1 ;
    GND1  PWR  140  337  19 METAL1 ;
    GND1  PWR  0  337  19 METAL1 ;
  ENDIOLIST ;
  ENDMODULE ;
  MODULE PAD76 ;
  TYPE PAD ;
  DIMENSIONS   140 0  140 346.5   0 346.5 0 0;
  IOLIST ;
    /* signalname  termtype  x y width  layer */
    inn  I  20.5  0  4 METAL2 ;
    inp  I  30  0  4 METAL2 ;
    out  O  36  0  4 METAL2 ;
    bondpin  PB  70  346.5  2 METAL1;
    Vdd  PWR  140  51.5  79 METAL1 ;
    Vdd  PWR  0  51.5  79 METAL1 ;
    GND  PWR  140  131  68 METAL1 ;
    GND  PWR  0  131  68 METAL1 ;
    GND1  PWR  140  337  19 METAL1 ;
    GND1  PWR  0  337  19 METAL1 ;
  ENDIOLIST ;
  ENDMODULE ;

  MODULE a3;
  TYPE PARENT;
  IOLIST;
  S0 PI RIGHT -1087.25;
  S1 PI RIGHT -478;
  S2 PI RIGHT 1962.25;
  S3 PI RIGHT -2306;
  S4 PI RIGHT -1696.75;
  S5 PI RIGHT -2915.25;
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```
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