

**SCL4018B**

PRESETTABLE DIVIDE-BY-N COUNTER

STATIC CHARACTERISTICS: (  $V_{SS} = 0 V$  )

| PARAMETER                         | CONDITIONS                    | $V_{DD}$<br>(Vdc) | $T_{LOW}^*$ |     | +25°C |      | $T_{HIGH}^{**}$ |     | UNIT |              |
|-----------------------------------|-------------------------------|-------------------|-------------|-----|-------|------|-----------------|-----|------|--------------|
|                                   |                               |                   | MIN         | MAX | MIN   | TYP  | MAX             | MIN |      | MAX          |
| QUIESCENT DEVICE CURRENT $I_{DD}$ | $V_{IN} = V_{SS}$ OR $V_{DD}$ | 5                 |             | 5   |       | 0.05 | 5               |     | 150  | $\mu A_{dc}$ |
|                                   |                               | 10                |             | 10  |       | 0.1  | 10              |     | 300  |              |
|                                   |                               | 15                |             | 20  |       | 0.2  | 20              |     | 600  |              |

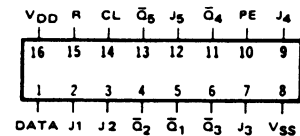
Note: \*  $T_{LOW} = -55^{\circ}C$  for C / H devices,  $-40^{\circ}C$  for E / S devices, \*\* $T_{HIGH} = +125^{\circ}C$  for C / H devices,  $+85^{\circ}C$  for E / S devices.

DYNAMIC CHARACTERISTICS: (  $C_L = 50pF, T_A = 25^{\circ}C$  )

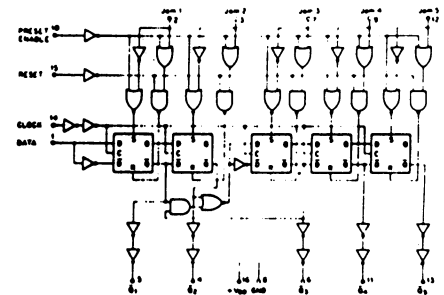
| PARAMETER  | $V_{DD}$<br>(Vdc) | MINIMUM | TYPICAL | MAXIMUM | UNIT    |
|--|-------------------|---------|---------|---------|---------|
| PROPAGATION DELAY TIME $t_{PLH}, t_{PHL}$                                    | 5                 |         | 500     | 1000    | ns      |
|  | 10                |         | 150     | 300     |         |
|  | 15                |         | 120     | 240     |         |
| OUTPUT TRANSITION TIME $t_{TLH}, t_{THL}$                                    | 5                 |         | 130     | 260     | ns      |
|  | 10                |         | 65      | 130     |         |
|  | 15                |         | 50      | 100     |         |
| CLOCK PULSE WIDTH MINIMUM $PW_{CL}$  | 5                 |         | 200     | 400     | ns      |
|  | 10                |         | 100     | 200     |         |
|  | 15                |         | 80      | 160     |         |
| CLOCK FREQUENCY MAXIMUM $f_{CL}$   | 5                 | 1.25    | 2.5     |         | MHz     |
|  | 10                | 2.5     | 5       |         |         |
|  | 15                | 3       | 6       |         |         |
| CLOCK RISE & FALL TIME MAXIMUM $t_{rCL}, t_{fCL}$                            | 5                 | 15      |         |         | $\mu s$ |
|  | 10                | 15      |         |         |         |
|  | 15                | 5       |         |         |         |
| DATA INPUT SETUP TIME MINIMUM $t_{set}$                                      | 5                 |         | 200     | 400     | ns      |
|  | 10                |         | 100     | 200     |         |
|  | 15                |         | 80      | 160     |         |
| DATA INPUT HOLD TIME MINIMUM $t_{hold}$                                      | 5                 |         | 0       | 100     | ns      |
|  | 10                |         | 0       | 50      |         |
|  | 15                |         | 0       | 40      |         |
| PRE/RESET PROPAGATION DELAY TIME $t_{PLH}, t_{PHL}$ (FROM PE OR RESET INPUT) | 5                 |         | 500     | 1000    | ns      |
|  | 10                |         | 250     | 500     |         |
|  | 15                |         | 200     | 400     |         |
| PRESET OR RESET PULSE WIDTH MINIMUM $PW_{RP}, PW_{R}$                        | 5                 |         | 200     | 400     | ns      |
|  | 10                |         | 100     | 200     |         |
|  | 15                |         | 80      | 160     |         |
| JAM INPUT SETUP TIME $t_{set}$   | 5                 |         | 200     | 400     | ns      |
|  | 10                |         | 100     | 200     |         |
|  | 15                |         | 80      | 160     |         |
| PRESET OR RESET REMOVAL TIME $t_{rem}$                                       | 5                 |         | 375     | 750     | ns      |
|  | 10                |         | 125     | 250     |         |
|  | 15                |         | 90      | 180     |         |

Note: Refer to "SCL4000B SERIES FAMILY SPECIFICATIONS" for remaining Dynamic and Static Characteristics, and, for recommended and maximum operating conditions.

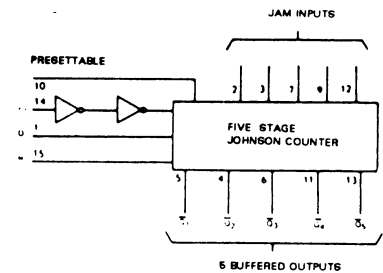
CONNECT DIAGRAM



LOGIC DIAGRAM



BLOCK DIAGRAM



DIE DRAWING

SCL4018B

88 x 72 mils

