

FB3651 LAN Transceiver Array

GENERAL DESCRIPTION

The FB3651 is an application focused tile array intended for local area network transceiver applications. This array was developed using Micro Linear's proprietary mini tile architecture. This mini tile approach combined with our 12 volt, 1 GHz technology allows high complexity and high speed, cost effective LAN Transceiver circuits to be easily integrated.

The array consists of two distinct sections each with different component groupings, the first section, situated mostly in the middle of the array, contains custom cells to implement timer functions. These custom cells can implement up to nine timers with outputs that span from milliseconds up to 1/2 second with no external components. The long times are accomplished by generating very small yet stable currents that charge on chip capacitors. The remainder of the die area has general purpose mini-tiles for the other analog and digital circuit functions common to LAN transceiver applications.

The design of the FB3651 LAN Transceiver array is optimized for the circuit building blocks required to implement the function of a local area network transceiver. Examples of the types of circuits possible are: high speed transmitters and receivers, transmit and receive squelch, oscillators, diagnostic and fault protection circuits, LED drivers, and other similar type circuits.

This very high complexity array can realize up to 12 analog functional blocks, 6 high frequency/digital blocks, and 150 digital gates, in addition to the nine timer functions.

FEATURES

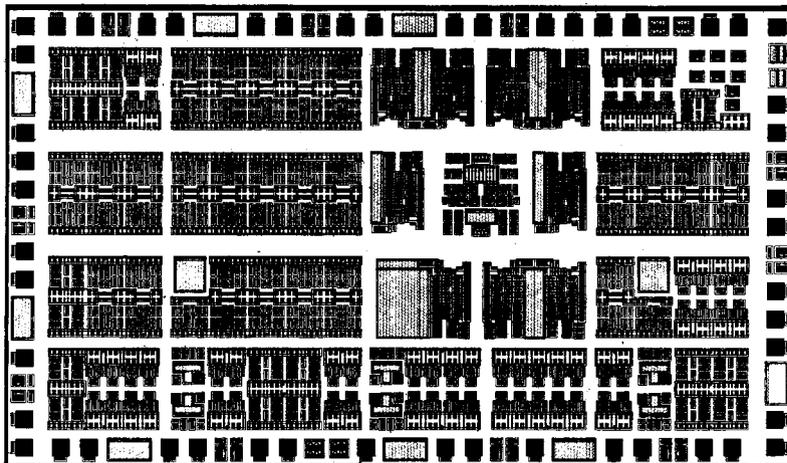
- Array optimized for local area network transceivers
- Nine independent timer functions possible for deadman, squelch, and diagnostic functions (1-500ms)
- Can implement a highly symmetrical current driven transmitter for low RFI noise and low jitter
- 18 analog circuit blocks with 150 ECL gates
- 12 volt, 1 GHz technology

ARRAY SUMMARY

NPN Transistors	1424
PNP Transistors	152
Schottky Transistors	20
Total Diffused Resistance	1020K
Total Implant Resistance	5432K
Total MOS Capacitance	310pF
Total Components	4242
Bond Pads	50

MINI TILE SUMMARY

T1 General	58
T2 Specialized	6
T7 High Frequency	17
T9 ECL Logic	50
T12 Schottky Peripheral	10
T13 High Frequency	3
Timer Cells	9
Timer Bias	1



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