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THOMSON SEMICONDUCTORS

EFG7515

T-75-33-05

ADVANCE INFORMATION

SINGLE CHIP DPSK AND FSK MODEM (BELL 212A - BELL 103 - V22 A/B)

The EFG7515 is a single chip DPSK and FSK voiceband modem, compatible with the applicable BELL and CCITT recommended standards for 212A sets including BELL 103 and V22 A-B type modems.

- Monolithic device includes both transmit and receive filters.
- Mixing analog and digital technics.
- Standard low cost crystal (4.9152 MHz).
- Available clock for microprocessor at 4.9152 MHz.
- Low power consumption - CMOS technology.
- Sharp adjacent channel rejection.
- Fixed equalization in transmitter and receiver.
- Test loops.
- Carrier detect output.
- CCITT and BELL signaling tone.
- 1200 bps and 600 bps bit synchronous format in DPSK.
- 1200 bps and 600 bps +1%, −2.5% or +2.3%, −2.5% character asynchronous format (8, 9, 10 or 11 bits) in DPSK.
- 0 to 300 bps in FSK.
- Break signal supervision.
- External voice band tone filtering available (i.e. 550 Hz or DTMF).
- CMOS and TTL compatible.
- Direct interface to THOMSON SEMICONDUCTORS microprocessor family.

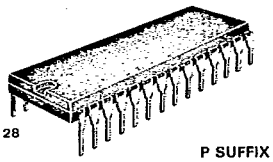
MAIN OPERATING MODES

- Standard selection (BELL 212A/BELL 103/V22).
- Answer tone selection.
- Low speed mode selection.
- Channel selection (Answer/Originate).
- Synchronous/Asynchronous mode selection.
- 8 bits to 11 bits word length selection in character asynchronous format mode.
- Overspeed selection in character asynchronous format mode.
- Scrambler selection.
- 1800 Hz guard tone selection in V22.
- Test loop selection (Digital/Analog).

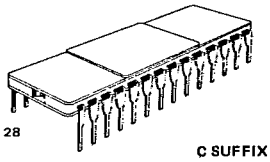
CMOS

SINGLE CHIP DPSK AND FSK MODEM

CASE CB-132

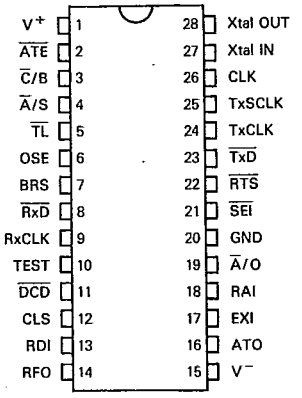


P SUFFIX
PLASTIC PACKAGE



C SUFFIX
CERAMIC PACKAGE

PIN ASSIGNMENT



Ref.00400-R1

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THOMSON COMPONENTS

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GENERAL DESCRIPTION

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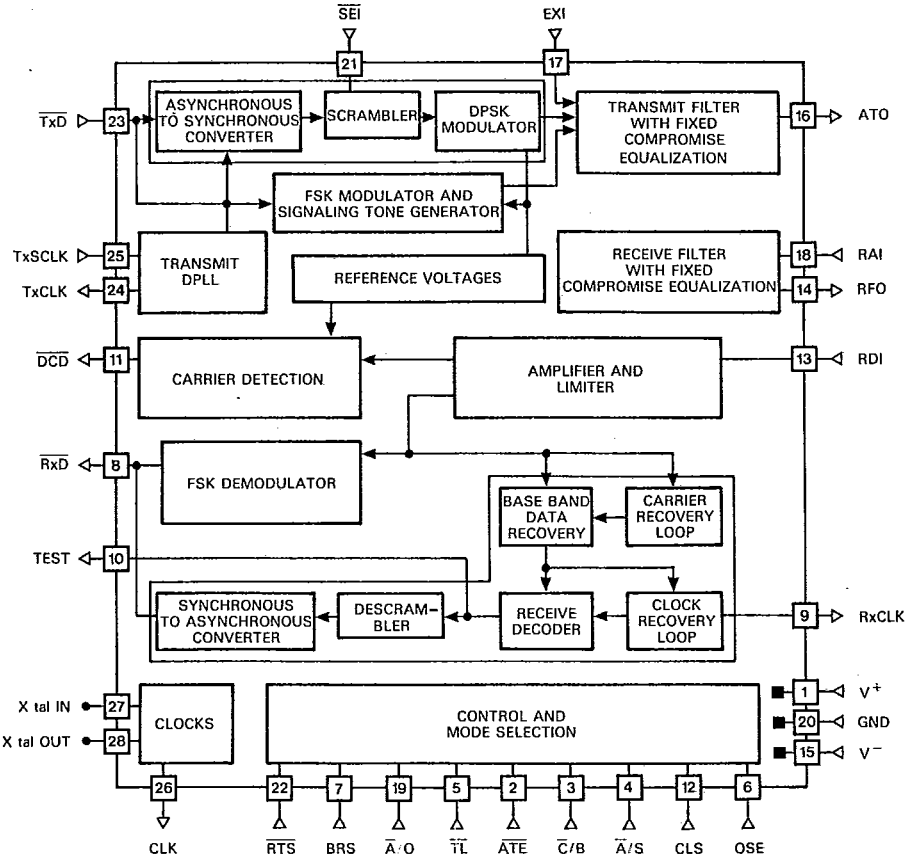
The EFG7515 is a general purpose monolithic DPSK and FSK modem implemented with double poly CMOS process. It is capable of generating and receiving phase modulated signals at data rates of 1200 bps or 600 bps as well as frequency modulated signals at data rates up to 300 bps on voice-grade telephone lines. It is offered in a 28 pin package capable of operating full-duplex according to three pin selectable standards :

- CCITT V22 A-B.
- Bell 212A with its low speed mode.
- Bell 103.

All filtering functions required for frequency generation, out-of-band noise rejection and demodulation are performed by on-chip switched capacitor filters. In phase modulation the modem provides all data buffering and scrambling functions necessary for bit synchronous format and asynchronous character format modes of operation. Internal frequencies are generated from a 4.9152 MHz crystal reference.

BLOCK DIAGRAM



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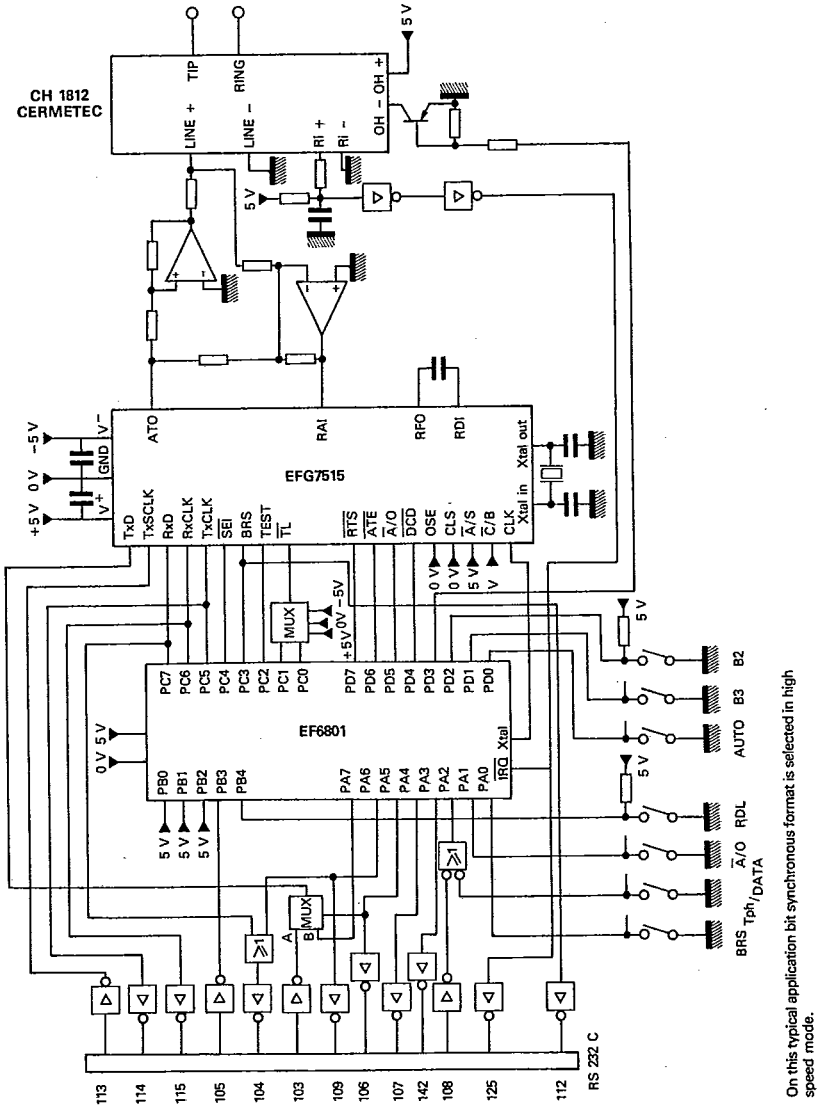
APPLICATIONS INFORMATION

In a typical application a microcontroller provides control and interface to the Data Terminal Equipment (DTE), and a Direct Access Arrangement provides connection to the telephone line. Then the EFG7515 can communicate with the most popular modems (BELL 103 and BELL 212A) in countries under BELL standards and popular modems (V22) in countries under CCITT recommendations.

BELL 212A application :



On this typical application bit synchronous format is selected in high speed mode.

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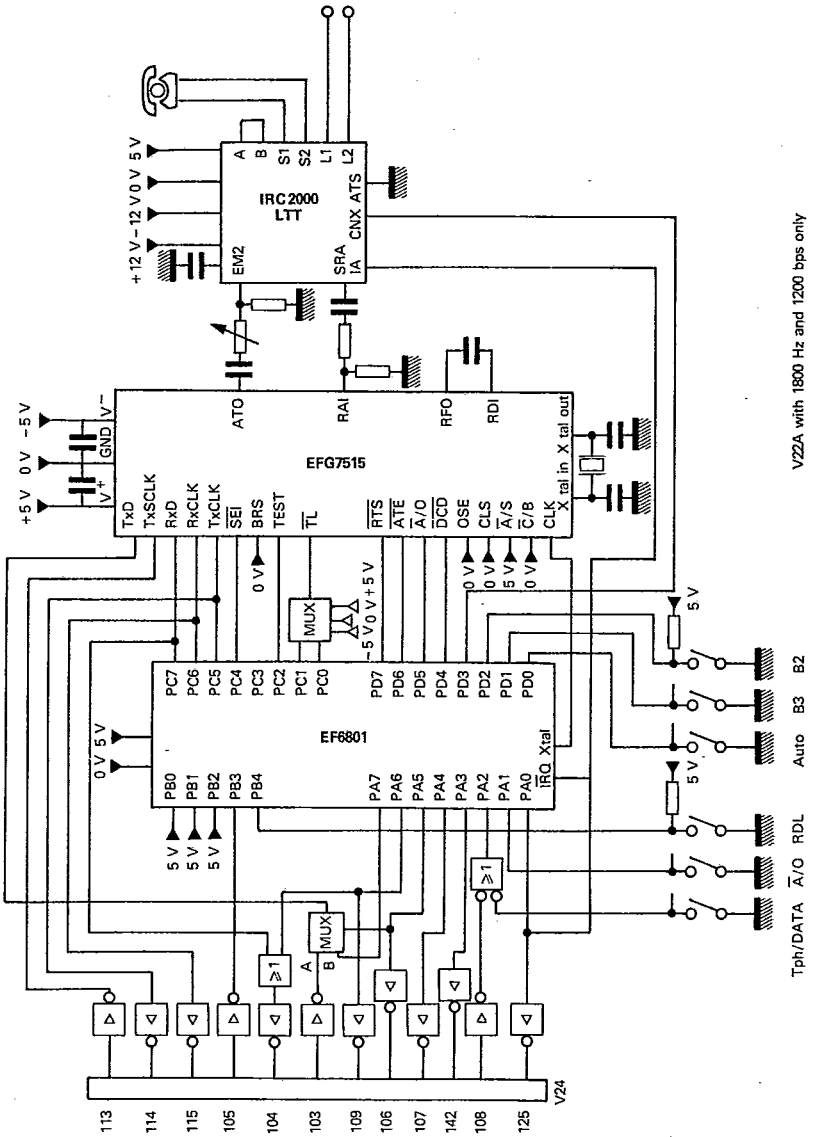
V22 application :



This is advance information and specifications are subject to change without notice
Please inquire with our sales offices about the availability of the different packages.