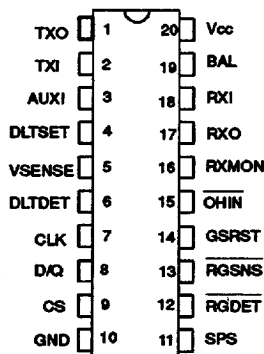


DALLAS
SEMICONDUCTOR**DS1360**
Phantom DAA Chip

T-51-07-01

FEATURES

- Single-chip DAA controller for:
 - Modems
 - Speech interfaces
- Phantom operation reports loop current changes back to host
- Allows the DAA to use an existing phone line unobtrusively
- Transmit/receive interface connects directly to 600 ohm phone-line coupling transformers
- On-chip electronic 2- to 4-wire converter
- Integrates FCC Part-68 DAA requirements:
 - Ring detection
 - 2-second billing delay
 - Transmit power limiter
- Onboard, low-pass filtering of transmit and receive signals
- Replaces up to 20 discrete components
- Voice/data switching
- Software-controlled receive gain
- 3-wire serial control port
- +5 Volt single-supply operation
- DS1360S surface mount version available

PIN ASSIGNMENTDS1360 20-Pin DIP
(300 MIL)**DESCRIPTION**

The DS1360 Phantom DAA Chip is a CMOS device that integrates FCC requirements for interfacing data and voice to the telephone network. The DS1360 meets FCC Part-68 specifications such as 2-second billing delay, transmit signal power limiting, and ringing detection. It also offers programmable transmit and receive gains and an on-chip 2- to 4-wire converter (hybrid). By adding a coupling transformer, a relay, and an optocoupler, a complete DAA circuit can be quickly designed.

A unique feature of the DS1360 is its ability to sense loop current using an on-chip, 8-bit A/D converter. By using an external optocoupler (for proper isolation), the phone loop current can be digitized and monitored through the serial port by a host processor. The DS1360 can also be programmed by external resistors to report when the current has changed by a certain percentage. Loop current sensing is important for monitoring the activity of extension phones or for determining loop length for cable compensation.