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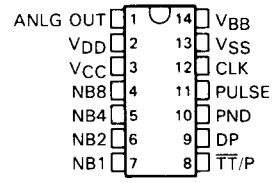
PRODUCT SUMMARY

This data is excerpted from the *TMS99531 Modem Products Data Manual*,

- **Standard N-Channel Silicon Gate Processing Using Switched Capacitor Technology**
- **Identical 4-Bit Addressing for Both Pulse and DTMF Dialing**
- **Interdigit Timing for Both Pulse and DTMF Dialing**
- **No Limit to the Number of Digits That Can Be Sent**
- **Accelerated Pulse Rate for Minimum Checkout or Test Time**
- **Standard 12 Frequency-Pair Combinations, Plus Single Tone Capability**
- **Stable Frequencies and Amplitudes**
- **Less Than 5 Percent Total Harmonic Distortion in Voice Band**
- **High Group Tone Pre-emphasis**
- **TTL-Compatible Input-Output Interface**
- **Subsystem Complement to the TMS99532A FSK Modem**
- **Accepts BCD Inputs for Easy Interface to Microcomputers**

N
DUAL-IN-LINE PACKAGE
(TOP VIEW)



description

The TMS99531 Pulse and Tone Telephone Dialer is a telecommunications device compatible with the U.S. public switched telephone network. In addition to the usual common telephone usage, the dialer can be used with transaction (point-of-sale and/or credit) terminals, digital voice messages, radio and mobile telephones, and remote or process control. Cost and performance advantages make this dialer highly competitive with other dual-tone and pulse dialers currently available.

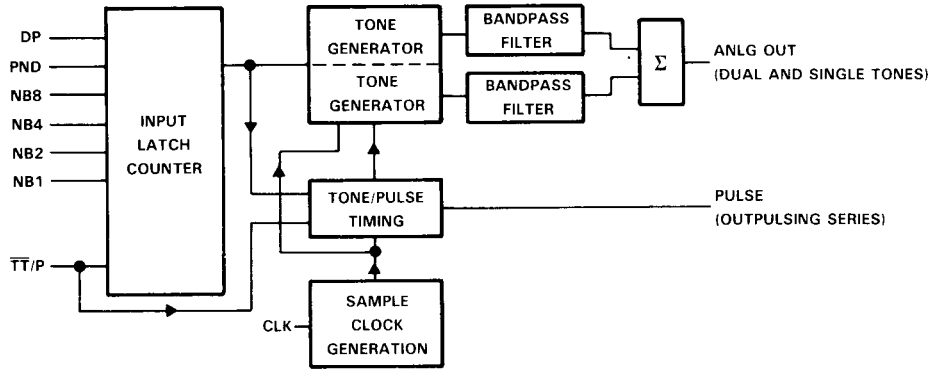
In the pulse mode, the TMS99531 can dial all 10 digits (0-9). In the dual-tone mode, it can dial the 12 dual-tone combinations (0-9, *, #) used by the standard pushbutton telephone keypad. The TMS99531 also generates the appropriate interdigit delays for pulse and tone modes.

A test-enhancement feature in the pulse mode (accelerated pulse rate) reduces the test time needed to verify functionality of all digits. For tone applications, single-tone generation of each of the frequencies is provided.

The TMS99531 is characterized for operation from 0°C to 70°C.

PIN NAME	PIN NO.	I/O	DESCRIPTION
ANLG OUT	1	O	Dual-tone (or single-tone) analog output. Normally capacitively coupled to the EXI input on the TMS99532A modem
CLK	12	I	4.032-MHz master clock input. Received from an external source. Normally connected to OSCOUT of TMS99532A
DP	9	I	Digit present input. A high indicates that a digit is present (and stable) on NB1 through NB8.
NB8	4	I	Digit select input (MSB)
NB4	5	I	Digit select input (third order)
NB2	6	I	Digit select input (second order)
NB1	7	I	Digit select input (LSB)
PND	10	O	Present next digit. When high, the dialer is ready to accept another digit. The DP input must be low for PND to go high.
PULSE	11	O	Pulse dial series. Used with the off-hook relay. A high indicates an off-hook condition. A low indicates an on-hook condition.
$\overline{TT}$/P	8	I	Dual tone or pulse select. When low, the dual-tone mode is selected. When high, the pulse dial mode is selected.
V_{BB}	14		−5-volt nominal supply voltage
V_{CC}	3		5-volt nominal supply voltage
V_{DD}	2		12-volt nominal supply voltage
V_{SS}	13		Ground

functional block diagram



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