

FEATURES

- Low R_{ON} : 65Ω
- Low Power Dissipation: $8.0\mu W$
- Fast Switching: 20ns
- CMOS Compatible

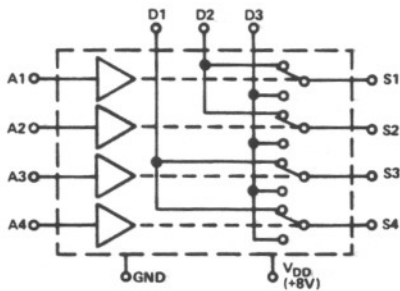
OBSOLETE

GENERAL DESCRIPTION

The AD7519 consists of four SPDT switches which steer current to one of two buss lines that normally should be terminated at ground or the virtual ground of an operational amplifier. It operates from a single +7.5 to +10V supply with a quiescent power dissipation of only $8.0\mu W$.

Typical AD7519 applications include fast settling D/A converters, variable gain amplifiers, and digitally controlled summing amplifiers.

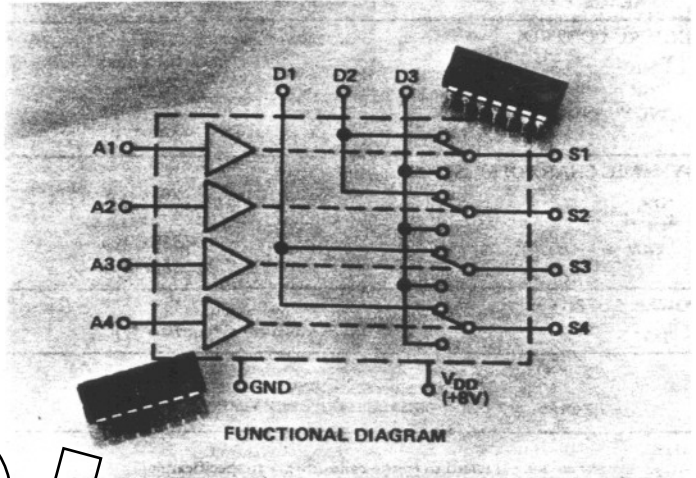
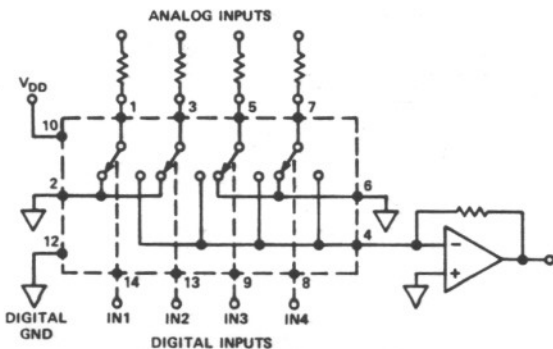
FUNCTIONAL DIAGRAM



LOGIC

Switch "Makes" Terminal D-3 for Address "HIGH"

TYPICAL APPLICATION (SUMMING AMPLIFIER)



ABSOLUTE MAXIMUM RATINGS

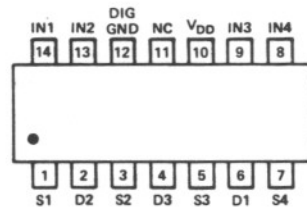
($T_A = +25^\circ C$ unless otherwise noted)

$V_{DD} - GND$	+12V
Digital Input Voltage	0V to V_{DD}
Switch Current	5.0mA
Power Dissipation (Package)	
14 pin Ceramic DIP	
Up to $+75^\circ C$	450mW
Derates above $+75^\circ C$ by	$6mW/^\circ C$
14 pin Plastic DIP	
Up to $+70^\circ C$	670mW
Derates above $+70^\circ C$ by	$8.3mW/^\circ C$
Operating Temperature	$-55^\circ C$ to $+125^\circ C$
Storage Temperature	$-65^\circ C$ to $+150^\circ C$
Switch Voltage	
(pins 1, 3, 4, 5, 7)	$-100mV$ to V_{DD}

CAUTION:

1. Do not apply voltages higher than V_{DD} and V_{SS} to any other terminal, especially when $V_{SS} = V_{DD} = 0V$ all other pins should be at 0V.
2. The digital control inputs are zener protected; however, permanent damage may occur on unconnected units under high energy electrostatic fields. Keep unused units in conductive foam at all times.

PIN CONFIGURATION (Top View)



ORDERING INFORMATION

AD7519JN

0 to $+75^\circ C$

SPECIFICATIONS

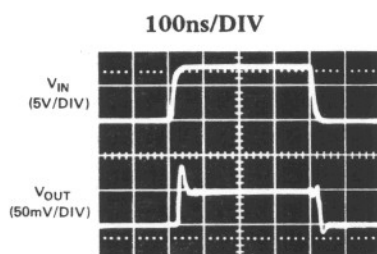
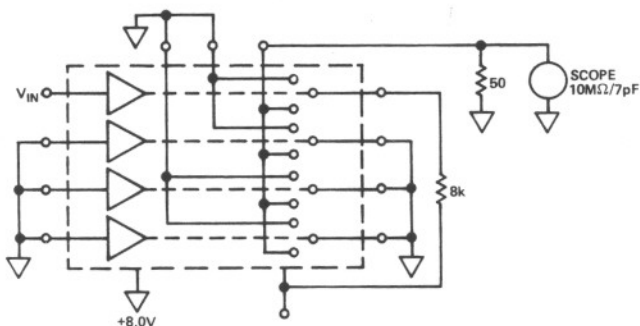
($V_{DD} = +8.0V$, $T_A = +25^\circ C$ unless otherwise noted)

PARAMETER	SWITCH CONDITION	@ +25°C	TEST CONDITIONS
ANALOG SWITCH			
R_{ON}	ON	65Ω typ, 100Ω max	$V_D = 0V$, $I_{DS} = 1.0mA$
R_{ON} vs. Temperature	ON	+0.5%/°C typ	$I_{DS} = 1.0mA$
ΔR_{ON} Between Switches	ON	5% typ	$I_{DS} = 1.0mA$
$I_{LEAKAGE}$ (Pin 4)	OFF	50nA typ	$V_{IN} = 0V$
DIGITAL CONTROL			
V_{INL}		0.4V max	
V_{INH}		7V min	
I_{INL} or I_{INH}		10nA typ	
C_{IN}		3pF typ	
DYNAMIC CHARACTERISTICS¹			
t_{ON}		20ns typ	$V_{IN} = 0$ to V_{DD} & V_{DD} to 0
t_{OFF}		30ns typ	
C_{OUT}	ON	55pF typ	$V_{IN} = V_{DD}$
	OFF	15pF typ	$V_{IN} = 0V$
POWER SUPPLY			
I_{DD}		1μA typ	$V_{IN} = 0$ or V_{DD}

NOTES:
¹ AC parameters are sample tested to ensure conformance to specifications.
² Pin 4 to GND.

Specifications subject to change without notice.

TYPICAL SWITCHING CHARACTERISTICS

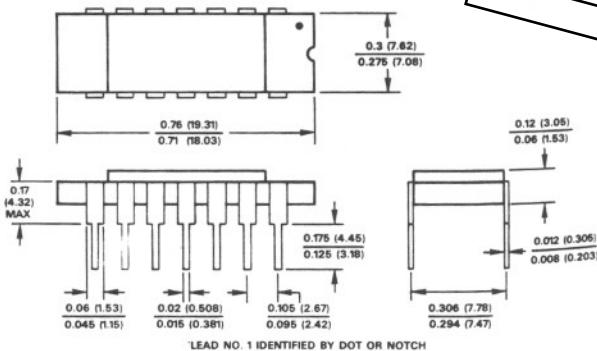


MECHANICAL INFORMATION

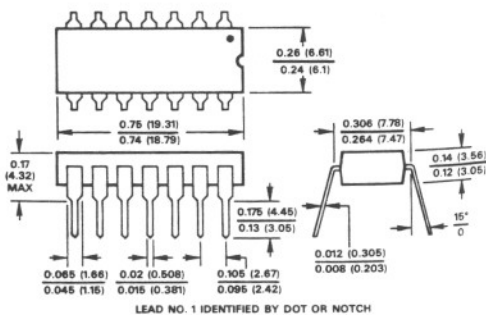
OUTLINE DIMENSIONS

Dimensions shown in inches and (mm).

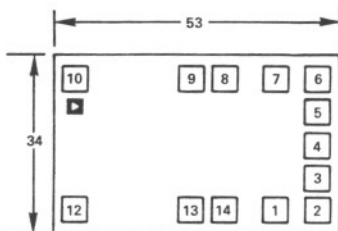
14-PIN CERAMIC DIP (SUFFIX D)



14-PIN PLASTIC DIP (SUFFIX N)



BONDING DIAGRAM



All bonding pads are 4 x 4 MIL.
 All pad numbers correspond with DIP package pin configuration.