

LINEAR INTEGRATED CIRCUITS

DESCRIPTION

The SN75451 and SN75451A dual peripheral drivers are versatile devices designed for use in systems that employ TTL or DTL logic. These circuits are dual AND drivers (positive logic) with the gate outputs internally connected to the npn output transistors.

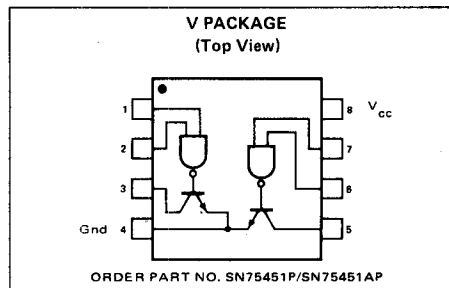
ABSOLUTE MAXIMUM RATINGS

Supply Voltage (V_{CC})	+7V
Input Voltage	+5.5V
Output Voltage	+30V
Continuous Output Current	300mA
Continuous Power Dissipation	800mW
Positive Logic	Y = AB

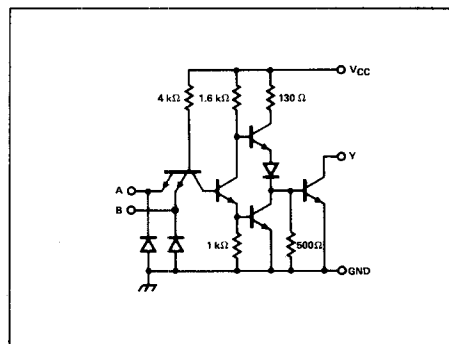
TRUTH TABLE

A	B	Y
L	L	L (on state)
L	H	L (on state)
H	L	L (on state)
H	H	H (off state)

PIN CONFIGURATION



EQUIVALENT CIRCUIT (Each Driver)



ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
V_{IH} High-Level Input Voltage		2			V
V_{IL} Low-Level Input Voltage				0.8	V
V_I Input Clamp Voltage				-1.5	V
I_{OH} High-Level Output Current	$V_{CC} = 4.75V, I_I = -12mA$			100	μA
V_{OL} Low-Level Output Voltage	$V_{CC} = 4.75V, V_{IH} = 2V$ $V_{OH} = 30V$				
	$V_{CC} = 4.75V, V_{IL} = 0.8V$ $I_{OL} = 100mA$		0.25	0.4	V
	$V_{CC} = 4.75V, V_{IL} = 0.8V,$ $I_{OL} = 300mA$		0.5	0.7	V
I_I Input Current at Maximum Input Voltage	$V_{CC} = 5.25V, V_I = 5.5V$			1	mA
I_{IH} High-Level Input Current	$V_{CC} = 5.25V, V_I = 2.4V$			40	μA
I_{IL} Low-Level Input Current	$V_{CC} = 5.25V, V_I = 0.4V$		-1	-1.6	mA
I_{CCH} Supply Current, High-Level Output	$V_{CC} = 5.25V, V_I = 5V$		7	11	mA
I_{CCL} Supply Current, Low-Level Output	$V_{CC} = 5.25V, V_T = 0$		52	65	mA

SIGNETICS ■ N75451/N75451A – DUAL PERIPHERAL DRIVER

SWITCHING CHARACTERISTICS ($V_{CC} = 5V$, $T_A = 25^\circ C$)

PARAMETER	TEST CONDITIONS	75451			75451A			UNITS
		MIN	TYP	MAX	MIN	TYP	MAX	
t_{PLH} Propagation Delay Time Low-to-High-Level Output	$I_O \approx 200mA, C_L = 15pF$ $R_L = 50\Omega$		20	25		45		ns
t_{PHL} Propagation Delay Time High-to-Low Level Output			20	30		25		ns
t_{TLH} Transition Time, Low-to- High-Level Output			10			10		ns
t_{THL} Transition Time, High-to- Low-Level Output			10			12		ns