

9311 ✓ 010621
93L11 ✓ 010222

1-OF-16 DECODER/DEMULTIPLEXER

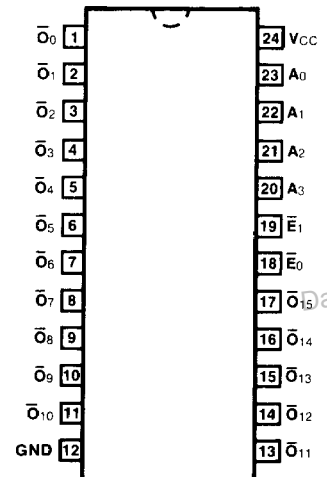
DESCRIPTION — The '11 is a multipurpose decoder designed to accept four inputs and provide 16 mutually exclusive outputs. The 9311 is a faster replacement for the 74154.

- **MUTUALLY EXCLUSIVE OUTPUTS**
- **HIGH CAPACITIVE DRIVE CAPABILITY**
- **DEMULTIPLEXING CAPABILITY**
- **TYPICAL POWER DISSIPATION OF 175 mW FOR '11, 58 mW FOR 'L11**
- **2-INPUT ENABLE GATE**

ORDERING CODE: See Section 9

PKGS	PIN OUT	COMMERCIAL GRADE	MILITARY GRADE	PKG TYPE
		V _{CC} = +5.0 V ±5%, T _A = 0°C to +70°C	V _{CC} = +5.0 V ±10%, T _A = -55°C to +125°C	
Plastic DIP (P)	A	9311PC, 93L11PC		9N
Ceramic DIP (D)	A	9311DC, 93L11DC	9311DM, 93L11DM	6N
Flatpak (F)	A	9311FC, 93L11FC	9311FM, 93L11FM	4M

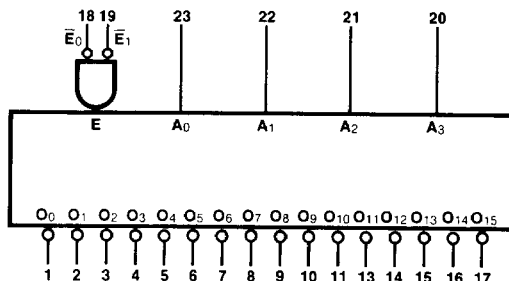
CONNECTION DIAGRAM PINOUT A



INPUT LOADING/FAN-OUT: See Section 3 for U.L. definitions

PIN NAMES	DESCRIPTION	93XX (U.L.) HIGH/LOW	93L (U.L.) HIGH/LOW
A ₀ — A ₃	Address Inputs	1.0/1.0	0.5/0.25
E ₀ , E ₁	AND Enable Inputs (Active LOW)	1.0/1.0	0.5/0.25
O ₀ — O ₁₅	Decoder Outputs (Active LOW)	20/10	10/5.0 (3.0)

LOGIC SYMBOL



V_{CC} = Pin 24

GND = Pin 12

DC CHARACTERISTICS OVER OPERATING TEMPERATURE RANGE (unless otherwise specified)

SYMBOL	PARAMETER	93XX		93L		UNITS	CONDITIONS	
		Min	Max	Min	Max			
I _{OS}	Output Short Circuit Current	XM	-20	-55	-2.5	-25	mA	V _{CC} = Max, V _{OUT} = 0 V
		XC	-20	-57	-2.5	-25		
I _{CC}	Power Supply Current	XM	49		16.5		mA	V _{CC} = Max
		XC	56		16.5			

AC CHARACTERISTICS: V_{CC} = +5.0 V, T_A = +25°C (See Section 3 for waveforms and load configurations)

SYMBOL	PARAMETER	93XX		93L		UNITS	CONDITIONS
		C _L = 15 pF R _L = 400 Ω		C _L = 15 pF			
		Min	Max	Min	Max		
t _{PLH} t _{PHL}	Propagation Delay A _n to O _n	31 28		75 85		ns	Figs. 3-1, 3-20
t _{PLH} t _{PHL}	Propagation Delay E _n to O _n	23 24		60 65			

DataSheet4U.com