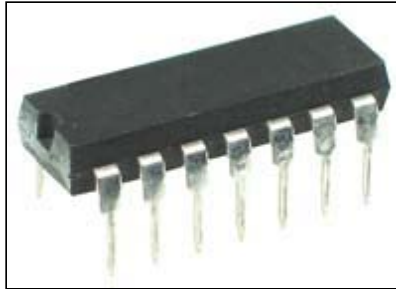


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7404 - 7404 Hex Inverter Datasheet

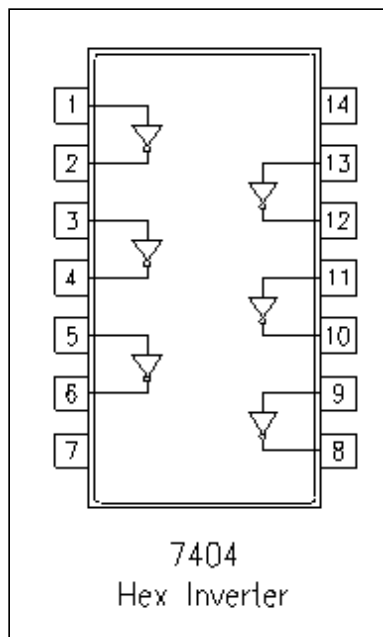
Photograph



Features

- ▶ Six Hex Inverters
- ▶ Outputs Directly Interface to CMOS, NMOS and TTL
- ▶ Large Operating Voltage Range
- ▶ Wide Operating Conditions
- ▶ Not Recommended for New Designs Use [74LS04](#)

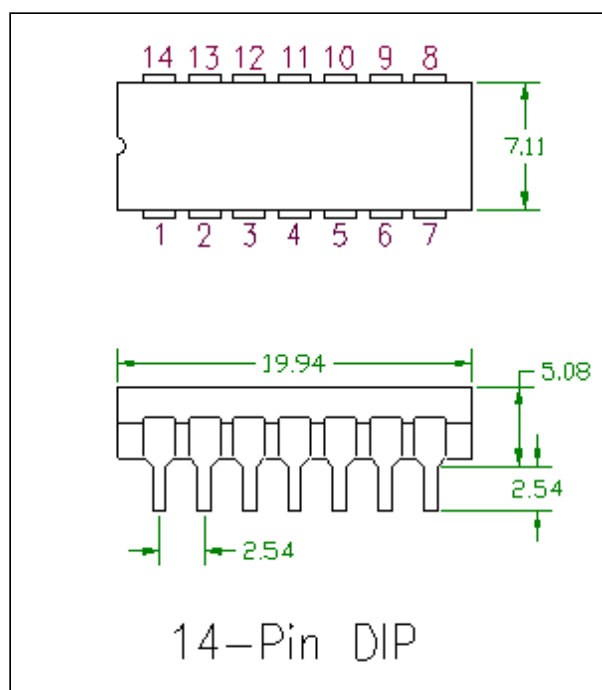
Pin Layout



Pin Description

Pin Number	Description
1	A Input Gate 1
2	Y Output Gate 1
3	A Input Gate 2
4	Y Output Gate 2
5	A Input Gate 3
6	Y Output Gate 3
7	Ground
8	Y Output Gate 4
9	A Input Gate 4
10	Y Output Gate 5
11	A Input Gate 5
12	Y Output Gate 6
13	A Input Gate 6
14	Vcc - Positive Supply

Dimensional Drawing



Technical Data

Absolute Maximum Ratings

Supply Voltage	7V
Input Voltage	5.5V
Operating Free Air Temperature	0°C to +70°C
Storage Temperature Range	-65°C to +150°C

Recommended Operating Conditions

Symbol	Parameter	Min	Typ	Max	Units
Vcc	Supply Voltage	4.75	5	5.25	V
Vih	HIGH Level Input Voltage	2			V
Vil	LOW Level Input Voltage			0.8	V
Ioh	HIGH Level Output Current			-0.4	mA
Iol	LOW Level Output Current			16	mA
Ta	Free Air Operating Temperature	0		70	°C

Electrical Characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Units
Vi	Input Clamp Voltage	Vcc=Min Ii=-12mA			-1.5	V
Voh	HIGH Level Output Voltage	Vcc=Min Ioh=MAX Vil=MAX	2.4	3.4		V
Vol	LOW Level Output Voltage	Vcc=Min Iol=MAX Vih=MAX		0.2	0.4	V
Ii	Input Current@MAX Input Voltage	Vcc=Max Vi=5.5V			1	mA
Iih	HIGH Level Input Current	Vcc=Max Vi=2.4V			40	μA
Iil	LOW Level Input Current	Vcc=Max Vi=0.4V			-1.6	mA
Ios	Short Circuit Output Current	Vcc=Max	-18		-55	mA
Icch	Supply Current with Outputs HIGH	Vcc=Max		4	8	mA
Iccl	Supply Current with Outputs LOW	Vcc=Max		12	22	mA

Switching Characteristics at Vcc=5V,Ta=25°C

Symbol	Parameter	Conditions	Min	Typ	Max	Units
tph	Propagation Delay Time LOW-to-HIGH Level Output	CI=15pF RI=400R			22	nS
tphl	Propagation Delay Time HIGH-to-LOW Level Output	CI=15pF RI=400R			15	nS



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