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Kind regards,

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# 74HC251; 74HCT251 8-input multiplexer; 3-state Rev. 4 — 1 February 2016

**Product data sheet** 

# **General description**

The 74HC251; 74HCT251 is an 8-bit multiplexer with eight binary inputs (I0 to I7), three select inputs (S0 to S2) and an output enable input (OE). The select inputs select one of the eight binary inputs and route it to the complementary outputs (Y and Y). A HIGH on OE causes the outputs to assume a high-impedance OFF-state. Inputs include clamp diodes that enable the use of current limiting resistors to interface inputs to voltages in excess of V<sub>CC</sub>.

### **Features and benefits** 2.

- Input levels:
  - ◆ For 74HC251: CMOS level
  - For 74HCT251: TTL level
- Low-power dissipation
- Non-inverting data path
- Specified in compliance with JEDEC standard no. 7A
- ESD protection:
  - ◆ HBM JESD22-A114F exceeds 2 000 V
  - ♦ MM JESD22-A115-A exceeds 200 V
- Multiple package options
- Specified from -40 °C to +85 °C and from -40 °C to +125 °C

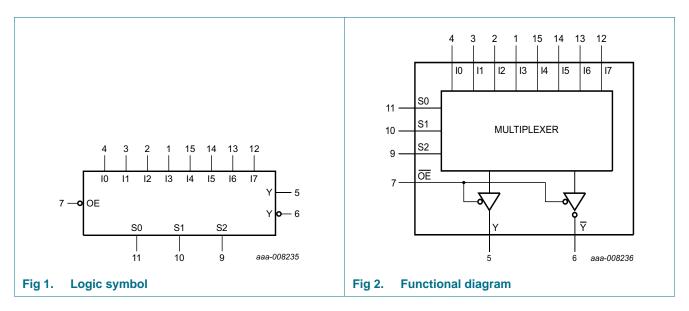
### 3. Ordering information

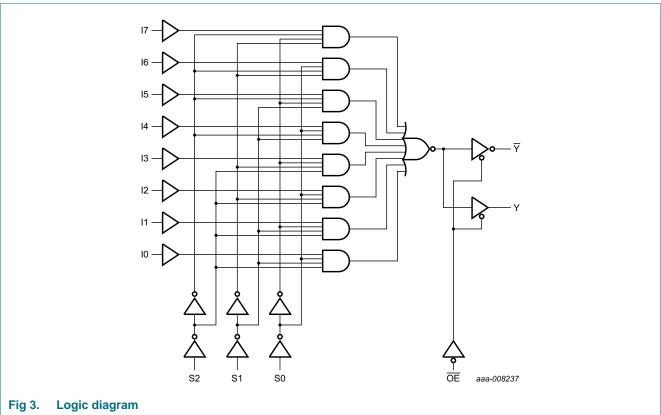
Table 1. **Ordering information** 

Type number	Package											
	Temperature range	Name	Description	Version								
74HC251D	-40 °C to +125 °C	SO16	plastic small outline package; 16 leads; body width 3.9 mm	SOT109-1								
74HCT251D												
74HC251DB	-40 °C to +125 °C	SSOP16	plastic shrink small outline package; 16 leads;	SOT338-1								
74HCT251DB			body width 5.3 mm									
74HC251PW	-40 °C to +125 °C	TSSOP16	plastic thin shrink small outline package; 16 leads;	SOT403-1								
74HCT251PW	HCT251PW body width 4.4 mm											



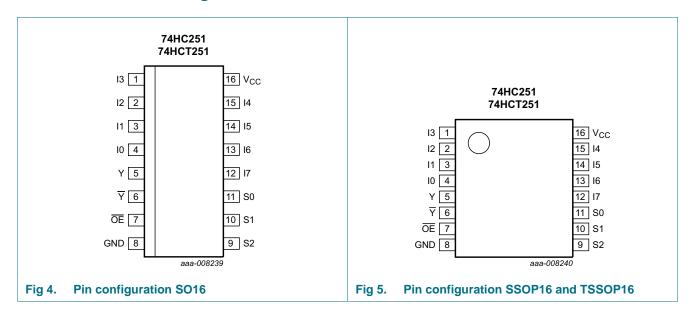
# 4. Functional diagram





# 5. Pinning information

# 5.1 Pinning



# 5.2 Pin description

Table 2. Pin description

Symbol	Pin	Description
I0 to I7	4, 3, 2, 1, 15, 14, 13, 12	data inputs
Υ	5	multiplexer output
Y	6	complementary multiplexer output
ŌĒ	7	output enable input (active LOW)
GND	8	ground (0 V)
S0, S1, S2	11, 10, 9	common data select inputs
V <sub>CC</sub>	16	supply voltage

# 6. Functional description

Table 3. Function table [1]

Input												Outp	ut
OE	S2	S1	S0	10	l1	12	13	14	15	16	17	Y	Υ
Н	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Z	Z
L	L	L	L	L	Х	Х	Х	Х	Х	Х	Х	Н	L
L	L	L	L	Н	Х	Х	Х	Х	Х	Х	Х	L	Н
L	L	L	Н	X	L	Х	Х	Х	Х	Х	Х	Н	L
L	L	L	Н	Х	Н	Х	Х	Х	Х	Х	Х	L	Н
L	L	Н	L	Х	Х	L	Х	Х	Х	Х	Х	Н	L
L	L	Н	L	X	Х	Н	Х	Х	Х	Х	Х	L	Н
L	L	Н	Н	X	Х	Х	L	Х	Х	Х	Х	Н	L
L	L	Н	Н	X	Х	Х	Н	Х	Х	Х	Х	L	Н
L	Н	L	L	X	Х	Х	Х	L	Х	Х	Х	Н	L
L	Н	L	L	X	Х	Х	Х	Н	Х	Х	Х	L	Н
L	Н	L	Н	X	Х	Х	Х	Х	L	Х	Х	Н	L
L	Н	L	Н	Х	Х	Х	Х	Х	Н	Х	Х	L	Н
L	Н	Н	L	Х	Х	Х	Х	Х	Х	L	Х	Н	L
L	Н	Н	L	Х	Х	Х	Х	Х	Х	Н	Х	L	Н
L	Н	Н	Н	Х	Х	Х	Х	Х	Х	Х	L	Н	L
L	Н	Н	Н	Х	Х	Х	Х	Х	Х	Х	Н	L	Н

<sup>[1]</sup> H = HIGH voltage level; L = LOW voltage level; X = don't care; Z = high-impedance OFF-state.

# 7. Limiting values

Table 4. Limiting values

In accordance with the Absolute Maximum Rating System (IEC 60134). Voltages are referenced to GND (ground = 0 V).

Symbol	Parameter	Conditions	Min	Max	Unit
V <sub>CC</sub>	supply voltage		-0.5	+7	V
I <sub>IK</sub>	input clamping current	$V_{I} < -0.5 \text{ V or } V_{I} > V_{CC} + 0.5 \text{ V}$	-	±20	mA
I <sub>OK</sub>	output clamping current	$V_{O} < -0.5 \text{ V or } V_{O} > V_{CC} + 0.5 \text{ V}$	-	±20	mA
Io	output current	$V_{O} = -0.5 \text{ V to } (V_{CC} + 0.5 \text{ V})$	-	±25	mA
I <sub>CC</sub>	supply current		-	+50	mA
I <sub>GND</sub>	ground current		-50	-	mA
T <sub>stg</sub>	storage temperature		-65	+150	°C
P <sub>tot</sub>	total power dissipation	$T_{amb} = -40  ^{\circ}\text{C} \text{ to } +125  ^{\circ}\text{C}$			
		SO16 package	-	500	mW
		(T)SSOP16 package	-	500	mW

<sup>[1]</sup> For SO16 package:  $P_{tot}$  derates linearly with 8 mW/K above 70  $^{\circ}\text{C}.$ 

<sup>[2]</sup> For SSOP16 and TSSOP16 packages:  $P_{tot}$  derates linearly with 5.5 mW/K above 60 °C.

# 8. Recommended operating conditions

Table 5. Recommended operating conditions

Voltages are referenced to GND (ground = 0 V)

Symbol	Parameter	Conditions		74HC251		7	4HCT25	1	Unit	
			Min	Тур	Max	Min	Тур	Max		
V <sub>CC</sub>	supply voltage		2.0	5.0	6.0	4.5	5.0	5.5	V	
VI	input voltage		0	-	V <sub>CC</sub>	0	-	V <sub>CC</sub>	V	
Vo	output voltage		0	-	V <sub>CC</sub>	0	-	V <sub>CC</sub>	V	
T <sub>amb</sub>	ambient temperature		-40	+25	+125	-40	+25	+125	°C	
Δt/ΔV	input transition rise and fall rate	V <sub>CC</sub> = 2.0 V	-	-	625	-	-	-	ns/V	
		V <sub>CC</sub> = 4.5 V	-	1.67	139	-	1.67	139	ns/V	
l		$V_{CC} = 6.0 \text{ V}$	-	-	83	-	-	-	ns/V	

# 9. Static characteristics

### Table 6. Static characteristics

At recommended operating conditions; voltages are referenced to GND (ground = 0 V).

Symbol	Parameter	Conditions	T <sub>ar</sub>	<sub>mb</sub> = 25	°C		40 °C to 5 °C		–40 °C to 25 °C	Unit
			Min	Тур	Max	Min	Max	Min	Max	
74HC25	1									
$V_{IH}$	HIGH-level	V <sub>CC</sub> = 2.0 V	1.5	1.2	-	1.5	-	1.5	-	V
	input voltage	V <sub>CC</sub> = 4.5 V	3.15	2.4	-	3.15	-	3.15	-	V
		$V_{CC} = 6.0 \text{ V}$	4.2	3.2	-	4.2	-	4.2	-	V
V <sub>IL</sub>	LOW-level	V <sub>CC</sub> = 2.0 V	-	0.8	0.5	-	0.5	-	0.5	V
	input voltage	V <sub>CC</sub> = 4.5 V	-	2.1	1.35	-	1.35	-	1.35	V
		$V_{CC} = 6.0 \text{ V}$	-	2.8	1.8	-	1.8	-	1.8	V
V <sub>OH</sub>	HIGH-level	$V_I = V_{IH}$ or $V_{IL}$								
οι	output voltage	$I_{O} = -20 \mu A; V_{CC} = 2.0 V$	1.9	2.0	-	1.9	-	1.9	-	V
		$I_O = -20 \mu A$ ; $V_{CC} = 4.5 \text{ V}$	4.4	4.5	-	4.4	-	4.4	-	V
		$I_{O} = -20 \mu A; V_{CC} = 6.0 V$	5.9	6.0	-	5.9	-	5.9	-	V
		$I_{O} = -4.0 \text{ mA}; V_{CC} = 4.5 \text{ V}$	3.98	4.32	-	3.84	-	3.7	-	V
		$I_{O} = -5.2 \text{ mA}; V_{CC} = 6.0 \text{ V}$	5.48	5.81	-	5.34	-	5.2	-	V
V <sub>OL</sub>	LOW-level	$V_I = V_{IH}$ or $V_{IL}$								
	output voltage	$I_O = 20 \mu A; V_{CC} = 2.0 V$	-	0	0.1	-	0.1	-	0.1	V
		$I_O = 20 \mu A; V_{CC} = 4.5 V$	-	0	0.1	-	0.1	-	0.1	V
		$I_O = 20 \mu A; V_{CC} = 6.0 \text{ V}$	-	0	0.1	-	0.1	-	0.1	V
		$I_O = 4.0 \text{ mA}; V_{CC} = 4.5 \text{ V}$	-	0.15	0.26	-	0.33	-	0.4	V
		$I_{O} = 5.2 \text{ mA}; V_{CC} = 6.0 \text{ V}$	-	0.16	0.26	-	0.33	-	0.4	V
lı	input leakage current	$V_I = V_{CC}$ or GND; $V_{CC} = 6.0 \text{ V}$	-	-	±0.1	-	±1.0	-	±1.0	μΑ
l <sub>OZ</sub>	OFF-state output current	$V_I = V_{IH} \text{ or } V_{IL};$ $V_O = V_{CC} \text{ or GND};$ $V_{CC} = 6.0 \text{ V}$	-	-	±0.5	-	±5.0	-	±10.0	μА

74HC\_HCT251

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Table 6. Static characteristics ... continued

At recommended operating conditions; voltages are referenced to GND (ground = 0 V).

Symbol	Parameter	Conditions	Tar	<sub>nb</sub> = 25	°C	T <sub>amb</sub> = - +85	40 °C to 5 °C		-40 °C to 5 °C	Unit
			Min	Тур	Max	Min	Max	Min	Max	
I <sub>CC</sub>	supply current	$V_I = V_{CC}$ or GND; $I_O = 0$ A; $V_{CC} = 6.0 \text{ V}$	-	-	8.0	-	80	-	160	μΑ
Cı	input capacitance		-	3.5	-					pF
74HCT2	51							1		
V <sub>IH</sub>	HIGH-level input voltage	V <sub>CC</sub> = 4.5 V to 5.5 V	2.0	1.6	-	2.0	-	2.0	-	V
$V_{IL}$	LOW-level input voltage	V <sub>CC</sub> = 4.5 V to 5.5 V	-	1.2	0.8	-	0.8	-	0.8	V
V <sub>OH</sub>	HIGH-level	$V_I = V_{IH}$ or $V_{IL}$ ; $V_{CC} = 4.5 \text{ V}$								
	output voltage	$I_{O} = -20 \mu A$	4.4	4.5	-	4.4	-	4.4	-	V
		$I_O = -4 \text{ mA}$	3.98	4.32	-	3.84	-	3.7	-	V
	LOW-level	$V_I = V_{IH}$ or $V_{IL}$ ; $V_{CC} = 4.5 \text{ V}$								
	output voltage	I <sub>O</sub> = 20 μA	-	0	0.1	-	0.1	-	0.1	V
		$I_{O} = 4.0 \text{ mA}$	-	0.15	0.26	-	0.33	-	0.4	V
I <sub>I</sub>	input leakage current	$V_1 = V_{CC}$ or GND; $V_{CC} = 5.5 \text{ V}$	-	-	±0.1	-	±1.0	-	±1.0	μА
l <sub>oz</sub>	OFF-state output current	$V_I = V_{IH}$ or $V_{IL}$ ; $V_O = V_{CC}$ or GND; $V_{CC} = 5.5 \text{ V}$	-	-	±0.5	-	±5.0	-	±10	μΑ
I <sub>CC</sub>	supply current	$V_I = V_{CC}$ or GND; $I_O = 0$ A; $V_{CC} = 5.5 \text{ V}$	-	-	8.0	-	80	-	160	μΑ
Δl <sub>CC</sub>	additional supply current	$\begin{aligned} &V_{I} = V_{CC} - 2.1 \text{ V;} \\ &\text{other inputs at } V_{CC} \text{ or GND;} \\ &V_{CC} = 4.5 \text{ V to } 5.5 \text{ V;} \\ &I_{O} = 0 \text{ A} \end{aligned}$								
		per input pin; In inputs	-	100	360	-	450	-	490	μΑ
		per input pin; OE input	-	150	540	-	675	-	735	μΑ
		per input pin; Sn input	-	150	540	-	675	-	735	μΑ
Cı	input capacitance		-	3.5	-					pF

# 10. Dynamic characteristics

Table 7. Dynamic characteristics

Voltages are referenced to GND (ground = 0 V);  $C_L = 50 \ pF$  unless otherwise specified; for test circuit, see Figure 9.

Symbol	Parameter	Conditions		Tan	<sub>nb</sub> = 25	°C		= –40 °C 85 °C	T <sub>amb</sub> =	Unit	
				Min	Тур	Max	Min	Max	Min	Max	
74HC25	1										
t <sub>pd</sub>	propagation	In to Y; see Figure 6	<u>[1]</u>								
	delay	V <sub>CC</sub> = 2.0 V		-	50	170	-	215	-	255	ns
		V <sub>CC</sub> = 4.5 V		-	18	34	-	43	-	51	ns
		V <sub>CC</sub> = 5 V; C <sub>L</sub> = 15 pF		-	15	-	-	-	-	-	ns
		V <sub>CC</sub> = 6.0 V		-	14	29	-	37	-	43	ns
		In to $\overline{Y}$ ; see Figure 6	<u>[1]</u>								
		V <sub>CC</sub> = 2.0 V		-	55	175	-	220	-	265	ns
		V <sub>CC</sub> = 4.5 V		-	20	35	-	44	-	53	ns
		$V_{CC} = 5 \text{ V}; C_L = 15 \text{ pF}$		-	17	-	-	-	-	-	ns
		V <sub>CC</sub> = 6.0 V		-	16	30	-	37	-	45	ns
		Sn to Y; see Figure 7	<u>[1]</u>								
		V <sub>CC</sub> = 2.0 V		-	66	205	-	255	-	310	ns
		V <sub>CC</sub> = 4.5 V		-	24	41	-	51	-	62	ns
		$V_{CC} = 5 \text{ V}; C_L = 15 \text{ pF}$		-	20	-	-	-	-	-	ns
		V <sub>CC</sub> = 6.0 V		-	19	35	-	43	-	53	ns
		Sn to $\overline{Y}$ ; see Figure 7	<u>[1]</u>								
		V <sub>CC</sub> = 2.0 V		-	69	205	-	255	-	310	ns
		V <sub>CC</sub> = 4.5 V		-	25	41	-	51	-	62	ns
		$V_{CC} = 5 \text{ V}; C_L = 15 \text{ pF}$		-	21	-	-	-	-	-	ns
		V <sub>CC</sub> = 6.0 V		-	20	35	-	43	-	53	ns
t <sub>en</sub>	enable time	OE to Y, Y; see Figure 7	[2]								
		V <sub>CC</sub> = 2.0 V		-	36	140	-	175	-	210	ns
		V <sub>CC</sub> = 4.5 V		-	13	28	-	35	-	42	ns
		V <sub>CC</sub> = 6.0 V		-	10	24	-	30	-	36	ns
t <sub>dis</sub>	disable time	$\overline{OE}$ to Y, $\overline{Y}$ ; see Figure 7	[3]								
		V <sub>CC</sub> = 2.0 V		-	39	140	-	170	-	210	ns
		V <sub>CC</sub> = 4.5 V		-	14	28	-	35	-	42	ns
		V <sub>CC</sub> = 6.0 V		-	11	24	-	30	-	36	ns
t <sub>t</sub>	transition	Y, Y; see Figure 6	[4]								
	time	V <sub>CC</sub> = 2.0 V		-	19	75	-	95	-	110	ns
		V <sub>CC</sub> = 4.5 V		-	7	15	-	19	-	22	ns
		V <sub>CC</sub> = 6.0 V		-	6	13	-	16	-	19	ns
C <sub>PD</sub>	power dissipation capacitance	$C_L$ = 50 pF; f = 1 MHz; $V_I$ = GND to $V_{CC}$	<u>[5]</u>	-	44	-	-	-	-	-	pF

Table 7. Dynamic characteristics ...continued

Voltages are referenced to GND (ground = 0 V); C<sub>L</sub> = 50 pF unless otherwise specified; for test circuit, see Figure 9.

Symbol	Parameter	Conditions		T <sub>an</sub>	<sub>nb</sub> = 25	°C		= –40 °C 85 °C		= –40 °C 125 °C	Unit
				Min	Тур	Max	Min	Max	Min	Max	
74HCT2	51										
t <sub>pd</sub>	propagation	In to Y; see Figure 6	[1]								
	delay	V <sub>CC</sub> = 4.5 V		-	22	35	-	44	-	53	ns
		V <sub>CC</sub> = 5 V; C <sub>L</sub> = 15 pF		-	19	-	-	-	-	-	ns
		In to $\overline{Y}$ ; see Figure 6	[1]								
		V <sub>CC</sub> = 4.5 V		-	22	35	-	44	-	53	ns
		V <sub>CC</sub> = 5 V; C <sub>L</sub> = 15 pF		-	19	-	-	-	-	-	ns
		Sn to Y; see Figure 7	[1]								
		V <sub>CC</sub> = 4.5 V		-	24	44	-	55	-	66	ns
		V <sub>CC</sub> = 5 V; C <sub>L</sub> = 15 pF		-	20	-	-	-	-	-	ns
		Sn to $\overline{Y}$ ; see Figure 7	[1]								
		V <sub>CC</sub> = 4.5 V		-	25	44	-	55	-	66	ns
		V <sub>CC</sub> = 5 V; C <sub>L</sub> = 15 pF		-	21	-	-	-	-	-	ns
t <sub>en</sub>	enable time	OE to Y, Y; see Figure 7	[2]								
		V <sub>CC</sub> = 4.5 V		-	13	28	-	35	-	42	ns
		V <sub>CC</sub> = 5 V; C <sub>L</sub> = 15 pF		-	13	-	-	-	-	-	ns
t <sub>dis</sub>	disable time	$\overline{OE}$ to Y, $\overline{Y}$ ; see Figure 7	[3]								
		V <sub>CC</sub> = 4.5 V		-	14	28	-	35	-	42	ns
		V <sub>CC</sub> = 5 V; C <sub>L</sub> = 15 pF		-	18	-	-	-	-	-	ns
t <sub>t</sub>	transition	Y, Y; see Figure 6	[4]								
	time	V <sub>CC</sub> = 4.5 V		-	7	15	-	19	-	22	ns
C <sub>PD</sub>	power dissipation capacitance	$C_L = 50 \text{ pF}; f = 1 \text{ MHz};$ $V_I = \text{GND to } V_{CC}$	[5]	-	46	-	-	-	-	-	pF

- [1]  $t_{pd}$  is the same as  $t_{PLH}$  and  $t_{PHL}$ .
- [2]  $t_{en}$  is the same as  $t_{PZH}$  and  $t_{PZL}$ .
- [3]  $t_{dis}$  is the same as  $t_{PLZ}$  and  $t_{PHZ}$ .
- [4]  $t_t$  is the same as  $t_{THL}$  and  $t_{TLH}$ .
- [5]  $C_{PD}$  is used to determine the dynamic power dissipation (P<sub>D</sub> in  $\mu$ W).

 $P_D = C_{PD} \times V_{CC}^2 \times f_i \times N + \sum (C_L \times V_{CC}^2 \times f_o)$  where:

f<sub>i</sub> = input frequency in MHz;

f<sub>o</sub> = output frequency in MHz;

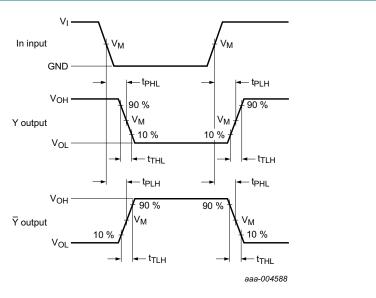
C<sub>L</sub> = output load capacitance in pF;

V<sub>CC</sub> = supply voltage in V;

N = number of inputs switching;

 $\sum (C_L \times V_{CC}^2 \times f_o) = sum \text{ of outputs.}$ 

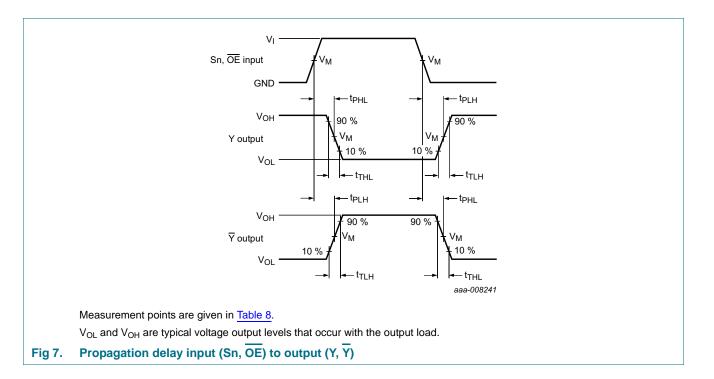
### 11. Waveforms



Measurement points are given in Table 8.

V<sub>OL</sub> and V<sub>OH</sub> are typical voltage output levels that occur with the output load.

Fig 6. Propagation delay input (In) to output  $(Y, \overline{Y})$  and the output  $(Y, \overline{Y})$  transition time



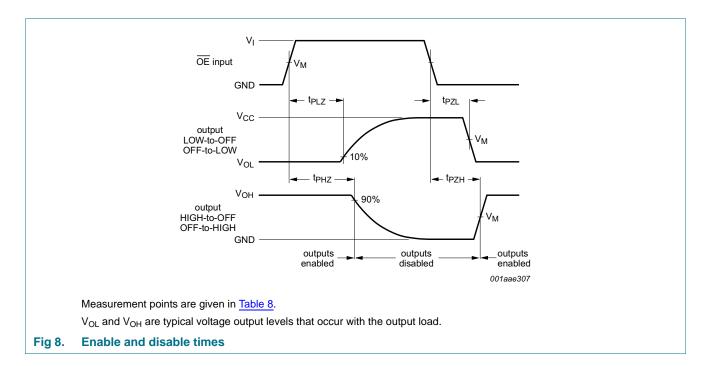
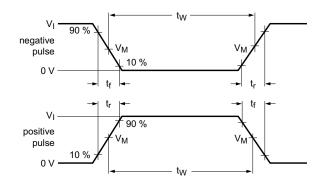
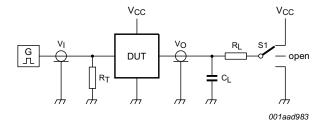


Table 8. **Measurement points** 

Туре	Input	Output
	$V_{M}$	V <sub>M</sub>
74HC251	0.5V <sub>CC</sub>	0.5V <sub>CC</sub>
74HCT251	1.3 V	1.3 V





Test data is given in Table 9.

Definitions test circuit:

 $R_T$  = Termination resistance should be equal to output impedance  $Z_o$  of the pulse generator.

 $C_L$  = Load capacitance including jig and probe capacitance.

R<sub>L</sub> = Load resistance.

S1 = Test selection switch.

Fig 9. Test circuit for measuring switching times

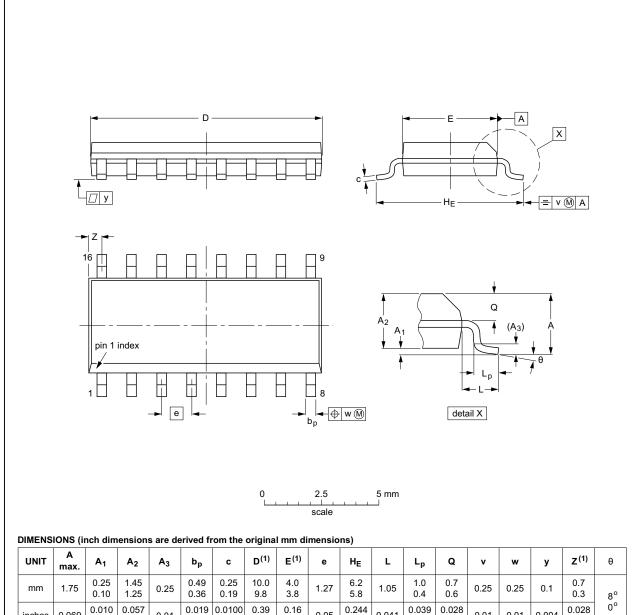
Table 9. Test data

Туре	Input		Load		S1 position					
	VI	t <sub>r</sub> , t <sub>f</sub>	CL	R <sub>L</sub>	t <sub>PHL</sub> , t <sub>PLH</sub>	t <sub>PZH</sub> , t <sub>PHZ</sub>	t <sub>PZL</sub> , t <sub>PLZ</sub>			
74HC251	V <sub>CC</sub>	6 ns	15 pF, 50 pF	1 kΩ	open	GND	V <sub>CC</sub>			
74HCT251	3 V	6 ns	15 pF, 50 pF	1 kΩ	open	GND	V <sub>CC</sub>			

# 12. Package outline

### SO16: plastic small outline package; 16 leads; body width 3.9 mm

SOT109-1



UNIT	A max.	A <sub>1</sub>	A <sub>2</sub>	<b>A</b> <sub>3</sub>	bp	С	D <sup>(1)</sup>	E <sup>(1)</sup>	е	HE	L	Lp	Q	٧	w	у	Z <sup>(1)</sup>	θ
mm	1.75	0.25 0.10	1.45 1.25	0.25	0.49 0.36	0.25 0.19	10.0 9.8	4.0 3.8	1.27	6.2 5.8	1.05	1.0 0.4	0.7 0.6	0.25	0.25	0.1	0.7 0.3	8°
inches	0.069	0.010 0.004	0.057 0.049	0.01		0.0100 0.0075	0.39 0.38	0.16 0.15	0.05	0.244 0.228	0.041	0.039 0.016		0.01	0.01	0.004	0.028 0.012	0°

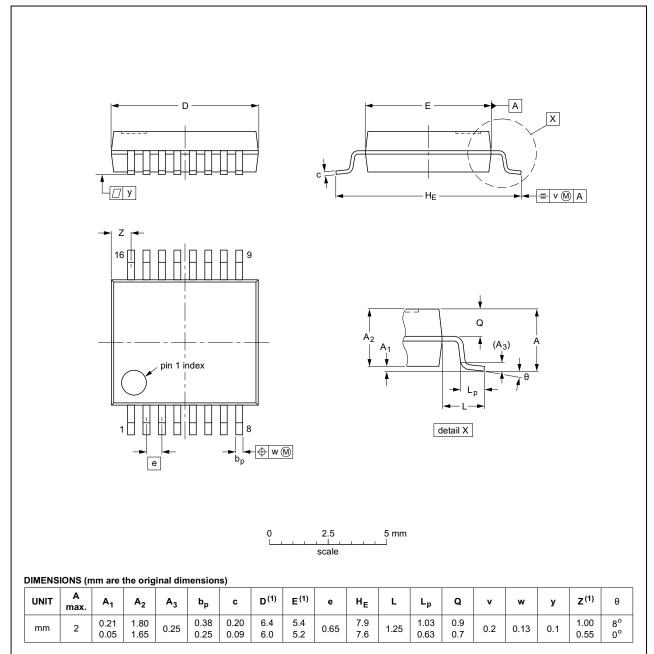
1. Plastic or metal protrusions of 0.15 mm (0.006 inch) maximum per side are not included.

OUTLINE		REFER	ENCES	EUROPEAN	ISSUE DATE	
VERSION	IEC	JEDEC	JEITA	PROJECTION	ISSUE DATE	
SOT109-1	076E07	MS-012			<del>99-12-27</del> 03-02-19	

Fig 10. Package outline SOT109-1 (SO16)

### SSOP16: plastic shrink small outline package; 16 leads; body width 5.3 mm

SOT338-1



### Note

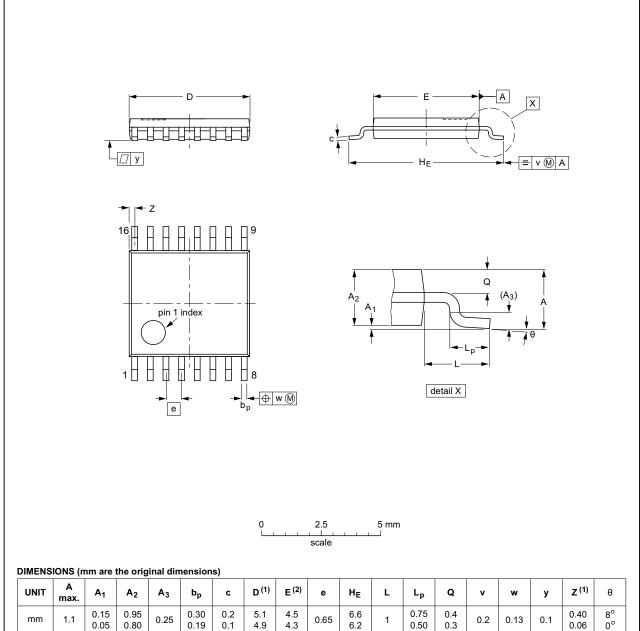
1. Plastic or metal protrusions of 0.25 mm maximum per side are not included.

OUTLINE		REFER	EUROPEAN	ISSUE DATE			
VERSION	IEC	JEDEC	JEITA		PROJECTION	ISSUE DATE	
SOT338-1		MO-150				<del>99-12-27</del> 03-02-19	

Fig 11. Package outline SOT338-1 (SSOP16)

TSSOP16: plastic thin shrink small outline package; 16 leads; body width 4.4 mm

SOT403-1



UNIT	A max.	A <sub>1</sub>	A <sub>2</sub>	<b>A</b> <sub>3</sub>	bp	C	D <sup>(1)</sup>	E <sup>(2)</sup>	е	HE	L	Lp	Q	v	w	у	Z <sup>(1)</sup>	θ
mm	1.1	0.15 0.05	0.95 0.80	0.25	0.30 0.19	0.2 0.1	5.1 4.9	4.5 4.3	0.65	6.6 6.2	1	0.75 0.50	0.4 0.3	0.2	0.13	0.1	0.40 0.06	8° 0°

### Notes

- 1. Plastic or metal protrusions of 0.15 mm maximum per side are not included.
- 2. Plastic interlead protrusions of 0.25 mm maximum per side are not included.

OUTLINE		REFER	ENCES	EUROPEAN	ISSUE DATE	
VERSION	IEC	JEDEC	JEITA	PROJECTION	ISSUE DATE	
SOT403-1		MO-153			<del>99-12-27</del> 03-02-18	

Fig 12. Package outline SOT403-1 (TSSOP16)

# 13. Abbreviations

### Table 10. Abbreviations

Acronym	Description
CMOS	Complementary Metal Oxide Semiconductor
DUT	Device Under Test
ESD	ElectroStatic Discharge
НВМ	Human Body Model
MM	Machine Model
TTL	Transistor-Transistor Logic
MIL	Military

# 14. Revision history

### Table 11. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes					
74HC_HCT251 v.4	20160201	Product data sheet	-	74HC_HCT251 v.3					
Modifications:	Type number	• Type numbers 74HC251N and 74HCT251N (SOT38-4) removed.							
74HC_HCT251 v.3	20130709	Product data sheet	-	74HC_HCT251_CNV v.2					
Modifications:		<ul> <li>The format of this data sheet has been redesigned to comply with the new identity guidelines of NXP Semiconductors.</li> </ul>							
	<ul> <li>Legal texts have been adapted to the new company name where appropriate.</li> </ul>								
74HC_HCT251_CNV v.2	19970828	Product specification	-						

# 15. Legal information

### 15.1 Data sheet status

Document status[1][2]	Product status[3]	Definition
Objective [short] data sheet	Development	This document contains data from the objective specification for product development.
Preliminary [short] data sheet	Qualification	This document contains data from the preliminary specification.
Product [short] data sheet	Production	This document contains the product specification.

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- [2] The term 'short data sheet' is explained in section "Definitions".
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# 74HC251; 74HCT251

8-input multiplexer; 3-state

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# 17. Contents

1	General description	. 1
2	Features and benefits	. 1
3	Ordering information	. 1
4	Functional diagram	. 2
5	Pinning information	. 3
5.1 5.2	Pinning	
6	Functional description	. 4
7	Limiting values	. 4
8	Recommended operating conditions	. 5
9	Static characteristics	. 5
10	Dynamic characteristics	. 7
11	Waveforms	. 9
12	Package outline	12
13	Abbreviations	15
14	Revision history	15
15	Legal information	16
15.1	Data sheet status	
15.2	Definitions	
15.3	Disclaimers	
15.4	Trademarks	
16	Contact information	17
17	Contents	19

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