

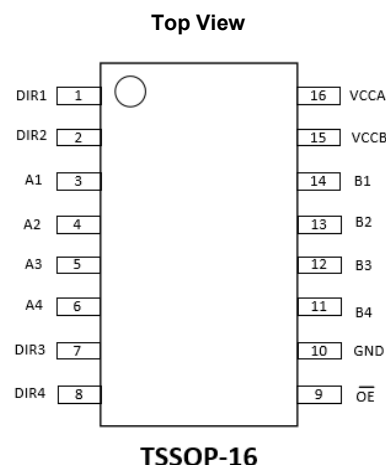
**4-BIT DUAL POWER SUPPLY TRANSLATING
 BUFFER WITH 3-STATE OUTPUTS**

Description

The 74AVC4T774 device is 4-bit, dual supply transceiver that enables bi-directional level translation, designed for asynchronous communication between two data buses. It has four 1-bit input-output ports (An and Bn), 4 direction control input (DIRn), an output enable input (\overline{OE}) and dual supply pins (VCCA and VCCB). Both VCCA and VCCB can be supplied at any voltage features between 0.8V and 3.6V, making the device suitable for translating between any of the low voltage nodes (0.8V, 1.2V, 1.5V, 1.8V, 2.5V and 3.3V). Pins An, \overline{OE} and DIRn are referenced to VCCA and pins Bn are referenced to VCCB. A HIGH on DIRn allows transmission from An to Bn and a LOW on DIRn allows transmission from Bn to An. The output enable input (\overline{OE}) can be used to disable the outputs so the buses are effectively isolated. The device is fully specified for partial power-down applications using IOFF. The IOFF circuitry disables the output, preventing any damaging backflow current through the device when it is powered down. In suspend mode when either VCCA or VCCB are at GND level, both An and Bn are in the high-impedance OFF-state.

The 74AVC4T774 is available in TSSOP-16 package and is specified for operation from -40°C to +125°C among all supply voltages. The wide temperature ranges and high ESD tolerance facilitate its use in harsh applications.

Pin Assignments



Features

- Supply Voltage Range: VCCA/VCCB: from 0.8V to 3.6V
- Max Data Rates:
 - 380Mbps (1.8V to 3.3V Translation)
 - 200Mbps (< 1.8V to 3.3V Translation)
 - 200Mbps (Translate to 2.5V or 1.8V)
 - 150Mbps (Translate to 1.5V)
 - 100Mbps (Translate to 1.2V)
 - 50Mbps (Translate to 0.8V-1.1V)
- High Drive Strength ($\pm 12\text{mA}$ at 3.3V)
- Each Channel Has an Independent DIR Control Input
- IOFF Supports Partial-Power-Down Mode Operation
- ESD Protection Exceeds JESD 22
 - Exceeds 8000V Human Body Model (A114)
 - Exceeds 1000V Charged Device Model (C101)
- Latchup Exceeds 100mA per JESD 78, Class II
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](https://www.diodes.com/contact-us) or your local Diodes representative.**
<https://www.diodes.com/quality/product-definitions/>

Applications

- Personal electronics
- Industrial
- Enterprises
- Telecoms

Notes:

1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Pin Descriptions

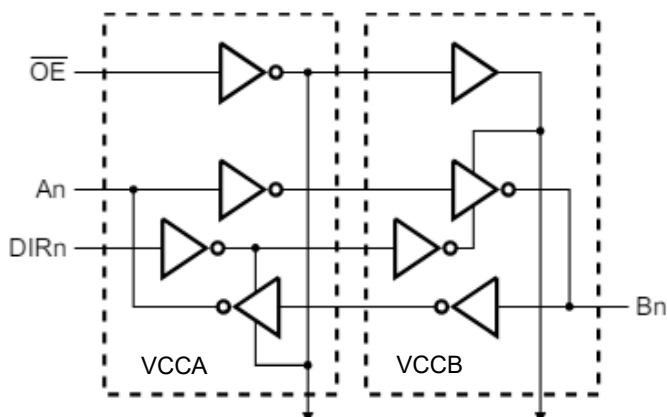
Pin Name	Pin Number	Function
DIR1	1	Direction Control Pin for Port "1".
DIR2	2	Direction Control Pin for Port "2".
A1	3	Input/Output A1. Referenced to VCCA.
A2	4	Input/Output A2. Referenced to VCCA.
A3	5	Input/Output A3. Referenced to VCCA.
A4	6	Input/Output A4. Referenced to VCCA.
DIR3	7	Direction Control Pin for Port "3".
DIR4	8	Direction Control Pin for Port "4".
$\overline{\text{OE}}$	9	3-State Output-Mode Enable. Pull to High to place port "2" outputs in high-impedance mode. Referenced to VCCA.
GND	10	Ground
B4	11	Input/Output B4. Referenced to VCCB.
B3	12	Input/Output B3. Referenced to VCCB.
B2	13	Input/Output B2. Referenced to VCCB.
B1	14	Input/Output B1. Referenced to VCCB.
VCCB	15	B Port Supply Voltage
VCCA	16	A Port Supply Voltage

Function Table

Control Functional		Output Status		Operation
$\overline{\text{OE}}$	DIR	A Port	B Port	
L	L	Enabled	Hi-Z	B to A
L	H	Hi-Z	Enabled	A to B
H	X	Hi-Z	Hi-Z	Isolation

Note: 4. Floating input pin is allowed for this case.

Logic Diagram



Absolute Maximum Ratings (Note 5) (@T_A = +25°C, unless otherwise specified.)

Symbol	Parameter	Rating	Unit
ESD HBM	Human Body Model ESD Protection	7.5	kV
ESD CDM	Charged Device Model ESD Protection	1.5	kV
V _{CCA} , V _{CCB}	Supply Voltage Range	-0.5 to +4.6	V
V _I	Input Voltage Range	-0.5 to +4.6	V
V _O	Voltage Applied to Output in High Impedance or I _{OFF} State	-0.5 to +4.6	V
V _O	Voltage Applied to Output in High or Low State	-0.5 to V _{CCO} +0.5	V
I _{IK}	Input Clamp Current V _I < 0	-50	mA
I _{OK}	Output Clamp Current	-50	mA
I _O	Continuous Output Current	±50	mA
—	Continuous Current Through V _{CCA} or GND	±100	mA
T _J	Operating Junction Temperature	+150	°C
T _{STG}	Storage Temperature	-65 to +150	°C

Note: 5. Stresses greater than those listed under *Absolute Maximum Ratings* can cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under *Recommended Operating Conditions* is not implied. Exposure to *Absolute Maximum Ratings* for extended periods can affect device reliability.

Recommended Operating Condition (Notes 6, 7 & 8) (@T_A = +25°C, unless otherwise specified.)

Symbol	Parameter	V _{CCI}	V _{CCO}	Min	Max	Unit
V _{CCA}	Operating Voltage	—	—	0.8	3.6	V
V _{CCB}	Operating Voltage	—	—	0.8	3.6	V
I _{OH}	High-Level Output Current Data Input, DIRn, $\overline{\text{OE}}$ Input	—	1.1V	—	-3	mA
		—	1.4V to 1.6V	—	-6	
		—	1.65V to 1.95V	—	-8	
		—	2.3V to 2.7V	—	-9	
		—	3V to 3.6V	—	-12	
I _{OL}	Low-Level Output Current Data Input, DIRn, $\overline{\text{OE}}$ Input	—	1.1V	—	3	mA
		—	1.4V to 1.6V	—	6	
		—	1.65V to 1.95V	—	8	
		—	2.3V to 2.7V	—	9	
		—	3V to 3.6V	—	12	
V _I	Input Voltage			0	3.6	V
V _O	Output Voltage	Active State		0	V _{CCO}	V
		Tri-State		0	3.6	V
T _A	Operating Free-Air Temperature			-40	+125	°C

Notes: 6. V_{CCI} is the V_{CC} associated with the input port.
7. V_{CCO} is the V_{CC} associated with the output port.
8. All unused data inputs of the device must be held at V_{CCI} or GND to ensure proper device operation.

Electrical Characteristics (Notes 6, 7, 8, 9 & 10) (@T_A = +40°C to +125°C, unless otherwise specified.)

Symbol	Parameter	Test Conditions	V _{CCI}	V _{CCO}	T _A = +25°C			T _A = -40°C to +85°C		T _A = -40°C to +125°C		Unit
					Min	Typ	Max	Min	Max	Min	Max	
V _{IH}	High-Level Input Voltage	Data Input, DIRn, $\overline{\text{OE}}$ Input	0.8V	—	0.70V _{CCI}	—	—	0.70V _{CCI}	—	0.70V _{CCI}	—	V
			1.1V to 1.95V	—	0.65V _{CCI}	—	—	0.65V _{CCI}	—	0.65V _{CCI}	—	
			1.95V to 2.7V	—	1.6	—	—	1.6	—	1.6	—	
			2.7V to 3.6V	—	2	—	—	2	—	2	—	
V _{IL}	Low-Level Input Voltage	Data Input, DIRn, $\overline{\text{OE}}$ Input	0.8V	—	—	—	0.3V _{CCI}	—	0.3V _{CCI}	—	0.3V _{CCI}	V
			1.1V to 1.95V	—	—	—	0.35V _{CCI}	—	0.35V _{CCI}	—	0.35V _{CCI}	
			1.95V to 2.7V	—	—	—	0.7	—	0.7	—	0.7	
			2.7V to 3.6V	—	—	—	0.8	—	0.8	—	0.8	
V _{OH}	High-Level Output Voltage	I _{OH} = -0.1mA	0.8V-3.6V	0.8V-3.6V	V _{CCO} - 0.1	—	—	V _{CCO} - 0.1	—	V _{CCO} - 0.1	—	V
		I _{OH} = -3mA	1.1V	1.1V	0.95	—	—	0.85	—	0.85	—	
		I _{OH} = -6mA	1.4V	1.4V	1.05	—	—	1.05	—	1.05	—	
		I _{OH} = -8mA	1.65V	1.65V	1.2	—	—	1.2	—	1.2	—	
		I _{OH} = -9mA	2.3V	2.3V	1.75	—	—	1.75	—	1.75	—	
		I _{OH} = -12mA	3V	3V	2.3	—	—	2.3	—	2.3	—	
V _{OL}	Low-Level Output Voltage	I _{OL} = 0.1mA	0.8V-3.6V	0.8V-3.6V	—	—	0.1	—	0.1	—	0.1	V
		I _{OL} = 3mA	1.1V	1.1V	—	—	0.25	—	0.25	—	0.27	
		I _{OL} = 6mA	1.4V	1.4V	—	—	0.35	—	0.35	—	0.35	
		I _{OL} = 8mA	1.65V	1.65V	—	—	0.45	—	0.45	—	0.45	
		I _{OL} = 9mA	2.3V	2.3V	—	—	0.55	—	0.55	—	0.55	
		I _{OL} = 12mA	3V	3V	—	—	0.7	—	0.7	—	0.7	

- Notes:
6. V_{CCI} is the V_{CC} associated with the input port.
 7. V_{CCO} is the V_{CC} associated with the output port.
 8. All unused data inputs of the device must be held at V_{CCI} or GND to ensure proper device operation.
 9. For V_{CCI} values not specified in the data sheet, V_{IH} min = V_{CCI} × 0.7V, V_{IL} max = V_{CCI} × 0.3V.
 10. For $\overline{\text{OE}}$ and DIR V_{CCI} values not specified in the data sheet, V_{IH} min = V_{CCA} × 0.7V, V_{IL} max = V_{CCA} × 0.3V.

Electrical Characteristics (Notes 6, 7, 8, 9 & 10) (@T_A = +40°C to +125°C, unless otherwise specified.) (continued)

Symbol	Parameter	Test Conditions		V _{CCI}	V _{CCO}	T _A = +25°C			T _A = -40°C to +85°C		T _A = -40°C to +125°C		Unit
						Min	Typ	Max	Min	Max	Min	Max	
I _I	Input Current	V _I = V _{CCA} or GND		0.8V-3.6V	0.8V-3.6V	—	—	±0.25	—	±1	—	±1	μA
I _{OFF}	Off-State Current	A or B Port	V _I or V _O = 0 to 3.6V	0	0.8V-3.6V	—	—	±1	—	±3	—	±10	μA
				0.8V-3.6V	0	—	—	±1	—	±3	—	±10	μA
I _{OZ}	High-Z State Current	A or B Port	V _I or V _O = 0 to 3.6V	3.6V	3.6V	—	—	±1	—	±2	—	±5	μA
		A Port		3.6V	0	—	—	±1	—	±2	—	±5	μA
		B Port		0	3.6V	—	—	±1	—	±2	—	±5	μA
I _{CCA}	Supply Current	V _I = V _{CCI} or GND I _O = 0		0.8V-3.6V	0.8V-3.6V	—	—	±1	—	±10	—	±35	μA
				0.8V-1.1V	0.8V-1.1V	—	—	±1	—	±8	—	±25	
				0-3.6V	0	—	—	±1	—	±10	—	±35	
				0	0-3.6V	—	—	±1	—	±1	—	±1	
I _{CCB}	Supply Current	V _I = V _{CCI} or GND I _O = 0		0.8V-3.6V	0.8V-3.6V	—	—	±1	—	±10	—	±35	μA
				0.8V-1.1V	0.8V-1.1V	—	—	±1	—	±8	—	±25	
				0-3.6V	0	—	—	±1	—	±1	—	±1	
				0	0-3.6V	—	—	±1	—	±10	—	±35	
I _{CCA} + I _{CCB}	Supply Current	V _I = V _{CCI} or GND I _O = 0		0.8V-3.6V	0.8V-3.6V	—	—	±2	—	±20	—	±70	μA
C _I	Control Input Capacitance	DIRn, $\overline{\text{OE}}$ Input	V _I = 3.3V or GND	3.3V	3.3V	—	3.5	—	—	4.5	—	4.5	pF
C _O	Input/Output Capacitance	A or B	V _O = 3.3V or GND	3.3V	3.3V	—	6	—	—	7	—	7	pF

- Notes:
6. V_{CCI} is the V_{CC} associated with the input port.
 7. V_{CCO} is the V_{CC} associated with the output port.
 8. All unused data inputs of the device must be held at V_{CCI} or GND to ensure proper device operation.
 9. For V_{CCI} values not specified in the data sheet, V_{IH} min = V_{CCI} × 0.7V, V_{IL} max = V_{CCI} × 0.3V.
 10. For $\overline{\text{OE}}$ and DIR V_{CCI} values not specified in the data sheet, V_{IH} min = V_{CCA} × 0.7V, V_{IL} max = V_{CCA} × 0.3V.

Package Characteristics

Symbol	Parameter	Package	Test Conditions	Min	Typ	Max	Unit
θ _{JA}	Thermal Resistance Junction-to-Ambient	TSSOP-16	(Note 11)	—	100	—	°C/W
θ _{JC}	Thermal Resistance Junction-to-Case	TSSOP-16	(Note 11)	—	43	—	°C/W

Note: 11. Test condition for the package type: device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

Switching Characteristics (@T_A = -40°C to +125°C, unless otherwise specified.)

V_{CCA} = 0.8V

Parameter	Test Conditions	Direction	V _{CCB}						Unit
			0.8V	1.2V ± 0.1V	1.5V ± 0.1V	1.8V ± 0.15V	2.5V ± 0.2V	3.3V ± 0.3V	
			Typ	Typ	Typ	Typ	Typ	Typ	
tpd	Propagation Delay	An to Bn	11.0	7.3	6.5	6.2	6.5	7.0	ns
		Bn to An	11.0	10.0	12.4	12.3	12.1	12.0	
ten	Enable Time	$\overline{\text{OE}}$ to An	18.2	18.2	18.2	18.2	18.2	18.2	
		$\overline{\text{OE}}$ to Bn	19.2	12.7	11.4	10.9	10.7	11.1	
tdis	Disable Time	$\overline{\text{OE}}$ to An	14.3	14.3	14.3	14.3	14.3	14.3	
		$\overline{\text{OE}}$ to Bn	12.6	9.9	9.0	9.4	9.0	9.7	

V_{CCB} = 0.8V

Parameter	Test Conditions	Direction	V _{CCA}						Unit
			0.8V	1.2V ± 0.1V	1.5V ± 0.1V	1.8V ± 0.15V	2.5V ± 0.2V	3.3V ± 0.3V	
			Typ	Typ	Typ	Typ	Typ	Typ	
tpd	Propagation Delay	An to Bn	14.5	12.7	12.4	12.3	12.1	12.0	ns
		Bn to An	14.5	7.3	6.5	6.2	5.9	6.0	
ten	Enable Time	$\overline{\text{OE}}$ to An	18.2	13.0	12.1	9.6	7.3	6.4	
		$\overline{\text{OE}}$ to Bn	19.2	15.8	15.3	15.0	15.0	14.8	
tdis	Disable Time	$\overline{\text{OE}}$ to An	14.3	9.6	8.5	7.5	7.7	8.6	
		$\overline{\text{OE}}$ to Bn	17.0	13.8	13.4	13.1	12.9	12.7	

Switching Characteristics (@T_A = -40°C to +125°C, unless otherwise specified.) (continued)

V_{CCA} = 1.2V ± 0.1V

Parameter	Test Conditions	Direction	V _{CCB}															Unit
			1.2V ± 0.1V			1.5V ± 0.1V			1.8V ± 0.15V			2.5V ± 0.2V			3.3V ± 0.3V			
			Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	
tpd	Propagation Delay	An to Bn	0.5	3	8.3	0.5	2.9	6.3	0.5	2.1	5.5	0.5	2.1	4.6	0.5	2.3	4.6	ns
		Bn to An	0.5	3	8.3	0.5	3.1	7.8	0.5	2.8	7.7	0.5	2.1	7.4	0.5	2.2	7.3	
ten	Enable Time	OE to An	1.8	3.9	11.7	1.8	4.2	11.7	1.8	4.3	11.7	1.8	3.5	11.7	1.8	3.5	11.7	
		OE to Bn	1.9	4	13.0	1.9	2.5	9.5	1.9	3.3	8.2	1.4	3.6	7.9	1.2	4.5	7.7	
tdis	Disable Time	OE to An	1.4	3.2	11.5	1.4	2.3	11.5	1.4	3	11.5	1.4	3	11.5	1.4	3.1	11.5	
		OE to Bn	1.1	3	10.0	1.1	2.2	8.1	1.1	2.9	7.5	1.0	2.5	6.3	1.0	5.5	6.3	

V_{CCA} = 1.5V ± 0.1V

Parameter	Test Conditions	Direction	V _{CCB}										Unit
			1.2V ± 0.1 V		1.5V ± 0.1V		1.8V ± 0.15V		2.5V ± 0.2V		3.3V ± 0.3V		
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
tpd	Propagation Delay	An to Bn	0.3	7.8	0.3	6.3	0.3	5.2	0.4	4.2	0.4	4.2	ns
		Bn to An	0.7	6.3	0.7	6.3	0.5	5.9	0.4	5.7	0.3	5.6	
ten	Enable Time	$\overline{\text{OE}}$ to An	1.8	10.5	1.4	9.6	1.1	9.5	0.7	9.7	0.4	9.4	
		$\overline{\text{OE}}$ to Bn	1.9	11.0	1.4	9.6	1.1	7.7	0.9	7.1	0.9	6.9	
tdis	Disable Time	$\overline{\text{OE}}$ to An	1.1	10.2	1.8	10.2	1.5	10.2	1.3	10.2	1.6	10.2	
		$\overline{\text{OE}}$ to Bn	1.4	10.4	1.9	10.3	1.9	9.1	1.4	7.4	1.2	7.6	

V_{CCA} = 1.8V ± 0.15V

Parameter	Test Conditions	Direction	V _{CCB}										Unit
			1.2V ± 0.1V		1.5V ± 0.1V		1.8V ± 0.15V		2.5V ± 0.2V		3.3V ± 0.3 V		
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
tpd	Propagation Delay	An to Bn	0.1	7.7	0.1	5.9	0.1	4.9	0.1	3.9	0.3	3.9	ns
		Bn to An	0.6	5.5	0.6	5.3	0.5	4.9	0.3	4.6	0.3	4.5	
ten	Enable Time	OE to An	1.8	9.0	1	8.6	1	7.3	0.6	7.3	0.4	7.2	
		OE to Bn	1.7	10.5	1.2	9.2	1	7.4	0.8	6.7	0.8	6.5	
tdis	Disable Time	OE to An	1.0	8.9	1.6	8.6	1.8	8.7	1.3	8.7	1.6	8.7	
		OE to Bn	1.2	10.0	1.7	9.9	1.6	8.7	1.2	7.4	1	6.9	

Switching Characteristics (@T_A = -40°C to +125°C, unless otherwise specified.) (continued)

V_{CCA} = 2.5V ± 0.2V

Parameter	Test Conditions	Direction	V _{CCB}										Unit
			1.2V ± 0.1V		1.5V ± 0.1V		1.8V ± 0.15V		2.5V ± 0.2V		3.3V ± 0.3V		
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
tpd	Propagation Delay	An to Bn	0.1	7.4	0.1	5.7	0.1	4.6	0.2	3.9	0.1	3.6	ns
		Bn to An	0.6	4.6	0.6	4.2	0.4	4.1	0.2	3.9	0.2	3.3	
ten	Enable Time	$\overline{\text{OE}}$ to An	1.0	8.0	0.7	6.7	0.7	6.5	0.6	5.9	0.4	4.8	
		$\overline{\text{OE}}$ to Bn	1.5	9.8	0.9	8.8	0.8	7.0	0.6	5.8	0.6	4	
tdis	Disable Time	$\overline{\text{OE}}$ to An	0.7	9.0	1	8.4	1	8.4	1	6.2	1	6.6	
		$\overline{\text{OE}}$ to Bn	0.9	9.9	1.5	9.4	1.3	8.2	1.1	6.2	0.9	5.2	

V_{CCA} = 3.3V ± 0.3V

Parameter	Test Conditions	Direction	V _{CCB}										Unit
			1.2V ± 0.1V		1.5V ± 0.1V		1.8V ± 0.15V		2.5V ± 0.2V		3.3V ± 0.3V		
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
tpd	Propagation Delay	An to Bn	0.1	7.3	0.1	5.6	0.1	4.5	0.1	3.7	0.1	2.9	ns
		Bn to An	0.6	4.6	0.6	4.2	0.4	3.9	0.2	3.7	0.1	2.8	
ten	Enable Time	$\overline{\text{OE}}$ to An	0.7	9.2	0.6	8.7	0.6	5.9	0.6	5.6	0.4	3.8	
		$\overline{\text{OE}}$ to Bn	1.4	9.5	0.8	8.7	0.6	6.8	0.5	5.7	0.5	3.8	
tdis	Disable Time	$\overline{\text{OE}}$ to An	0.6	9.5	0.7	9.3	0.7	8.3	0.7	5.6	0.7	6.6	
		$\overline{\text{OE}}$ to Bn	0.8	9.5	1.4	9.3	1.2	8.1	1	6.4	0.8	6.2	

Operating Characteristics (@T_A = +25°C, unless otherwise specified.)

Parameter	Test Conditions			0.8V	1.2V	1.5V	1.8V	2.5V	3.3V	Unit
CpdA	A to B	Enabled	C _L = 0	0.2	0.2	0.2	0.2	0.3	0.4	pF
		Disabled	R _L = Open	0.2	0.2	0.2	0.2	0.3	0.4	
	B to A	Enabled	f = 10MHz	9.5	9.7	9.8	9.9	10.7	11.9	
		Disabled	tr = tf = 1ns	0.6	0.6	0.6	0.6	0.7	0.7	
CpdB	A to B	Enabled	C _L = 0	9.5	9.7	9.8	9.9	10.7	11.9	
		Disabled	R _L = Open	0.6	0.6	0.6	0.6	0.7	0.7	
	B to A	Enabled	f = 10MHz	0.2	0.2	0.2	0.2	0.3	0.4	
		Disabled	tr = tf = 1ns	0.2	0.2	0.2	0.2	0.3	0.4	

Parameter Measurement Information

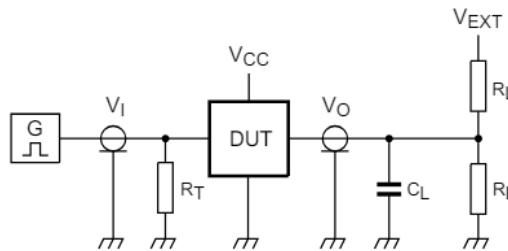
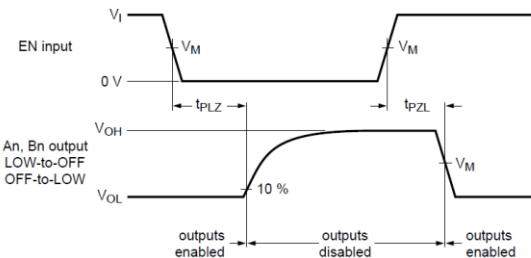
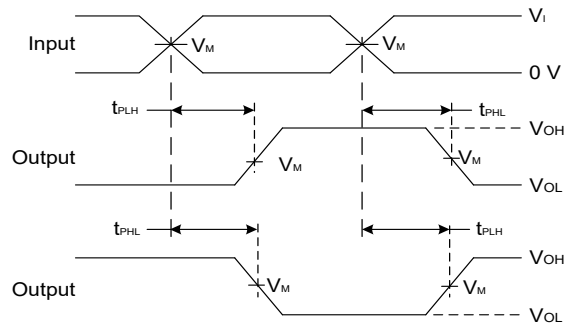
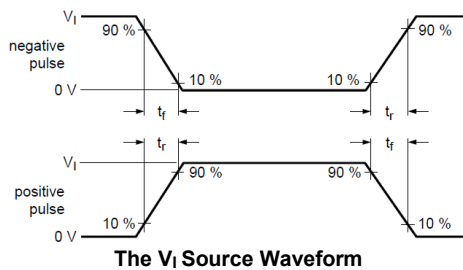
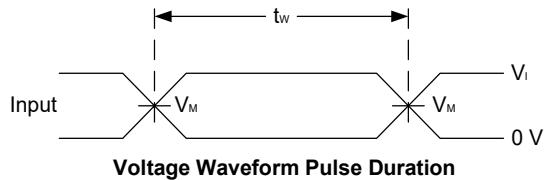


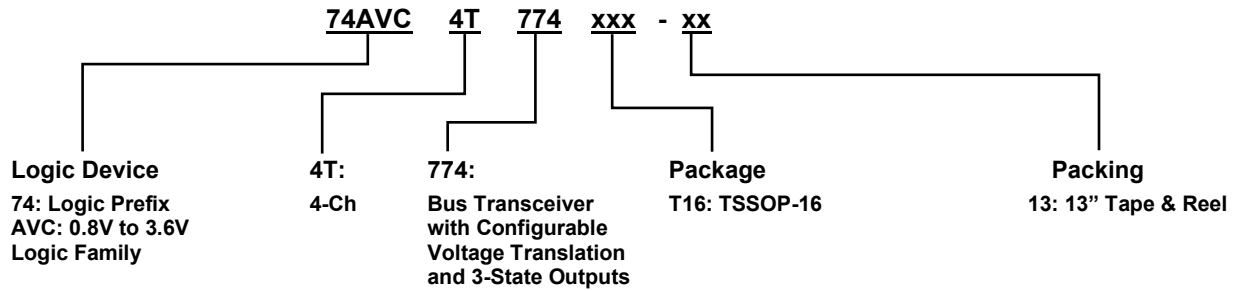
Figure 1. Load Circuit and Voltage Waveforms

Parameter	S1
tpd	Open
ten/ tdis	2*VCCO
ten/ tdis	GND

V _{CC}	R _L	C _L	V _{TP}
0.8V-1.6V	2kΩ	15pF	0.1V
1.65V-2.7V	2kΩ	15pF	0.15V
3.0V-3.6V	2kΩ	15pF	0.3V

- Notes:
- 12. Includes test lead and test apparatus capacitance.
 - 13. $f = 1\text{MHz}$, $\Delta V/\Delta t < 1\text{ns/V}$.
 - 14. t_{PLH} and t_{PHL} are the same as t_{PD} .
 - 15. t_r , $t_f < 1\text{ns}$.

Ordering Information (Notes 16, 17 & 18)

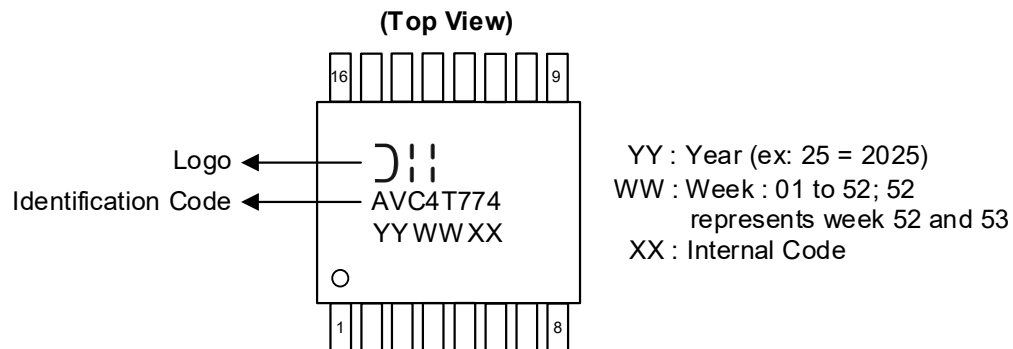


Orderable Part Number	Package Code	Package	Packing	
			Qty.	Carrier
74AVC4T774T16-13	T16	TSSOP-16	2500	Tape & Reel

Notes: 16. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.
 17. Pad layout as shown in Diodes Incorporated's package outline PDFs, which can be found on our website at <http://www.diodes.com/package-outlines.html>.
 18. The taping orientation is located on our website at <https://www.diodes.com/assets/Packaging-Support-Docs/AP02007.pdf>.

Marking Information

TSSOP-16

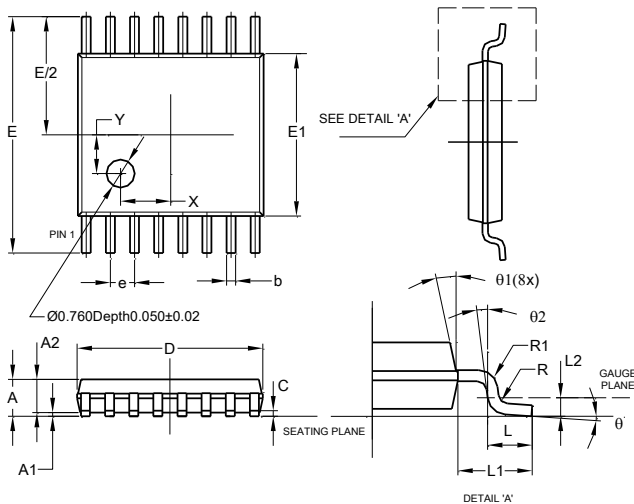


Orderable Part Number	Package	Identification Code
74AVC4T774T16-13	TSSOP-16	AVC4T774

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

TSSOP-16

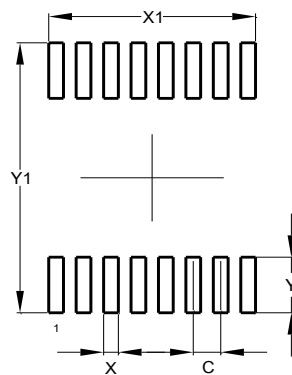


TSSOP-16			
Dim	Min	Max	Typ
A	-	1.08	-
A1	0.05	0.15	-
A2	0.80	0.93	-
b	0.19	0.30	-
c	0.09	0.20	-
D	4.90	5.10	-
E	6.40 BSC		
E1	4.30	4.50	-
e	0.65 BSC		
L	0.45	0.75	-
L1	1.00 REF		
L2	0.25 BSC		
R / R1	0.09	-	-
X	-	-	1.350
Y	-	-	1.050
θ	0°	8°	-
θ1	5°	15°	-
θ2	0°	-	-
All Dimensions in mm			

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

TSSOP-16



Dimensions	Value (in mm)
C	0.650
X	0.350
X1	4.900
Y	1.400
Y1	6.800

Mechanical Data

TSSOP-16

- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - Mate Tin Plated Leads, Solderable per MIL-STD-202, Method 208 ③
- Weight: 0.055 grams (Approximate)

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