

## Description

The Advanced Ultra Low Power (AUP) CMOS logic family is designed for low power and extended battery life in portable applications.

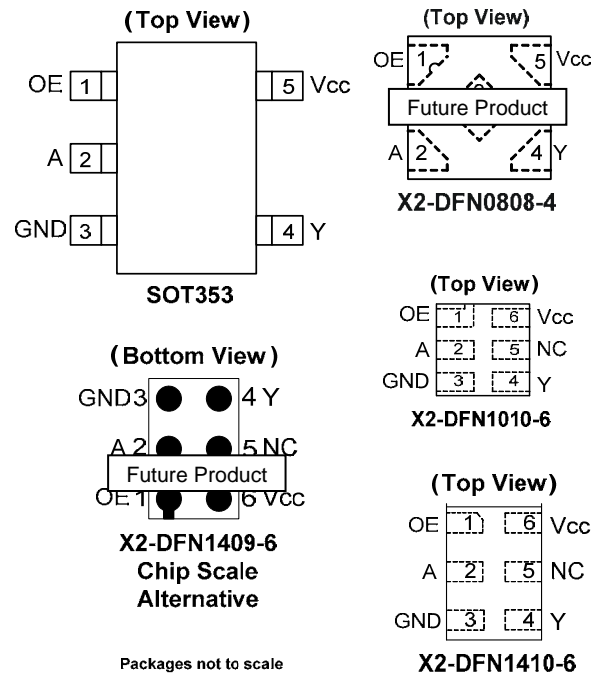
The 74AUP1G126 is a single non-inverting buffer/bus driver designed for operation over a power supply range of 0.8V to 3.6V. The device has a 3-state output that enters a high impedance state when a LOW-level is applied to the output enable (OE) pin. The device is fully specified for partial power down applications using I<sub>OFF</sub>. The I<sub>OFF</sub> circuitry disables the output preventing damaging current backflow when the device is powered down

## Features

- Advanced Ultra Low Power (AUP) CMOS
- Supply Voltage Range from 0.8V to 3.6V
- ±4mA Output Drive at 3.0V
- Low Static power consumption
  - I<sub>CC</sub> < 0.9µA
- Low Dynamic Power Consumption
  - C<sub>PD</sub> = 6.3pF (Typical at 3.6V)
- Schmitt Trigger Action at All Inputs Make the Circuit Tolerant for Slower Input Rise and Fall Time. The hysteresis is typically 250mV at V<sub>CC</sub> = 3.0V
- I<sub>OFF</sub> Supports Partial-Power-Down Mode Operation
- ESD Protection Exceeds JESD 22
  - 2000-V Human Body Model (A114-A)
  - Exceeds 1000-V Charged Device Model (C101C)
- Latch-Up Exceeds 100mA per JESD 78, Class II
- Leadless packages named per JESD30E
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.
  2. See [http://www.diodes.com/quality/lead\\_free.html](http://www.diodes.com/quality/lead_free.html) 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 Assignments



## Applications

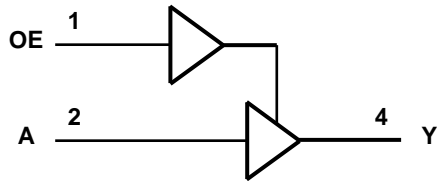
- Suited for battery and low power needs
- Wide array of products such as:
  - Tablets, E-readers
  - Cell Phones, Personal Navigation / GPS
  - MP3 players, Cameras, Video Recorders
  - PCs ultrabooks, notebooks, netbooks,
  - Computer peripherals, hard drives, CD/DVD ROM
  - TV, DVD, DVR, set top box

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## Pin Descriptions

Pin Name	Function
OE	Output Enable
A	Data Input
GND	Ground
Y	Data Output
V <sub>CC</sub>	Supply Voltage

## Logic Diagram



## Function Table

Inputs		Output
OE	A	Y
H	H	H
H	L	L
L	X	Z

**Absolute Maximum Ratings** (Note 4) (@ $T_A = +25^\circ\text{C}$ , unless otherwise specified.)

Symbol	Description	Rating	Unit
ESD HBM	Human Body Model ESD Protection	2	kV
ESD CDM	Charged Device Model ESD Protection	1	kV
$V_{CC}$	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 or low state	-0.5 to $V_{CC} + 0.5$	V
$I_{IK}$	Input Clamp Current $V_I < 0$	50	mA
$I_{OK}$	Output Clamp Current ( $V_O < 0$ )	50	mA
$I_O$	Continuous Output current ( $V_O = 0$ to $V_{CC}$ )	$\pm 20$	mA
$I_{CC}$	Continuous Current Through $V_{CC}$	50	mA
$I_{GND}$	Continuous Current Through GND	-50	mA
$T_J$	Operating Junction Temperature	-40 to +150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-65 to +150	$^\circ\text{C}$

Note: 4. Stresses beyond the absolute maximum may result in immediate failure or reduced reliability. These are stress values and device operation should be within recommend values.

**Recommended Operating Conditions** (Note 5) (@ $T_A = +25^\circ\text{C}$ , unless otherwise specified.)

Symbol	Parameter		Min	Max	Unit
$V_{CC}$	Operating Voltage		0.8	3.6	V
$V_I$	Input Voltage		0	3.6	V
$V_O$	Output Voltage		0	$V_{CC}$	V
$I_{OH}$	High-Level Output Current	$V_{CC} = 0.8\text{V}$		-20	$\mu\text{A}$
		$V_{CC} = 1.1\text{V}$		-1.1	mA
		$V_{CC} = 1.4\text{V}$		-1.7	
		$V_{CC} = 1.65\text{V}$		-1.9	
		$V_{CC} = 2.3\text{V}$		-3.1	
		$V_{CC} = 3.0\text{V}$		-4	
$I_{OL}$	Low-Level Output Current	$V_{CC} = 0.8\text{V}$		20	$\mu\text{A}$
		$V_{CC} = 1.1\text{V}$		1.1	mA
		$V_{CC} = 1.4\text{V}$		1.7	
		$V_{CC} = 1.65\text{V}$		1.9	
		$V_{CC} = 2.3\text{V}$		3.1	
		$V_{CC} = 3.0\text{V}$		4	
$\Delta t/\Delta V$	Input Transition Rise or Fall Rate	$V_{CC} = 0.8\text{V}$ to $3.6\text{V}$		200	ns/V
$T_A$	Operating Free-Air Temperature		-40	+125	$^\circ\text{C}$

Note: 5. Unused inputs should be held at  $V_{CC}$  or Ground.

**Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Symbol	Parameter	Test Conditions	V <sub>CC</sub>	T <sub>A</sub> = +25°C		T <sub>A</sub> = -40°C to +85°C		Unit
				Min	Max	Min	Max	
V <sub>IH</sub>	High-Level Input Voltage		0.8V to 1.65V	0.80 X V <sub>CC</sub>		0.80 X V <sub>CC</sub>		V
			1.65V to 1.95V	0.65 X V <sub>CC</sub>		0.65 X V <sub>CC</sub>		
			2.3V to 2.7V	1.6		1.6		
			3.0V to 3.6V	2.0		2.0		
V <sub>IL</sub>	Low-Level Input Voltage		0.8V to 1.65V		0.30 X V <sub>CC</sub>		0.30 X V <sub>CC</sub>	V
			1.65V to 1.95V		0.35 X V <sub>CC</sub>		0.35 X V <sub>CC</sub>	
			2.3V to 2.7V		0.7		0.7	
			3.0V to 3.6V		0.9		0.9	
V <sub>OH</sub>	High-Level Output Voltage	I <sub>OH</sub> = -20μA	0.8V to 3.6V	V <sub>CC</sub> - 0.1		V <sub>CC</sub> - 0.1		V
		I <sub>OH</sub> = -1.1mA	1.1V	0.75 X V <sub>CC</sub>		0.7 X V <sub>CC</sub>		
		I <sub>OH</sub> = -1.7mA	1.4V	1.11		1.03		
		I <sub>OH</sub> = -1.9mA	1.65V	1.32		1.3		
		I <sub>OH</sub> = -2.3mA	2.3V	2.05		1.97		
		I <sub>OH</sub> = -3.1mA		1.9		1.85		
		I <sub>OH</sub> = -2.7mA	3V	2.72		2.67		
		I <sub>OH</sub> = -4mA		2.6		2.55		
V <sub>OL</sub>	Low-Level Output Voltage	I <sub>OL</sub> = 20μA	0.8V to 3.6V		0.1		0.1	V
		I <sub>OL</sub> = 1.1mA	1.1V		0.3 X V <sub>CC</sub>		0.3 X V <sub>CC</sub>	
		I <sub>OL</sub> = 1.7mA	1.4V		0.31		0.37	
		I <sub>OL</sub> = 1.9mA	1.65V		0.31		0.35	
		I <sub>OL</sub> = 2.3mA	2.3V		0.31		0.33	
		I <sub>OL</sub> = 3.1mA			0.44		0.45	
		I <sub>OL</sub> = 2.7mA	3V		0.31		0.33	
		I <sub>OL</sub> = 4mA			0.44		0.45	
I <sub>I</sub>	Input Current	A or B Input V <sub>I</sub> = GND to 3.6V	0 to 3.6V		±0.1		±0.5	μA
I <sub>OFF</sub>	Power Down Leakage Current	V <sub>I</sub> or V <sub>O</sub> = 0V to 3.6V	0		±0.2		±0.5	μA
I <sub>OZ</sub>	Z State Leakage Current	V <sub>O</sub> = 3.6V V <sub>I</sub> = 3.6V	3.6V		±0.2		±0.5	μA
ΔI <sub>OFF</sub>	Delta Power Down Leakage Current	V <sub>I</sub> or V <sub>O</sub> = 0V to 3.6V	0 to 0.2V		0.2		0.6	μA
I <sub>CC</sub>	Supply Current	V <sub>I</sub> = GND or V <sub>CC</sub> , I <sub>O</sub> = 0	0.8V to 3.6V		0.5		0.9	μA
ΔI <sub>CC</sub>	Additional Supply Current	Data input at V <sub>CC</sub> -0.6V OE = GND I <sub>O</sub> = 0A	3.3V		40		50	μA
		OE input at V <sub>CC</sub> -0.6V Data Input = GND or V <sub>CC</sub> , I <sub>O</sub> = 0A	3.3V		110		120	μA
		OE input at GND Data Input = GND to 3.6V, I <sub>O</sub> = 0A	0.8V to 3.6V		1		1	μA

**Electrical Characteristics** (Note 4) (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Symbol	Parameter	Test Conditions	V <sub>CC</sub>	T <sub>A</sub> = -40°C to +125°C		Unit
				Min	Max	
V <sub>IH</sub>	High-Level Input Voltage		0.8V to 1.65V	0.80 X V <sub>CC</sub>		V
			1.65V to 1.95V	0.70 X V <sub>CC</sub>		
			2.3V to 2.7V	1.6		
			3.0V to 3.6V	2.0		
V <sub>IL</sub>	Low-Level Input Voltage		0.8V to 1.65V		0.25X V <sub>CC</sub>	V
			1.65V to 1.95V		0.35 X V <sub>CC</sub>	
			2.3V to 2.7V		0.7	
			3.0V to 3.6V		0.9	
V <sub>OH</sub>	High-Level Output Voltage	I <sub>OH</sub> = -20μA	0.8V to 3.6V	V <sub>CC</sub> - 0.11		V
		I <sub>OH</sub> = -1.1mA	1.1V	0.6 X V <sub>CC</sub>		
		I <sub>OH</sub> = -1.7mA	1.4V	0.93		
		I <sub>OH</sub> = -1.9mA	1.65V	1.17		
		I <sub>OH</sub> = -2.3mA	2.3V	1.77		
		I <sub>OH</sub> = -3.1mA		1.67		
		I <sub>OH</sub> = -2.7mA	3V	2.40		
		I <sub>OH</sub> = -4mA		2.30		
V <sub>OL</sub>	Low-Level Output Voltage	I <sub>OL</sub> = 20μA	0.8V to 3.6V		0.11	V
		I <sub>OL</sub> = 1.1mA	1.1V		0.3 X V <sub>CC</sub>	
		I <sub>OL</sub> = 1.7mA	1.4V		0.41	
		I <sub>OL</sub> = 1.9mA	1.65V		0.39	
		I <sub>OL</sub> = 2.3mA	2.3V		0.36	
		I <sub>OL</sub> = 3.1mA			0.50	
		I <sub>OL</sub> = 2.7mA	3V		0.36	
		I <sub>OL</sub> = 4mA			0.50	
I <sub>I</sub>	Input Current	A or B Input V <sub>I</sub> = GND to 3.6V	0 to 3.6V		±0.75	μA
I <sub>OFF</sub>	Power Down Leakage Current	V <sub>I</sub> or V <sub>O</sub> = 0V to 3.6V	0		±3.5	μA
I <sub>OZ</sub>	Z State Leakage Current	V <sub>O</sub> = 3.6V V <sub>I</sub> = 3.6V	3.6V		±1.5	μA
ΔI <sub>OFF</sub>	Delta Power Down Leakage Current	V <sub>I</sub> or V <sub>O</sub> = 0V to 3.6V	0V to 0.2V		±2.5	μA
I <sub>CC</sub>	Supply Current	V <sub>I</sub> = GND or V <sub>CC</sub> , I <sub>O</sub> = 0	0.8V to 3.6V		3.0	μA
ΔI <sub>CC</sub>	Additional Supply Current	Data input at V <sub>CC</sub> -0.6V OE = GND I <sub>O</sub> = 0A	3.3V		75	μA
		OE input at V <sub>CC</sub> -0.6V Data Input = GND or V <sub>CC</sub> , I <sub>O</sub> = 0A	3.3V		180	μA
		OE input at GND Data Input = GND to 3.6V, I <sub>O</sub> = 0A	0.8V to 3.6V		1	μA

## Switching Characteristics

 $C_L = 5\text{pF}$  see Figure 1

Parameter	From Input	TO OUTPUT	V <sub>CC</sub>	T <sub>A</sub> = +25°C			T <sub>A</sub> = -40°C to +85°C		T <sub>A</sub> = -40°C to +125°C		Unit
				Min	Typ	Max	Min	Max	Min	Max	
t <sub>pd</sub>	A	Y	0.8V		20.6						ns
			1.2V ± 0.1V	2.5	5.5	10.5	2.5	11.7	2.5	12.9	
			1.5V ± 0.1V	2.0	3.9	6.1	2.0	7.3	2.0	8.1	
			1.8V ± 0.15V	1.9	3.2	4.8	1.7	6.1	1.7	6.7	
			2.5V ± 0.2V	1.6	2.6	3.6	1.4	4.3	1.4	4.9	
			3.3V ± 0.3V	1.4	2.4	3.1	1.2	3.9	1.2	4.4	
t <sub>en</sub>	OE	Y	0.8V		71.6						ns
			1.2V ± 0.1V	2.8	6.2	12.4	2.6	13.6	2.6	13.6	
			1.5V ± 0.1V	2.1	4.2	6.9	2.1	7.4	2.1	7.7	
			1.8V ± 0.15V	1.7	3.3	5.3	1.7	5.9	1.7	6.2	
			2.5V ± 0.2V	1.4	2.4	3.6	1.4	3.8	1.4	4.1	
			3.3V ± 0.3V	1.3	2.0	2.9	1.2	3.2	1.2	3.4	
t <sub>dis</sub>	OE	Y	0.8V		10.3						ns
			1.2V ± 0.1V	2.6	4.2	8.2	2.6	8.9	2.6	8.9	
			1.5V ± 0.1V	2.1	3.2	6.7	2.1	7.0	2.1	7.0	
			1.8V ± 0.15V	1.7	3.1	6.2	1.7	6.5	1.7	6.5	
			2.5V ± 0.2V	1.3	2.9	5.7	1.3	5.8	1.3	5.8	
			3.3V ± 0.3V	1.2	2.8	4.5	1.2	4.7	1.2	4.7	

 $C_L = 10\text{pF}$  see Figure 1

Parameter	From Input	TO OUTPUT	V <sub>CC</sub>	T <sub>A</sub> = +25°C			T <sub>A</sub> = -40°C to +85°C		T <sub>A</sub> = -40°C to +125°C		Unit
				Min	Typ	Max	Min	Max	Min	Max	
t <sub>pd</sub>	A	Y	0.8V		24.0						ns
			1.2V ± 0.1V	2.6	6.4	12.3	2.6	13.8	2.6	15.2	
			1.5V ± 0.1V	2.1	4.5	7.3	2.1	8.5	2.1	9.4	
			1.8V ± 0.15V	1.9	3.8	5.5	1.9	6.8	1.9	7.6	
			2.5V ± 0.2V	1.7	3.2	4.2	1.7	5.3	1.7	5.9	
			3.3V ± 0.3V	1.6	3.0	3.8	1.6	4.6	1.6	5.2	
t <sub>en</sub>	OE	Y	0.8V		75.3						ns
			1.2V ± 0.1V	3.0	7.1	14.1	3.0	15.4	3.0	15.4	
			1.5V ± 0.1V	2.1	4.8	8.0	2.1	8.3	2.1	8.6	
			1.8V ± 0.15V	1.7	3.9	5.9	1.7	6.5	1.7	6.8	
			2.5V ± 0.2V	1.4	2.9	4.2	1.4	4.5	1.4	4.8	
			3.3V ± 0.3V	1.3	2.6	3.6	1.3	3.8	1.3	4.0	
t <sub>dis</sub>	OE	Y	0.8V		12.2						ns
			1.2V ± 0.1V	3.3	7.9	10.1	3.3	11.1	3.3	11.1	
			1.5V ± 0.1V	2.1	7.0	9.3	2.1	10.1	2.1	10.1	
			1.8V ± 0.15V	1.7	6.3	8.7	1.7	9.1	1.7	9.1	
			2.5V ± 0.2V	1.4	4.9	7.6	1.4	7.8	1.4	7.8	
			3.3V ± 0.3V	1.3	4.1	5.7	1.3	5.8	1.3	5.8	

**Switching Characteristics** (cont.)

 $C_L=15\text{pF}$  see Figure 1

Parameter	From Input	TO OUTPUT	V <sub>CC</sub>	T <sub>A</sub> = +25°C			T <sub>A</sub> = -40°C to +85°C		T <sub>A</sub> = -40°C to +125°C		Unit
				Min	Typ	Max	Min	Max	Min	Max	
t <sub>pd</sub>	A	Y	0.8V		27.4						ns
			1.2V ± 0.1V	3.6	7.2	14.1	3.3	15.8	3.3	17.5	
			1.5V ± 0.1V	3.0	5.1	8.1	2.5	9.8	2.5	10.9	
			1.8V ± 0.15V	2.2	4.3	6.3	2.0	7.9	2.0	8.8	
			2.5V ± 0.2V	2.0	3.7	4.9	1.8	6.0	1.8	6.7	
			3.3V ± 0.3V	2.0	3.5	4.4	1.8	5.4	1.8	6.1	
t <sub>en</sub>	OE	Y	0.8V		79.2						ns
			1.2V ± 0.1V	3.6	7.8	15.8	3.3	17.1	3.3	17.1	
			1.5V ± 0.1V	3.0	5.4	8.8	2.9	9.4	2.9	9.7	
			1.8V ± 0.15V	2.1	4.3	6.7	2.0	7.3	2.0	7.7	
			2.5V ± 0.2V	1.8	3.4	4.8	1.7	5.2	1.7	5.6	
			3.3V ± 0.3V	1.6	3.1	4.3	1.5	4.5	1.5	4.7	
t <sub>dis</sub>	OE	Y	0.8V		14.9						ns
			1.2V ± 0.1V	3.7	9.0	12.7	3.7	13.0	3.7	13.0	
			1.5V ± 0.1V	2.5	8.1	11.5	2.5	12.0	2.5	12.0	
			1.8V ± 0.15V	2.0	7.9	10.1	2.0	10.4	2.0	10.4	
			2.5V ± 0.2V	1.7	7.7	9.7	1.7	9.9	1.7	9.9	
			3.3V ± 0.3V	1.5	7.2	9.0	1.5	9.3	1.5	9.3	

 $C_L=30\text{pF}$  see Figure 1

Parameter	From Input	TO OUTPUT	V <sub>CC</sub>	T <sub>A</sub> = +25°C			T <sub>A</sub> = -40°C to +85°C		T <sub>A</sub> = -40°C to +125°C		Unit
				Min	Typ	Max	Min	Max	Min	Max	
t <sub>pd</sub>	A	Y	0.8V		37.4						ns
			1.2V ± 0.1V	4.8	9.5	18.7	4.4	21.4	4.4	24.0	
			1.5V ± 0.1V	4.0	6.7	10.8	3.0	13.0	3.0	14.5	
			1.8V ± 0.15V	2.5	5.6	8.4	2.5	10.3	2.5	11.5	
			2.5V ± 0.2V	2.2	4.8	6.3	2.2	7.8	2.2	8.7	
			3.3V ± 0.3V	2.0	4.6	5.8	2.0	7.0	2.0	8.3	
t <sub>en</sub>	OE	Y	0.8V		90.6						ns
			1.2V ± 0.1V	4.7	10.0	20.4	4.3	22.0	4.3	22.0	
			1.5V ± 0.1V	3.5	6.9	11.3	3.5	12.0	3.5	12.5	
			1.8V ± 0.15V	2.6	5.6	8.6	3.2	9.5	3.2	10.1	
			2.5V ± 0.2V	2.3	4.5	6.3	2.9	6.8	2.9	7.3	
			3.3V ± 0.3V	2.2	4.2	5.8	2.7	6.4	2.7	6.7	
t <sub>dis</sub>	OE	Y	0.8V		51.6						ns
			1.2V ± 0.1V	4.7	12.8	15.0	4.7	15.5	4.7	15.5	
			1.5V ± 0.1V	3.0	11.8	13.5	3.0	13.9	3.0	13.9	
			1.8V ± 0.15V	2.6	10.8	12.7	2.6	13.2	2.6	12.7	
			2.5V ± 0.2V	2.3	10.1	12.0	2.3	12.5	2.3	12.5	
			3.3V ± 0.3V	2.2	9.0	11.5	2.2	12.0	2.2	12.0	

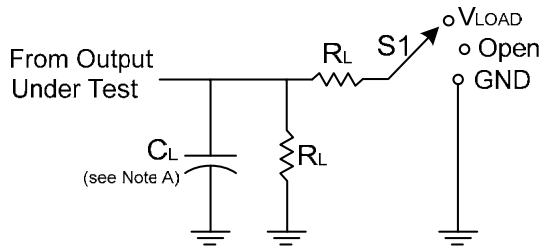
**Operating and Package Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Parameter		Test Conditions		V <sub>CC</sub>	Typ	Unit
C <sub>pd</sub>	Power Dissipation Capacitance	f = 1MHz No Load		0.8V	6.9	pF
				1.2V ± 0.1V	6.7	
				1.5V ± 0.1V	6.6	
				1.8V ± 0.15V	6.5	
				2.5V ± 0.2V	6.4	
				3.3V ± 0.3V	6.3	
C <sub>i</sub>	Input Capacitance	V <sub>i</sub> = V <sub>CC</sub> or GND		0V or 3.3V	1.5	pF
θ <sub>JA</sub>	Thermal Resistance Junction-to-Ambient	SOT353	(Note 6)		371	°C/W
		X2-DFN0808-4		430		
		X2-DFN1010-6		445		
		X2-DFN1409-6		470		
		X2-DFN1410-6		460		
θ <sub>JC</sub>	Thermal Resistance Junction-to-Case	SOT353	(Note 6)		143	°C/W
		X2-DFN0808-4		240		
		X2-DFN1010-6		250		
		X2-DFN1409-6		275		
		X2-DFN1410-6		265		

Note: 6. Test condition for , SOT353, X2-DFN0808-4., X2-DFN1010-6 X2-DFN1409-6 and X2-DFN1410-6: Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



**Parameter Measurement Information**



TEST	S1	$R_L$
$t_{PLH}/t_{PHL}$	Open	1M $\Omega$
$t_{PLZ}/t_{PZL}$	Vload	5k $\Omega$
$t_{PHZ}/t_{PZH}$	GND	5k $\Omega$

$V_{CC}$	Inputs		$V_M$	$V_{LOAD}$	$C_L$	$V_{\Delta}$
	$V_I$	$t_r/t_f$				
0.8V	$V_{CC}$	$\leq 3ns$	$V_{CC}/2$	$2 \times V_{CC}$	5, 10, 15, 30pF	0.1V
$1.2V \pm 0.1V$	$V_{CC}$	$\leq 3ns$	$V_{CC}/2$	$2 \times V_{CC}$	5, 10, 15, 30pF	0.1V
$1.5V \pm 0.1V$	$V_{CC}$	$\leq 3ns$	$V_{CC}/2$	$2 \times V_{CC}$	5, 10, 15, 30pF	0.1V
$1.8V \pm 0.15V$	$V_{CC}$	$\leq 3ns$	$V_{CC}/2$	$2 \times V_{CC}$	5, 10, 15, 30pF	0.15V
$2.5V \pm 0.2V$	$V_{CC}$	$\leq 3ns$	$V_{CC}/2$	$2 \times V_{CC}$	5, 10, 15, 30pF	0.15V
$3.3V \pm 0.3V$	$V_{CC}$	$\leq 3ns$	$V_{CC}/2$	$2 \times V_{CC}$	5, 10, 15, 30pF	0.3V

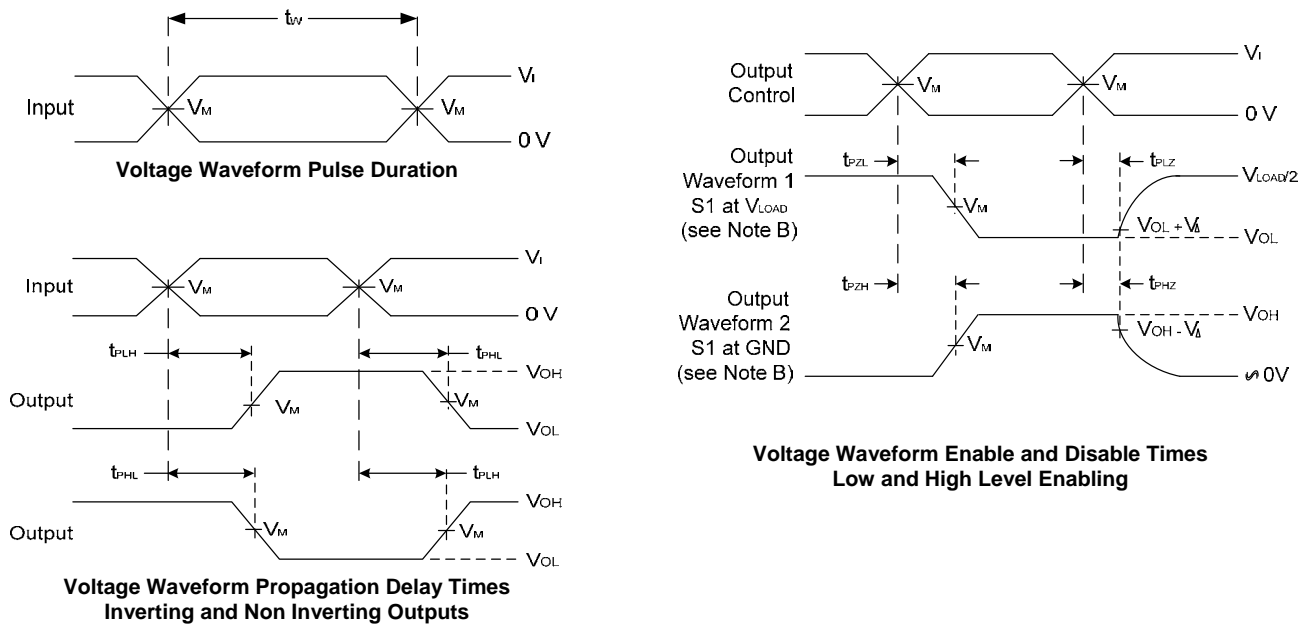
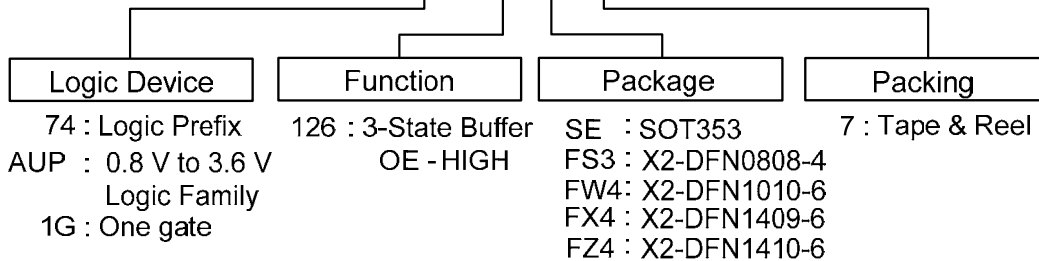


Figure 1 Load Circuit and Voltage Waveforms

- Notes:
- A. Includes test lead and test apparatus capacitance.
  - B. All pulses are supplied at pulse repetition rate  $\leq 10MHz$ .
  - C. Inputs are measured separately one transition per measurement.
  - D.  $t_{PLZ}$  and  $t_{PHZ}$  are the same as  $t_{dis}$ .
  - E.  $t_{PZL}$  and  $t_{PZH}$  are the same as  $t_{EN}$ .
  - F.  $t_{PLH}$  and  $t_{PHL}$  are the same as  $t_{PD}$ .

## Ordering Information

### 74AUP1G126XX - 7



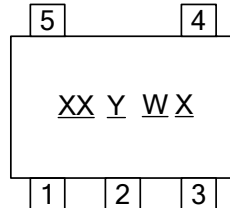
Device	Package Code	Packaging	7" Tape and Reel (Note 7)	
			Quantity	Part Number Suffix
74AUP1G126SE-7	SE	SOT353	3000/Tape & Reel	-7
74AUP1G126FS3-7**	FS3	X2-DFN0808-4	5000/Tape & Reel	-7
74AUP1G126FW4-7	FW4	X2-DFN1010-6	5000/Tape & Reel	-7
74AUP1G126FX4-7**	FX4	X2-DFN1409-6	5000/Tape & Reel	-7
74AUP1G126FZ4-7	FZ4	X2-DFN1410-6	5000/Tape & Reel	-7

Notes: 7. The taping orientation is located on our website at <http://www.diodes.com/datasheets/ap02007.pdf>  
 \*\* Future Products – Contact your Diodes sales representative for availability.

## Marking Information

### (1) SOT353

(Top View)

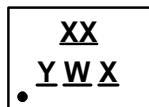


XX : Identification code  
Y : Year 0~9  
W : Week : A~Z : 1~26 week;  
 a~z : 27~52 week; z represents  
 52 and 53 week  
X : A~Z : Internal code

Part Number	Package	Identification Code
74AUP1G126SE	SOT353	XZ

### (2) X2-DFN0808-4, X2-DFN1010-6 X2-DFN1409-6 and X2-DFN1410-6

(Top View)



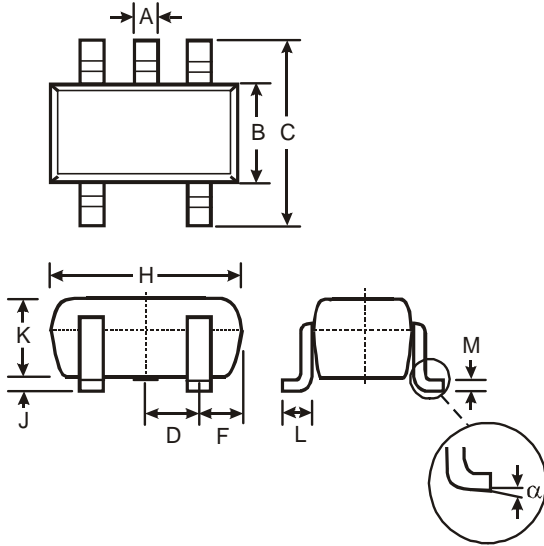
XX : Identification Code  
Y : Year : 0~9  
W : Week : A~Z : 1~26 week;  
 a~z : 27~52 week; z represents  
 52 and 53 week  
X : A~Z : Internal code

Part Number	Package	Identification Code
74AUP1G126FS3	X2-DFN0808-4	YZ
74AUP1G126FW4	X2-DFN1010-6	XZ
74AUP1G126FX4	X2-DFN1409-6	HR
74AUP1G126FZ4	X2-DFN1410-6	XZ

**Package Outline Dimensions** (All dimensions in mm.)

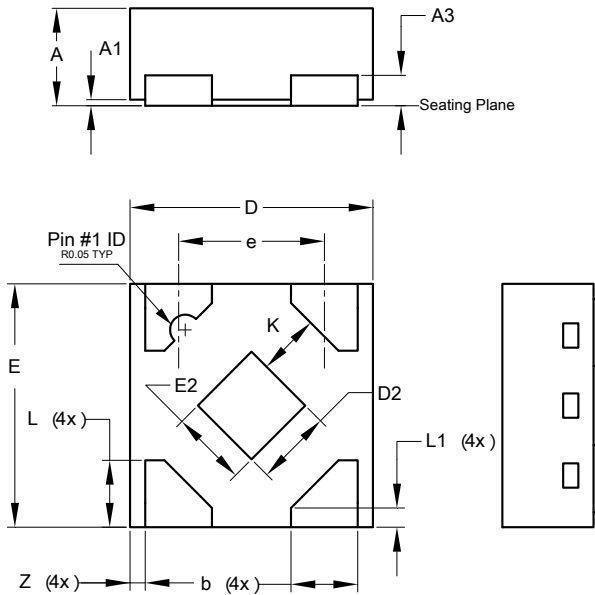
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.

(1) SOT353



SOT353			
Dim	Min	Max	Typ
A	0.10	0.30	0.25
B	1.15	1.35	1.30
C	2.00	2.20	2.10
D	0.65 Typ		
F	0.40	0.45	0.425
H	1.80	2.20	2.15
J	0	0.10	0.05
K	0.90	1.00	1.00
L	0.25	0.40	0.30
M	0.10	0.22	0.11
α	0°	8°	-
All Dimensions in mm			

(2) X2-DFN0808-4

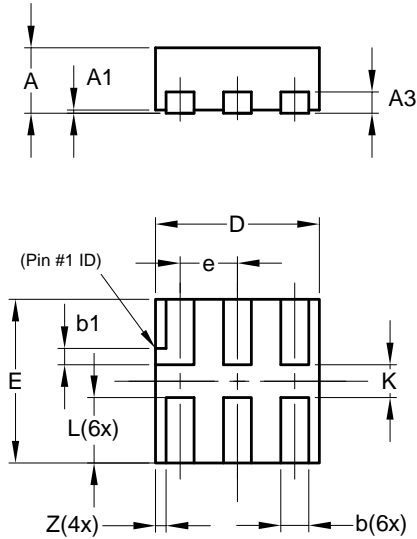


X2-DFN0808-4			
Dim	Min	Max	Typ
A	0.25	0.35	0.30
A1	0	0.04	0.02
A3	-	-	0.13
b	0.17	0.27	0.22
D	0.75	0.85	0.80
D2	0.15	0.35	0.25
E	0.75	0.85	0.80
E2	0.15	0.35	0.25
e	-	-	0.48
K	0.20	-	-
L	0.17	0.27	0.22
L1	0.02	0.12	0.07
Z	-	-	0.05
All Dimensions in mm			

**Package Outline Dimensions** (cont.) (All dimensions in mm.)

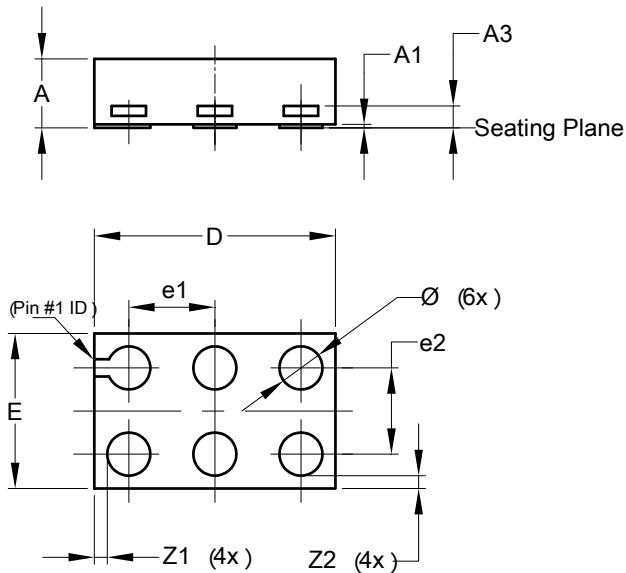
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.

(3) X2-DFN1010-6



X2-DFN1010-6			
Dim	Min	Max	Typ
A	—	0.40	0.39
A1	0.00	0.05	0.02
A3	—	—	0.13
b	0.14	0.20	0.17
b1	0.05	0.15	0.10
D	0.95	1.05	1.00
E	0.95	1.05	1.00
e	—	—	0.35
L	0.35	0.45	0.40
K	0.15	—	—
Z	—	—	0.065
All Dimensions in mm			

(4) X2-DFN1409-6

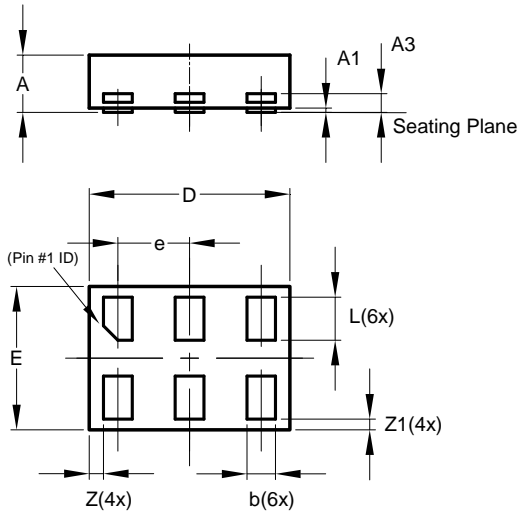


X2-DFN1409-6			
Dim	Min	Max	Typ
A	-	0.40	0.39
A1	0	0.05	0.02
A3	-	-	0.13
Ø	0.20	0.30	0.25
D	1.35	1.45	1.40
E	0.85	0.95	0.90
e1	-	-	0.50
e2	-	-	0.50
Z1	-	-	0.075
Z2	-	-	0.075
All Dimensions in mm			

**Package Outline Dimensions** (cont.) (All dimensions in mm.)

Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.

(5) X2-DFN1410-6

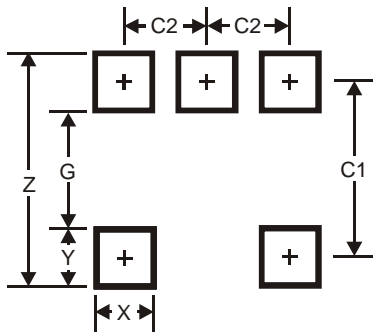


X2-DFN1410-6			
Dim	Min	Max	Typ
A	—	0.40	0.39
A1	0.00	0.05	0.02
A3	—	—	0.13
b	0.15	0.25	0.20
D	1.35	1.45	1.40
E	0.95	1.05	1.00
e	—	—	0.50
L	0.25	0.35	0.30
Z	—	—	0.10
Z1	0.045	0.105	0.075
All Dimensions in mm			

**Suggested Pad Layout**

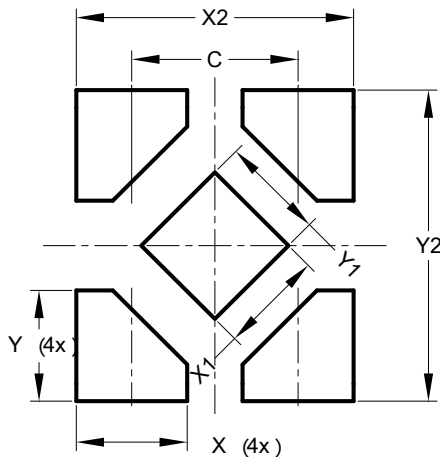
Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for the latest version

(1) SOT353



Dimensions	Value (in mm)
Z	2.5
G	1.3
X	0.42
Y	0.6
C1	1.9
C2	0.65

(2) X2-DFN0808-4

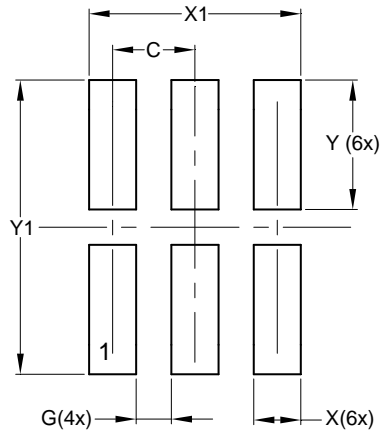


Dimensions	Value (in mm)
C	0.480
X	0.320
X1	0.300
X2	0.800
Y	0.320
Y1	0.300
Y2	0.900

## Suggested Pad Layout

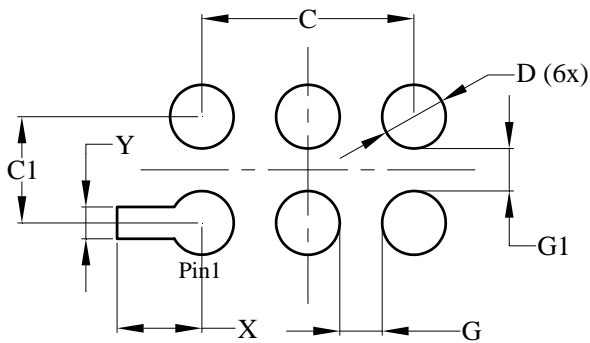
Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for the latest version

### (3) X2-DFN1010-6



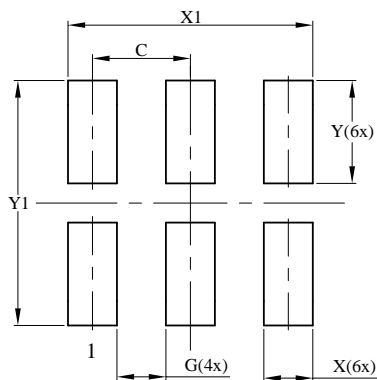
Dimensions	Value (in mm)
C	0.350
G	0.150
X	0.200
X1	0.900
Y	0.550
Y1	0.350

### (4) X2-DFN1409-6



Dimensions	Value (in mm)
C	1.000
C1	0.500
D	0.300
G	0.200
G1	0.200
X	0.400
Y	0.150

### (5) X2-DFN1410-6



Dimensions	Value (in mm)
C	0.500
G	0.250
X	0.250
X1	1.250
Y	0.525
Y1	1.250

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