

Description

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

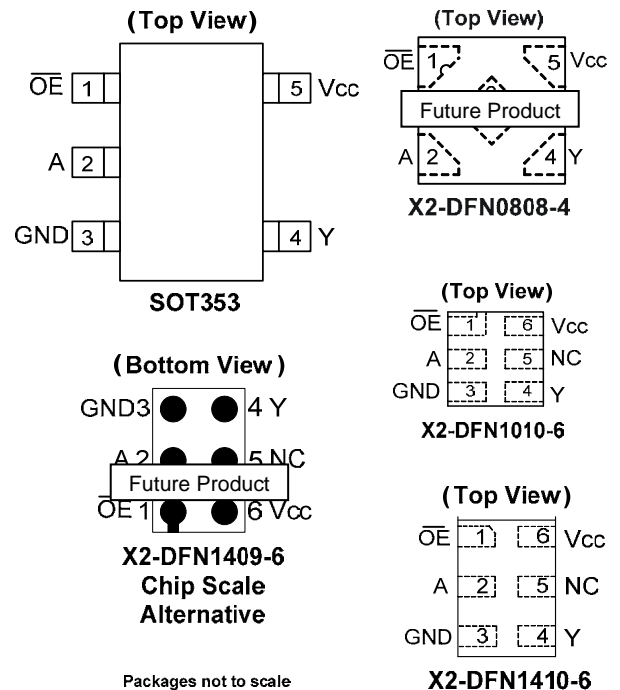
The 74AUP1G125 is a single non-inverting buffer/bus driver designed for operation over a power supply range of 0.8V to 3.6V. The device has a 3-state output that enters a high impedance state when a High-Level is applied to the output enable (\overline{OE}) pin. The device is fully specified for partial power down applications using I_{OFF} . The I_{OFF} 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
- $\pm 4\text{mA}$ Output Drive at 3.0V
- Low Static power consumption
 - $I_{CC} < 0.9\mu\text{A}$
- Low Dynamic Power Consumption
 - $C_{PD} = 6.3\text{pF}$ (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 $V_{CC} = 3.0\text{V}$
- I_{OFF} 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 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

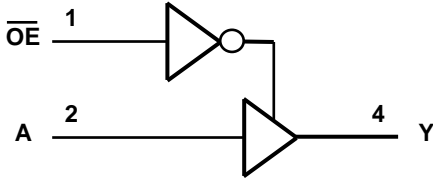
- Suited for battery and low power needs
- Wide array of products such as:
 - Tablets, E-readers
 - Cell Phones, Personal Navigation / GPS
 - MP3 players, Cameras, Video Recorders
 - PCs ultrabooks, notebooks, netbooks,
 - Computer peripherals, hard drives, CD/DVD ROM
 - TV, DVD, DVR, set top box

[Click here for ordering information, located at the end of datasheet](#)

Pin Descriptions

Pin Name	Function
\overline{OE}	Output Enable
A	Data Input
GND	Ground
Y	Data Output
V _{CC}	Supply Voltage

Logic Diagram



Function Table

Inputs		Output
\overline{OE}	A	Y
L	H	H
L	L	L
H	X	Z

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

Symbol	Parameter	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})	± 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	μA	
		$V_{CC} = 1.1\text{V}$	-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	μA	
		$V_{CC} = 1.1\text{V}$	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 3.6V		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_A = +25°C, unless otherwise specified.)

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

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

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

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

Parameter	From Input	TO OUTPUT	V _{CC}	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	
t _{pd}	A	Y	0.8V		20.6						ns
			1.2V ± 0.1V	2.8	5.5	10.5	2.5	11.7	2.5	12.9	
			1.5V ± 0.1V	2.0	3.9	6.1	1.9	7.3	1.9	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	1.2	2.4	3.1	1.2	3.9	1.2	4.4	
t _{en}	$\overline{\text{OE}}$	Y	0.8V		69.9						ns
			1.2V ± 0.1V	3.1	6.1	11.8	2.9	13.9	2.9	15.4	
			1.5V ± 0.1V	2.3	4.2	6.6	2.2	7.7	2.2	8.3	
			1.8V ± 0.15V	2.0	3.4	5.1	1.9	6.2	1.9	6.8	
			2.5V ± 0.2V	1.8	2.6	3.7	1.7	4.5	1.7	5.0	
			3.3V ± 0.3V	1.7	2.4	3.1	1.7	3.5	1.7	3.9	
t _{dis}	$\overline{\text{OE}}$	Y	0.8V		14.3						ns
			1.2V ± 0.1V	2.7	4.3	6.5	2.7	7.3	2.7	8.2	
			1.5V ± 0.1V	2.1	3.2	5.1	2.1	5.7	2.1	5.7	
			1.8V ± 0.15V	2.0	3.0	4.9	2.0	5.4	2.0	5.7	
			2.5V ± 0.2V	1.4	2.7	3.9	1.4	4.0	1.4	4.1	
			3.3V ± 0.3V	1.3	2.5	3.2	1.3	3.4	1.3	3.9	

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

Parameter	From Input	TO OUTPUT	V _{CC}	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	
t _{pd}	A	Y	0.8V		24.0						ns
			1.2V ± 0.1V	3.2	6.4	12.3	3.0	13.8	3.0	15.2	
			1.5V ± 0.1V	2.1	4.5	7.3	1.9	8.5	1.9	9.4	
			1.8V ± 0.15V	1.9	3.8	5.5	1.7	6.8	1.7	7.6	
			2.5V ± 0.2V	1.7	3.2	4.2	1.6	5.3	1.6	5.9	
			3.3V ± 0.3V	1.4	3.0	3.8	1.4	4.6	1.4	5.2	
t _{en}	$\overline{\text{OE}}$	Y	0.8V		73.7						ns
			1.2V ± 0.1V	3.6	6.9	13.5	3.4	15.8	3.4	17.5	
			1.5V ± 0.1V	2.3	4.8	7.7	2.2	8.6	2.2	9.4	
			1.8V ± 0.15V	2.0	3.9	5.8	1.9	6.8	1.9	7.4	
			2.5V ± 0.2V	1.8	3.2	4.3	1.7	5.3	1.7	5.9	
			3.3V ± 0.3V	1.7	3.0	3.9	1.7	4.3	1.7	4.8	
t _{dis}	$\overline{\text{OE}}$	Y	0.8V		32.7						ns
			1.2V ± 0.1V	3.4	5.4	7.9	3.4	8.8	3.4	9.9	
			1.5V ± 0.1V	2.2	4.1	5.5	2.2	6.2	2.2	7.1	
			1.8V ± 0.15V	2.2	4.2	5.6	1.9	6.3	1.9	7.1	
			2.5V ± 0.2V	1.7	3.0	5.2	1.7	5.5	1.7	6.1	
			3.3V ± 0.3V	1.9	3.8	4.8	1.7	5.0	1.7	5.6	

Switching Characteristics (cont.)

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

Parameter	From Input	TO OUTPUT	V _{CC}	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	
t _{pd}	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	1.5	3.5	4.4	1.5	5.4	1.5	6.1	
t _{en}	$\overline{\text{OE}}$	Y	0.8V		77.5						ns
			1.2V ± 0.1V	4.0	7.7	15.2	3.7	17.6	3.7	19.6	
			1.5V ± 0.1V	3.0	5.3	8.4	2.5	9.8	2.5	10.7	
			1.8V ± 0.15V	2.3	4.4	6.5	2.1	7.7	2.1	8.5	
			2.5V ± 0.2V	2.1	3.6	5.0	2.0	6.1	2.0	6.8	
			3.3V ± 0.3V	2.0	3.5	4.5	1.9	4.9	1.9	5.5	
t _{dis}	$\overline{\text{OE}}$	Y	0.8V		60.8						ns
			1.2V ± 0.1V	3.8	6.5	12.3	3.7	13.3	3.7	13.3	
			1.5V ± 0.1V	2.8	5.8	10.1	2.5	10.5	2.5	10.5	
			1.8V ± 0.15V	2.2	5.3	9.0	2.1	9.4	2.1	9.9	
			2.5V ± 0.2V	2.1	5.1	7.9	2.0	8.1	2.0	8.4	
			3.3V ± 0.3V	1.9	5.0	7.0	1.9	7.5	1.9	7.5	

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

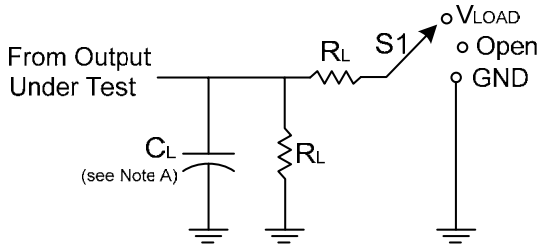
Parameter	From Input	TO OUTPUT	V _{CC}	T _A = +25°C			T _A = -40°C to +85°C		T _A = -40°C to +125°C		Unit
				Min	Typ	Max	Min	Max	Min	Max	
t _{pd}	A	Y	0.8V		37.4						ns
			1.2V ± 0.1V	4.8	9.5	19.0	4.4	21.6	4.4	24.0	
			1.5V ± 0.1V	4.0	6.7	10.8	3.0	13.0	3.0	14.5	
			1.8V ± 0.15V	2.4	5.6	8.4	2.4	10.3	2.4	11.5	
			2.5V ± 0.2V	2.1	4.8	6.3	2.1	7.8	2.1	8.7	
			3.3V ± 0.3V	2.0	4.6	5.8	2.0	7.5	2.0	8.3	
t _{en}	$\overline{\text{OE}}$	Y	0.8V		88.9						ns
			1.2V ± 0.1V	5.2	9.9	19.8	4.8	22.8	4.8	25.3	
			1.5V ± 0.1V	4.0	6.8	10.8	3.1	12.6	3.1	14.1	
			1.8V ± 0.15V	3.0	5.6	8.5	2.8	10.2	2.8	11.3	
			2.5V ± 0.2V	2.2	4.8	6.5	2.2	8.1	2.2	8.8	
			3.3V ± 0.3V	2.1	4.6	6.0	2.1	7.5	2.1	7.7	
t _{dis}	$\overline{\text{OE}}$	Y	0.8V		49.9						ns
			1.2V ± 0.1V	6.0	9.9	13.3	4.8	16.5	4.8	16.5	
			1.5V ± 0.1V	2.8	9.0	12.0	3.1	13.2	3.1	14.2	
			1.8V ± 0.15V	2.6	8.8	11.1	2.8	12.4	2.8	13.8	
			2.5V ± 0.2V	2.6	8.7	10.9	2.6	11.6	2.6	13.5	
			3.3V ± 0.3V	2.5	8.6	10.5	2.5	10.8	2.5	13.1	

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

Parameter		Test Conditions		V _{CC}	Typ	Unit
C _{pd}	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 _i	Input Capacitance	V _i = V _{CC} or GND		0V or 3.3V	1.5	pF
θ _{JA}	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 _{JC}	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	RL
t _{PLH} /t _{PHL}	Open	1MΩ
t _{PLZ} /t _{PZL}	V _{load}	5kΩ
t _{PHZ} /t _{PZH}	GND	5kΩ

V _{CC}	Inputs		V _M	V _{LOAD}	C _L	V _Δ
	V _I	t _r /t _f				
0.8V	V _{CC}	≤3ns	V _{CC} /2	2 X V _{CC}	5, 10, 15, 30pF	0.1V
1.2V ± 0.1V	V _{CC}	≤3ns	V _{CC} /2	2 X V _{CC}	5, 10, 15, 30pF	0.1V
1.5V ± 0.1V	V _{CC}	≤3ns	V _{CC} /2	2 X V _{CC}	5, 10, 15, 30pF	0.1V
1.8V ± 0.15V	V _{CC}	≤3ns	V _{CC} /2	2 X V _{CC}	5, 10, 15, 30pF	0.15V
2.5V ± 0.2V	V _{CC}	≤3ns	V _{CC} /2	2 X V _{CC}	5, 10, 15, 30pF	0.15V
3.3V ± 0.3V	V _{CC}	≤3ns	V _{CC} /2	2 X V _{CC}	5, 10, 15, 30pF	0.3V

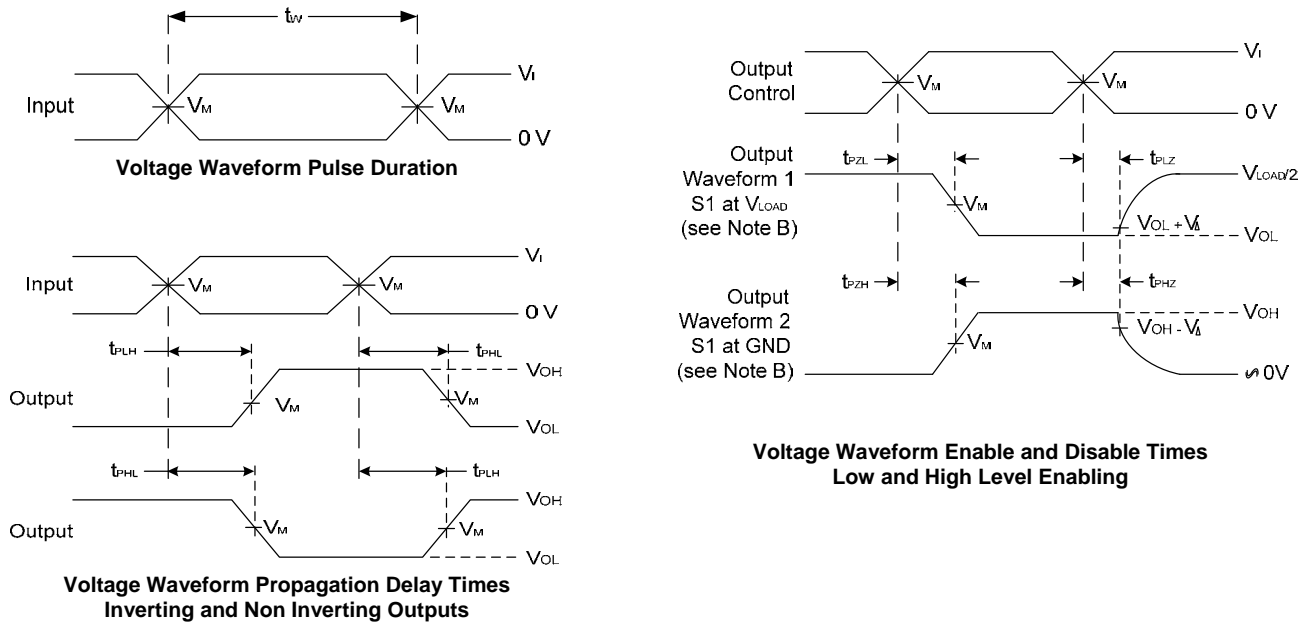
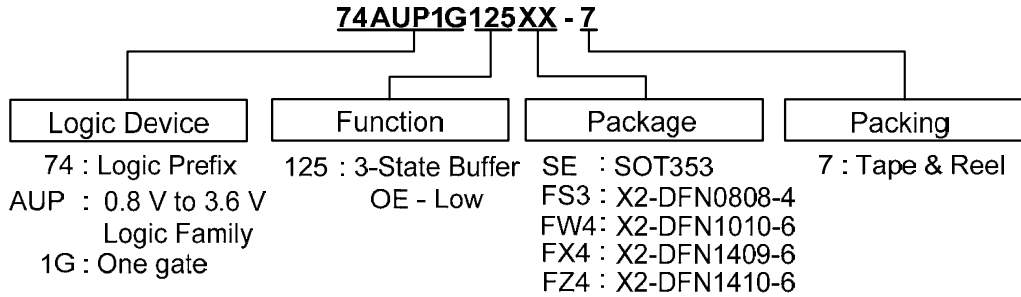


Figure 1 Load Circuit and Voltage Waveforms

- Notes:
- A. Includes test lead and test apparatus capacitance.
 - B. All pulses are supplied at pulse repetition rate ≤ 10MHz.
 - C. Inputs are measured separately one transition per measurement.
 - D. t_{PZL} 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



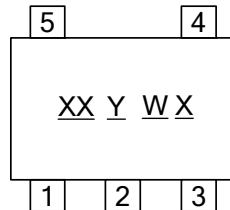
Device	Package Code	Packaging	7" Tape and Reel (Note 7)	
			Quantity	Part Number Suffix
74AUP1G125SE-7	SE	SOT353	3000/Tape & Reel	-7
74AUP1G125FS3-7**	FS3	X2-DFN0808-4	5000/Tape & Reel	-7
74AUP1G125FW4-7	FW4	X2-DFN1010-6	5000/Tape & Reel	-7
74AUP1G125FX4-7**	FX4	X2-DFN1409-6	5000/Tape & Reel	-7
74AUP1G125FZ4-7	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)

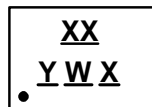


XX : Identification code
 Y : Year 0~9
 W : Week : A~Z : 1~26 week;
 a~z : 27~52 week; z represents
 52 and 53 week
 X : A~Z : Internal code

Part Number	Package	Identification Code
74AUP1G125SE	SOT353	XY

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

(Top View)



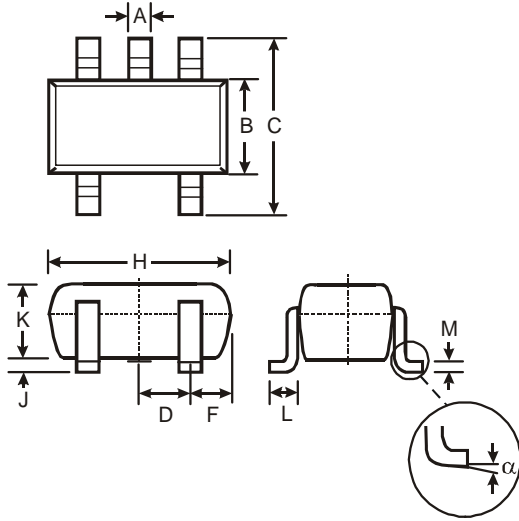
XX : Identification Code
 Y : Year : 0~9
 W : Week : A~Z : 1~26 week;
 a~z : 27~52 week; z represents
 52 and 53 week
 X : A~Z : Internal code

Part Number	Package	Identification Code
74AUP1G125FS3	X2-DFN0808-4	YY
74AUP1G125FW4	X2-DFN1010-6	XY
74AUP1G125FX4	X2-DFN1409-6	HP
74AUP1G125FZ4	X2-DFN1410-6	XY

Package Outline Dimensions (All dimensions in mm.)

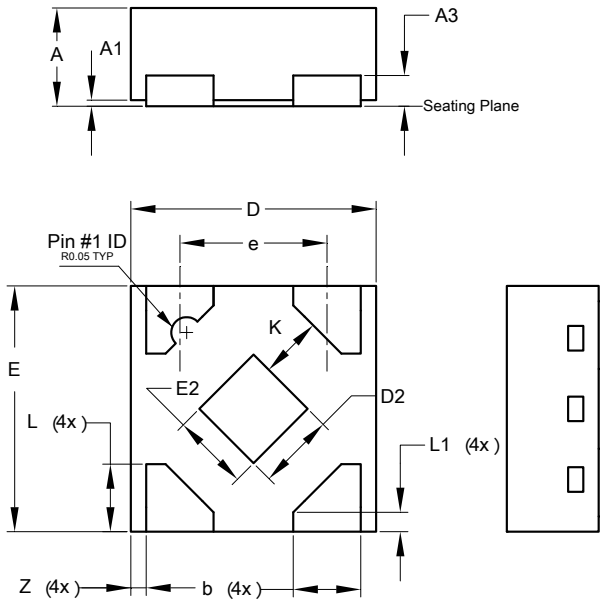
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.

(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

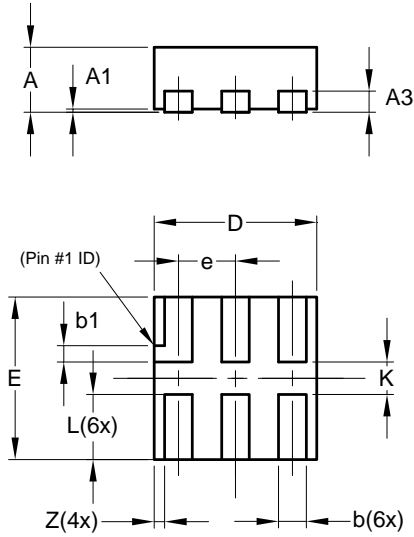


X2-DFN0808-4			
Dim	Min	Max	Typ
A	0.25	0.35	0.30
A1	0	0.04	0.02
A3	-	-	0.13
b	0.17	0.27	0.22
D	0.75	0.85	0.80
D2	0.15	0.35	0.25
E	0.75	0.85	0.80
E2	0.15	0.35	0.25
e	-	-	0.48
K	0.20	-	-
L	0.17	0.27	0.22
L1	0.02	0.12	0.07
Z	-	-	0.05
All Dimensions in mm			

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

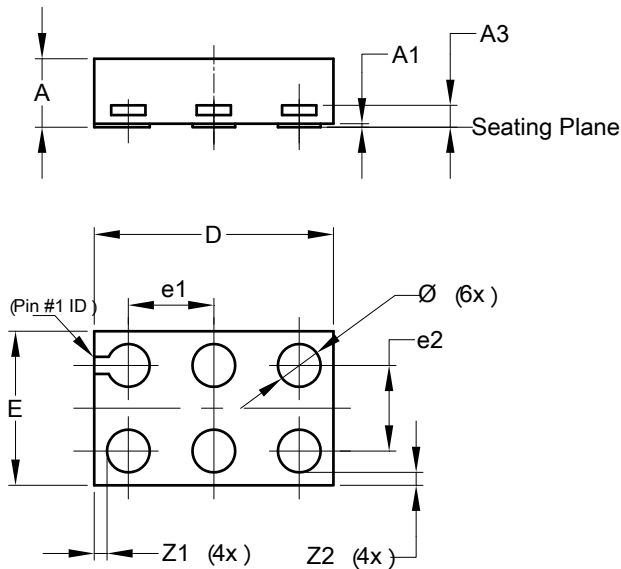
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.

(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

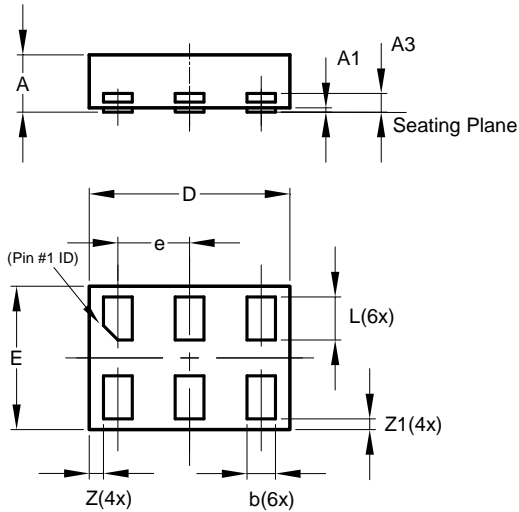


X2-DFN1409-6			
Dim	Min	Max	Typ
A	-	0.40	0.39
A1	0	0.05	0.02
A3	-	-	0.13
Ø	0.20	0.30	0.25
D	1.35	1.45	1.40
E	0.85	0.95	0.90
e1	-	-	0.50
e2	-	-	0.50
Z1	-	-	0.075
Z2	-	-	0.075
All Dimensions in mm			

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

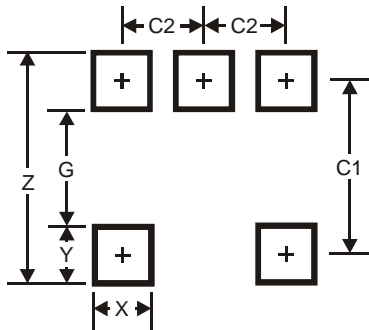


X2-DFN1410-6			
Dim	Min	Max	Typ
A	—	0.40	0.39
A1	0.00	0.05	0.02
A3	—	—	0.13
b	0.15	0.25	0.20
D	1.35	1.45	1.40
E	0.95	1.05	1.00
e	—	—	0.50
L	0.25	0.35	0.30
Z	—	—	0.10
Z1	0.045	0.105	0.075
All Dimensions in mm			

Suggested Pad Layout

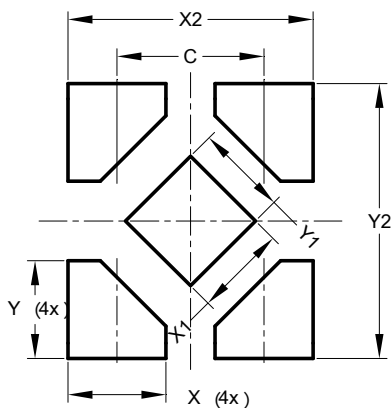
Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for the latest version

(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

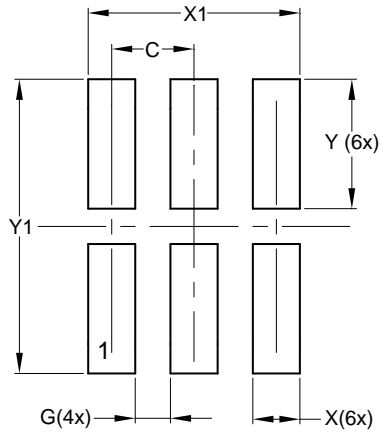


Dimensions	Value (in mm)
C	0.480
X	0.320
X1	0.300
X2	0.800
Y	0.320
Y1	0.300
Y2	0.900

Suggested Pad Layout

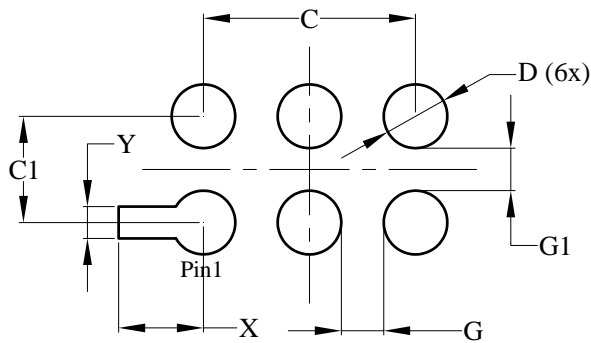
Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for the latest version

(3) X2-DFN1010-6



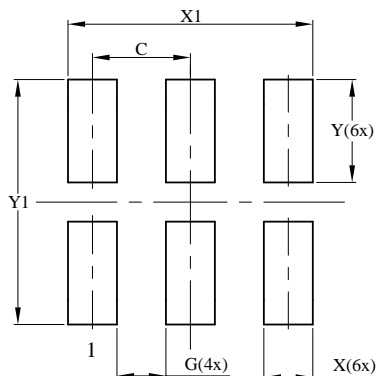
Dimensions	Value (in mm)
C	0.350
G	0.150
X	0.200
X1	0.900
Y	0.550
Y1	0.350

(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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