



### 74AUP1G06

SINGLE INVERTER WITH OPEN DRAIN OUTPUT

### Description

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

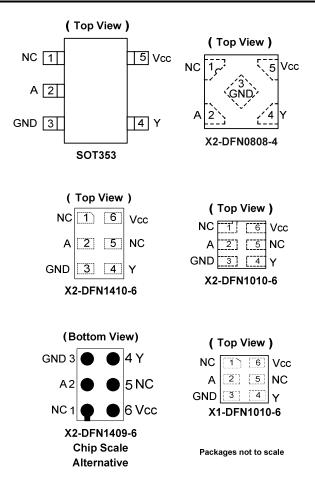
The 74AUP1G06 is a single inverter with an open-drain output, designed for operation over a power supply range of 0.8V to 3.6V. The device is fully specified for partial power down applications using  $I_{\rm OFF}$ . The  $I_{\rm OFF}$  circuitry disables the output, preventing damaging current backflow when the device is powered down. The gate performs the positive Boolean function:

 $\mathsf{Y}=\overline{\mathsf{A}}$ 

### **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 Icc < 0.9μA</li>
- Low Dynamic Power Consumption
  C<sub>PD</sub> = 6pF (Typical at 3.6V)
- Schmitt Trigger Action at all inputs makes the circuit tolerant for slower input rise and fall time. The hysteresis is typically 250mV at Vcc = 3.0V.
- IOFF Supports Partial-Power-Down Mode Operation
- ESD Protection Exceeds JESD 22
  2000-V Human Body Model (A114)
  Exceeds 1000-V Charged Device Model (C101)
- Latch-Up Exceeds 100mA per JESD 78, Class I
- Leadless Packages Named per JESD30E
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)

### **Pin Assignments**



### Applications

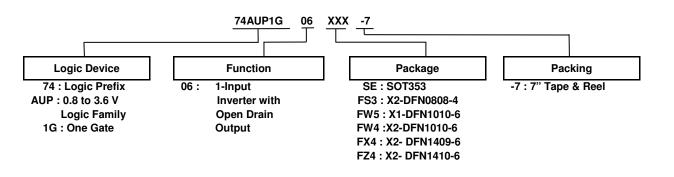
- Suited for Battery and Low Power Needs
  - Wide array of products such as:
  - Tablets, E-readers
  - Cell Phones, Personal Navigation / GPS
  - MP3 Players ,Cameras, Video Recorders
  - PCs, Ultrabooks, Notebooks, Netbooks,
  - Computer Peripherals, Hard Drives, SSDs, CD/DVD ROMs
  - TVs, DVDs, DVRs, Set-Top Boxes

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.



### **Ordering Information**



Device	Package	Package	Package Package		and Reel	
Device	Code	(Notes 4 & 5)	Size	Quantity	Part Number Suffix	
74AUP1G06SE-7	SE	SOT353	2.0mm x 2.0mm x 1.1mm 0.65 mm lead pitch	3,000/Tape & Reel	-7	
74AUP1G06FS3-7	FS3	X2-DFN0808-4	0.8mm x 0.8mm x 0.35mm 0.5 mm pad pitch (diamond)	5,000/Tape & Reel	-7	
74AUP1G06FW5-7	FW5	X1-DFN1010-6	1.0mm x 1.0mm x 0.5mm 0.35 mm pad pitch	5,000/Tape & Reel	-7	
74AUP1G06FW4-7	FW4	X2-DFN1010-6	1.0mm x 1.0mm x 0.4mm 0.35 mm pad pitch	5,000/Tape & Reel	-7	
74AUP1G06FX4-7	FX4	X2-DFN1409-6 Chip Scale Alternative	1.4mm x 0.9mm x 0.4mm 0.5 mm pad pitch	5,000/Tape & Reel	-7	
74AUP1G06FZ4-7	FZ4	X2-DFN1410-6	1.4mm x 1.0mm x 0.4mm 0.5 mm pad pitch	5,000/Tape & Reel	-7	

Notes: 4. Pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at

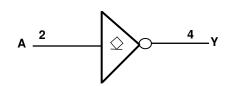
http://www.diodes.com/datasheets/ap02001.pdf.

5. The taping orientation is located on our website at http://www.diodes.com/datasheets/ap02007.pdf.

## **Pin Descriptions**

Pin Name	Function		
NC	No Connection		
А	Data Input		
GND	Ground		
Y	Data Output		
V <sub>CC</sub>	Supply Voltage		

### Logic Diagram



#### **Function Table**

Inputs	Output
Α	Y
Н	L
L	Z



### Absolute Maximum Ratings (Notes 6 & 7) (@T<sub>A</sub> = +25 °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 <sub>CC</sub>	Supply Voltage Range	-0.5 to +4.6	V
VI	Input Voltage Range	-0.5 to +4.6	V
Vo	Voltage Applied to Output in High or Low State	-0.5 to +4.6	V
I <sub>IK</sub>	Input Clamp Current VI < 0	50	mA
I <sub>OK</sub>	Output Clamp Current (V <sub>O</sub> < 0)	50	mA
lo	Continuous Output Current ( $V_O = 0$ to $V_{CC}$ )	±20	mA
lcc	Continuous Current Through V <sub>CC</sub>	50	mA
I <sub>GND</sub>	Continuous Current Through GND	-50	mA
TJ	Operating Junction Temperature	-40 to +150	°C
T <sub>STG</sub>	Storage Temperature	-65 to +150	°C

Notes: 6. 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.

7. Forcing the maximum allowed voltage could cause a condition exceeding the maximum current or conversely forcing the maximum current could cause a condition exceeding the maximum current and voltage must be maintained within the controlled range.

cause a condition exceeding the maximum voltage. The ratings of both current and voltage must be maintained within the controlled range.

## Recommended Operating Conditions (Note 8) (@T<sub>A</sub> = +25 °C, unless otherwise specified.)

Symbol	Pa	rameter	Min	Max	Unit	
V <sub>CC</sub>	Operating Voltage		0.8	3.6	V	
VI	Input Voltage		0	3.6	V	
Vo	Output Voltage		0	3.6	V	
		$V_{CC} = 0.8V$	—	20	μΑ	
		$V_{CC} = 1.1 V$	—	1.1		
la.	Low-Level Output Current	$V_{CC} = 1.4V$	—	1.7		
IOL	Low-Level Output Current	$V_{CC} = 1.65V$	—	1.9	mA	
		$V_{CC} = 2.3 V$	—	3.1		
		$V_{CC} = 3.0V$	—	4		
Δt/ΔV	Input Transition Rise or Fall Rate V <sub>CC</sub> = 0.8V to 3.6V		_	200	ns/V	
T <sub>A</sub>	Operating Free-Air Temperature		-40	125	°C	

Note: 8. Unused inputs should be held at V<sub>CC</sub> or Ground.



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

Cumhal	Deremeter	Test Conditions	м	$T_A = -$	⊦25 <i>°</i> C	T <sub>A</sub> = -40 °C	C to +85℃	Unit
Symbol	Parameter	Test Conditions	V <sub>cc</sub>	Min	Max	Min	Max	Unit
		_	0.8V to 1.65V	0.80 x V <sub>CC</sub>		$0.80 \times V_{CC}$	_	
.,		_	1.65V to 1.95V	0.65 x V <sub>CC</sub>	—	0.65 x V <sub>CC</sub>	_	.,
VIH	High-Level Input Voltage	_	2.3V to 2.7V	1.6	_	1.6	_	V
			3.0V to 3.6V	2.0	_	2.0	_	
		_	0.8V to 1.65V	_	0.30 x V <sub>cc</sub>		$0.30 \times V_{CC}$	
		_	1.65V to 1.95V		0.35 x V <sub>CC</sub>		0.35 x V <sub>CC</sub>	-
VIL	Low-Level Input Voltage		2.3V to 2.7V		0.00 x 100		0.7	V
			3.0V to 3.6V		0.9		0.9	_
		I <sub>OL</sub> = 20μΑ	0.8V to 3.6V		0.0		0.0	
		$I_{OL} = 1.1 \text{mA}$	1.1V		0.3 x V <sub>CC</sub>	_	0.3 x V <sub>CC</sub>	_
		$I_{OL} = 1.7 \text{mA}$	1.4V		0.3 × V <sub>CC</sub>	_	0.3 × V <sub>CC</sub>	-
			1.65V		0.31		0.37	
V <sub>OL</sub>	Low-Level Output Voltage	$I_{OL} = 1.9 \text{mA}$	1.05 V	_				V
		$I_{OL} = 2.3 \text{mA}$	2.3V		0.31		0.33	
		$I_{OL} = 3.1 \text{mA}$			0.44		0.45	
		$I_{OL} = 2.7 \text{mA}$	3V	—	0.31		0.33	
		$I_{OL} = 4mA$			0.44	—	0.45	
h	Input Current	A or B Input $V_1 = GND$ to 3.6V	0V to 3.6V	—	± 0.1	_	± 0.5	μA
I <sub>OFF</sub>	Power Down Leakage Current	$V_1$ or $V_0 = 0V$ to 3.6V	0V	_	± 0.2	_	± 0.5	μA
I <sub>oz</sub>	Z State Leakage Current	$V_{O} = 3.6V$ $V_{i} = 3.6V$	3.6V	—	± 0.2	_	± 0.5	μA
$\Delta I_{\text{OFF}}$	Delta Power Down Leakage Current	$V_1$ or $V_0 = 0V$ to 3.6V	0V to 0.2V	—	0.2	_	0.6	μA
Icc	Supply Current	$V_1 = GND \text{ or } V_{CC},$ $I_0 = 0$	0.8Vto 3.6V	—	0.5	_	0.9	μA
$\Delta I_{CC}$	Additional Supply Current	Input at V <sub>CC</sub> -0.6V	3.3V	_	40	_	50	μA
					T <sub>A</sub> = -40 ℃ to	+125°C		
Symbol	Parameter	Test Conditions	V <sub>cc</sub>	Min Max			Unit	
			0V to 1.65V	0.80 x				
			1.65V to 1.95V	0.30 x				
VIH	High-Level Input Voltage		2.3V to 2.7 V	1.6				V
	Vollago		3.0 V to 3.6V	2.0				
					,	0.25 x V <sub>c</sub>		
						0.25 X VC		
		—	0.8V to 1.65V					
VIL	Low-Level Input	—	1.65V to 1.95V			0.35 x V <sub>c</sub>	00	V
VIL	Low-Level Input Voltage	_	1.65V to 1.95V 2.3V to 2.7V			0.7	c	V
VIL	Voltage	_ _ _	1.65V to 1.95V        2.3V to 2.7V        3.0V to 3.6V			0.7 0.9		V
VIL		  _ = 20μΑ	1.65V to 1.95V        2.3V to 2.7V        3.0V to 3.6V        0.8V to 3.6V			0.7 0.9 0.11		V
VIL	Voltage	  = 20μΑ = 1.1mA	1.65V to 1.95V        2.3V to 2.7V        3.0V to 3.6V        0.8V to 3.6V        1.1V			0.7 0.9 0.11 0.3 x V <sub>C</sub>		V
VIL	Voltage	         	1.65V to 1.95V        2.3V to 2.7V        3.0V to 3.6V        0.8V to 3.6V        1.1V        1.4V			0.7 0.9 0.11 0.3 x V <sub>C</sub> 0.41		V
	Voltage	  L = 20µA L = 1.1mA L = 1.7mA L = 1.9mA	1.65V to 1.95V        2.3V to 2.7V        3.0V to 3.6V        0.8V to 3.6V        1.1V			0.7 0.9 0.11 0.3 x V <sub>C</sub> 0.41 0.39		
V <sub>IL</sub>	Voltage	         	1.65V to 1.95V        2.3V to 2.7V        3.0V to 3.6V        0.8V to 3.6V        1.1V        1.4V        1.65V			0.7 0.9 0.11 0.3 x V <sub>Ct</sub> 0.41 0.39 0.36		v
	Voltage	  L = 20µA L = 1.1mA L = 1.7mA L = 1.9mA	1.65V to 1.95V        2.3V to 2.7V        3.0V to 3.6V        0.8V to 3.6V        1.1V        1.4V			0.7 0.9 0.11 0.3 x V <sub>C</sub> 0.41 0.39		
	Voltage	 	1.65V to 1.95V        2.3V to 2.7V        3.0V to 3.6V        0.8V to 3.6V        1.1V        1.4V        1.65V        2.3V			0.7 0.9 0.11 0.3 x V <sub>Ct</sub> 0.41 0.39 0.36		
	Voltage		1.65V to 1.95V        2.3V to 2.7V        3.0V to 3.6V        0.8V to 3.6V        1.1V        1.4V        1.65V			0.7 0.9 0.11 0.3 x V <sub>C</sub> 0.41 0.39 0.36 0.50		
	Voltage		1.65V to 1.95V        2.3V to 2.7V        3.0V to 3.6V        0.8V to 3.6V        1.1V        1.4V        1.65V        2.3V			0.7 0.9 0.11 0.3 x V <sub>C</sub> 0.41 0.39 0.36 0.50 0.36		
Vol	Voltage		1.65V to 1.95V        2.3V to 2.7V        3.0V to 3.6V        0.8V to 3.6V        1.1V        1.4V        1.65V        2.3V        3V			0.7 0.9 0.11 0.3 x V <sub>c</sub> 0.41 0.39 0.36 0.50 0.36 0.50		V
V <sub>oL</sub>	Voltage		1.65V to 1.95V      2.3V to 2.7V      3.0V to 3.6V      0.8V to 3.6V      1.1V      1.4V      1.65V      2.3V      3V      0V to 3.6V			$\begin{array}{c} 0.7 \\ 0.9 \\ 0.11 \\ 0.3 \times V_{Cr} \\ 0.41 \\ 0.39 \\ 0.36 \\ 0.50 \\ 0.36 \\ 0.50 \\ \pm 0.75 \end{array}$		ν μA
V <sub>OL</sub>	Voltage		1.65V to 1.95V        2.3V to 2.7V        3.0V to 3.6V        0.8V to 3.6V        1.1V        1.4V        1.65V        2.3V        0V to 3.6V        0V to 3.6V			$\begin{array}{c} 0.7 \\ 0.9 \\ 0.11 \\ 0.3 \times V_{Ct} \\ 0.41 \\ 0.39 \\ 0.36 \\ 0.50 \\ 0.36 \\ 0.50 \\ \pm 0.75 \\ \pm 3.5 \end{array}$		V µA µA
V <sub>OL</sub> I <sub>I</sub> I <sub>OFF</sub> I <sub>OZ</sub>	Voltage		1.65V to 1.95V        2.3V to 2.7V        3.0V to 3.6V        0.8V to 3.6V        1.1V        1.4V        1.65V        2.3V        3V        0V to 3.6V        0V to 3.6V        3V        0V to 3.6V        0V        3.6V			$\begin{array}{c} 0.7 \\ 0.9 \\ 0.11 \\ 0.3 \times V_{Cr} \\ 0.41 \\ 0.39 \\ 0.36 \\ 0.50 \\ 0.50 \\ \pm 0.75 \\ \pm 3.5 \\ \pm 1.5 \end{array}$		ν μΑ μΑ



## **Switching Characteristics**

$C_L = 5pF, Sector$	C <sub>L</sub> = 5pF, See Figure 1										
Parameter	From	то	Vee	Т	T <sub>A</sub> = +25 ℃			T <sub>A</sub> = -40 ℃ to +85 ℃		T <sub>A</sub> = -40 ℃ to +125 ℃	
Parameter Input	OUTPUT	V <sub>cc</sub>	Min	Тур	Max	Min	Max	Min	Max	Unit	
		0.8V		12.8	—			_			
		Y	1.2V ± 0.1V	2.0	4.3	9.9	2	10.9	2	12	ns
	А		1.5V ± 0.1V	1.5	3.1	6.1	1.5	7.1	1.5	7.8	
٩d	t <sub>pd</sub> A		1.8V ± 0.15V	1.2	2.8	4.7	1.2	5.7	1.2	6.3	
			2.5V ± 0.2V	1	2.2	3.2	1	3.9	1	4.3	
			3.3V ± 0.3V	0.8	2.2	3.3	0.8	3.6	0.8	4	

#### CL = 10pF, See Figure 1

Parameter	From	то	Vee		ັ <sub>A</sub> = +25 °	С	T <sub>A</sub> = -40 ℃ to +85 ℃		T <sub>A</sub> = -40 ℃	Unit	
Farameter	Input	OUTPUT	VCC	Min	Тур	Max	Min	Max	Min	Max	Onit
			0.8V	—	15.8		—	—	—	_	
			1.2V ± 0.1V	2.5	5.4	11.2	2.5	13.2	2.5	15	
	٨	V	1.5V ± 0.1V	2	3.9	7	2	8.5	2	9.4	
t <sub>pd</sub>	A	ř	1.8V ± 0.15V	1.7	3.6	5.4	1.7	6.7	1.7	7.4	ns
			2.5V ± 0.2V	1.4	2.9	3.8	1.4	4.5	1.4	5	
			$3.3V \pm 0.3V$	1.2	3.2	4.6	1.2	4.9	1.2	5.4	

#### $C_L = 15 pF$ , See Figure 1

Parameter	From TO		V <sub>cc</sub>	Т	`A = +25 °	С	T <sub>A</sub> = -40 °C	C to +85℃	T <sub>A</sub> = -40 ℃	to +125℃	Unit
Falametei	Input	OUTPUT	V CC	Min	Тур	Max	Min	Max	Min	Max	Unit
		0.8V	—	18.8	_	—	—	_	—		
		v	1.2V ± 0.1V	2.9	6.4	12.2	2.9	15.2	2.9	17	- ns
	٨		1.5V ± 0.1V	2.3	4.6	7.7	2.3	9.4	2.3	10	
t <sub>pd</sub>	A	ř	1.8V ± 0.15V	2.1	4.5	6.6	2.1	7.3	2.1	8.1	
			2.5V ± 0.2V	1.7	3.5	4.6	1.7	5.1	1.7	5.7	
			3.3V ± 0.3V	1.5	4	6	1.5	6.5	1.5	7.2	

#### C<sub>L</sub> = 30pF, See Figure 1

Parameter	From	то	- Vee		A = +25 ۹	С	T <sub>A</sub> = -40 ℃ to +85 ℃		T <sub>A</sub> = -40 ℃	Unit	
Farameter	Input	OUTPUT	V CC	Min	Тур	Max	Min	Max	Min	Max	onn
		0.8 V	_	27.8	_	_	—	—	—		
			1.2V ± 0.1V	3.9	9.3	16.5	3.9	19.3	3.9	21.3	
	٨	V	1.5V ± 0.1V	3.2	6.8	10.1	3.2	12	3.2	13.2	
t <sub>pd</sub>	A	ř	1.8 V ± 0.15V	2.9	6.8	10.7	2.9	11	2.9	12.1	ns
		2.5V ± 0.2V	2.5	5.3	7.2	2.5	7.8	2.5	8.6		
			3.3V ± 0.3V	2.3	6.5	10.5	2.3	10.8	2.3	11.9	



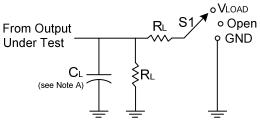
# **Operating and Package Characteristics** (@T<sub>A</sub> = +25 °C, unless otherwise specified.)

	Parameter	Test Conditio		Vcc	Тур	Unit
				0.8V	2.6	
				1.2V ± 0.1V	2.8	
0	Power Dissipation	f = 1MH	Ηz	1.5V ± 0.1V	2.9	~_
C <sub>pd</sub>	Capacitance	No Loa	ad	1.8V ± 0.15V	3.1	pF
				2.5V ± 0.2V	3.6	
				3.3V ± 0.3V	4.2	
Ci	Input Capacitance	$V_i = V_{CC} \text{ or } GND$		0V or 3.3V	1.5	pF
		SOT353			371	
		X2-DFN0808-4	1		430	
0	Thermal Resistance	Thermal Resistance X1-DFN1010-6 (Nata 0)	(Niete O)	—	435	
$\theta_{JA}$	Junction-to-Ambient	X2-DFN1010-6	(Note 9)	—	445	-0/00
		X2-DFN1409-6	] [	—	470	
		X2-DFN1410-6		—	460	
		SOT353		—	143	
		X2-DFN0808-4	] [	—	240	
0	Thermal Resistance	X1-DFN1010-6	(Niete 0)	—	250	°C/W
$\theta_{\text{JC}}$	Junction-to-Case	X2-DFN1010-6	(Note 9)	—	250	C/W
		X2-DFN1409-6	]	—	275	
		X2-DFN1410-6	] [	_	265	

Note: 9. Test condition for each of the six package types: Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

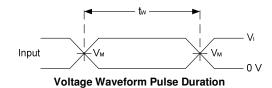


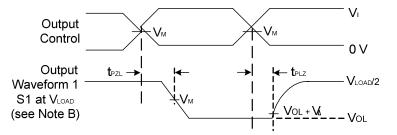
#### **Parameter Measurement Information**



TEST	S1	RL
t <sub>PLZ</sub> /t <sub>PZL</sub>	Vload	5kΩ

V	Inputs	М	М	•		
V <sub>cc</sub>	VI	t <sub>r</sub> /t <sub>f</sub>	V <sub>M</sub>	V <sub>LOAD</sub>	CL	V۵
0.8V	Vcc	≤3ns	V <sub>CC</sub> /2	2 X V <sub>CC</sub>	5, 10, 15, 30pF	0.1V
1.2V±0.1V	V <sub>CC</sub>	≤3ns	V <sub>CC</sub> /2	$2 \times V_{CC}$	5, 10, 15, 30pF	0.1V
1.5V±0.1V	V <sub>CC</sub>	≤3ns	V <sub>CC</sub> /2	2 X V <sub>CC</sub>	5, 10, 15, 30pF	0.1V
1.8V±0.15V	Vcc	≤3ns	V <sub>CC</sub> /2	2 X V <sub>CC</sub>	5, 10, 15, 30pF	0.15V
2.5V±0.2V	Vcc	≤3ns	V <sub>CC</sub> /2	2 X V <sub>CC</sub>	5, 10, 15, 30pF	0.15V
3.3V±0.3V	Vcc	≤3ns	V <sub>CC</sub> /2	2 X V <sub>CC</sub>	5, 10, 15, 30pF	0.3V





Voltage Waveform Enable and Disable Times Low and High Level Enabling

#### Figure 1 Load Circuit and Voltage Waveforms

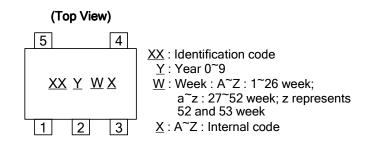
A. Includes test lead and test apparatus capacitance. Notes:

- B. All pulses are supplied at pulse repetition rate  $\leq$  10 MHz. C. Inputs are measured separately one transition per measurement.
- D. For the open drain device the specified propagation delay  $t_{PD}$  is the same as  $t_{PLZ}$  and  $t_{PZL}$ .



### **Marking Information**

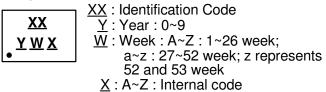
(1) SOT353



Part Number	Package	Identification Code	
74AUP1G06SE-7	SOT353	XM	

#### (2) X2-DFN0808-4, X1-DFN1010-6, X2-DFN1010-6, X2-DFN1409-6 and X2-DFN1410-6

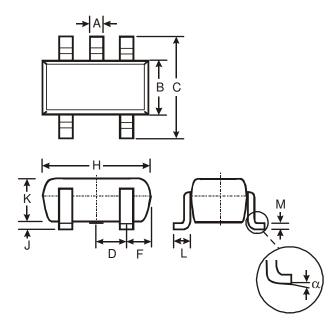
### (Top View)



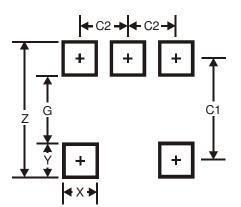
Part Number	Package	Identification Code
74AUP1G06FS3-7	X2-DFN0808-4	YM
74AUP1G06FW5-7	X1-DFN1010-6	Q5
74AUP1G06FW4-7	X2-DFN1010-6	XM
74AUP1G06FX4-7	X2-DFN1409-6	HD
74AUP1G06FZ4-7	X2-DFN1410-6	XM



## SOT353 Package Outline Dimensions and Suggested Pad Layout



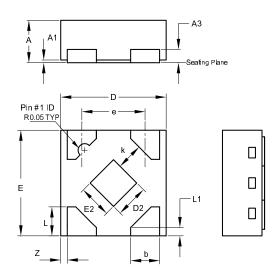
	SOT353					
Dim	Min	Max	Тур			
Α	0.10	0.30	0.25			
В	1.15	1.35	1.30			
С	2.00	2.20	2.10			
D	0.65 Typ					
F	0.40	0.45	0.425			
н	1.80	2.20	2.15			
J	0	0.10	0.05			
К	0.90	1.00	1.00			
L	0.25	0.40	0.30			
М	0.10	0.22	0.11			
α	0°	8°	-			
A	All Dimensions in mm					



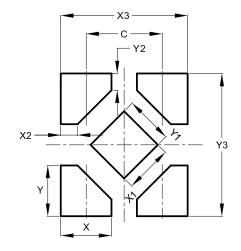
Dimensions	Value (in mm)	
Z	2.5	
G	1.3	
Х	0.42	
Y	0.6	
C1	1.9	
C2	0.65	



## X2-DFN0808-4 Package Outline Dimensions and Suggested Pad Layout



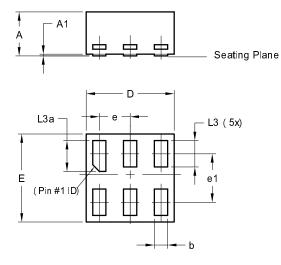
X2-DFN0808-4					
Dim	Min	Max	Тур		
Α	0.25	0.35	0.30		
A1	0	0.04	0.02		
A3	-	-	0.13		
b	0.17	0.27	0.22		
D	0.75	0.85	0.80		
D2	0.15	0.35	0.25		
E	0.75	0.85	0.80		
E2	0.15	0.35	0.25		
е	-	-	0.48		
K	0.20	-	-		
L	0.17	0.27	0.22		
L1	0.02	0.12	0.07		
Z	-	-	0.05		
All	All Dimensions in mm				



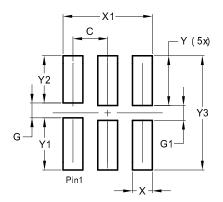
Dimensions	Value
С	0.480
Х	0.320
X1	0.300
X2	0.106
X3	0.800
Y	0.320
Y1	0.300
Y2	0.106
Y3	0.900



## X1-DFN1010-6 Package Outline Dimensions and Suggested Pad Layout



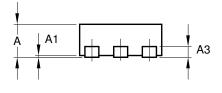
X1-DFN1010-6					
Dim	Min	Max	Тур		
Α	-	0.50	0.39		
A1	1	0.04	-		
b	0.12	0.20	0.15		
D	0.95	1.050	1.00		
Е	0.95	1.050	1.00		
е	0.35 BSC				
e1		0.55 B	SC		
L3	0.27	0.30	0.30		
L3a	0.32	0.40	0.35		
All Dimensions in mm					

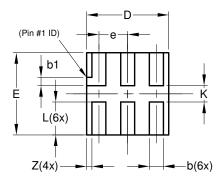


Value (in mm)	
0.350	
0.150	
0.150	
0.200	
0.900	
0.500	
0.525	
0.475	
1.150	

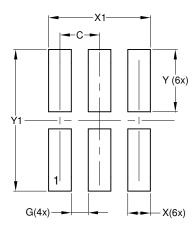


## X2-DFN1010-6 Package Outline Dimensions and Suggested Pad Layout





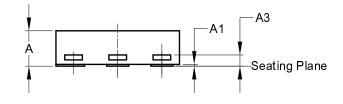
X2-DFN1010-6				
Dim	Min	Max	Тур	
Α		0.40	0.39	
A1	0.00	0.05	0.02	
A3			0.13	
b	0.14	0.20	0.17	
b1	0.05	0.15	0.10	
D	0.95	1.05	1.00	
E	0.95	1.05	1.00	
е	_		0.35	
L	0.35	0.45	0.40	
К	0.15			
Z			0.065	
All Dimensions in mm				

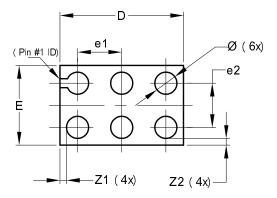


Dimensions	Value (in mm)	
С	0.350	
G	0.150	
X	0.200	
X1	0.900	
Y	0.550	
Y1	1.250	

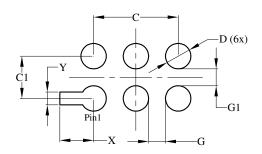


## X2-DFN1409-6 Package Outline Dimensions and Suggested Pad Layout





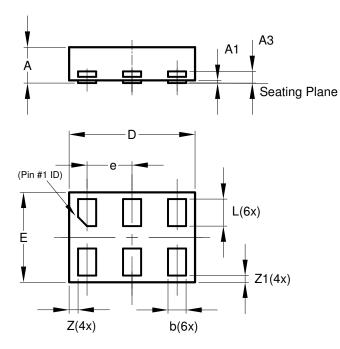
	X2-DFN1409-6					
Dim	Min	Max	Тур			
Α	-	0.40	0.39			
A1	0	0.05	0.02			
A3	-	-	0.13			
Ø	0.20	0.30	0.25			
D	1.35	1.45	1.40			
Е	0.85	0.95	0.90			
e1	-	-	0.50			
e2	-	-	0.50			
Z1	-	-	0.075			
Z2	-	-	0.075			
All Dimensions in mm						



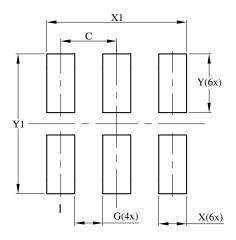
Dimensions	Value (in mm)
С	1.000
C1	0.500
D	0.300
G	0.200
G1	0.200
Х	0.400
Ŷ	0.150



### X2-DFN1410-6 Package Outline Dimensions and Suggested Pad Layout



X2-DFN1410-6				
Dim	Min	Max	Тур	
Α	_	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				



Dimensions	Value (in mm)	
С	0.500	
G	0.250	
Х	0.250	
X1	<b>X1</b> 1.250	
Y	0.525	
Y1	1.250	



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