

#### SINGLE SCHMITT-TRIGGER BUFFER

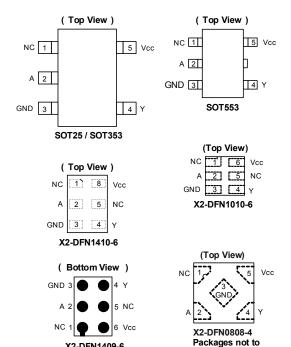
scale

## **Description**

The 74LVC1G17 is a single 1-input Schmitt-trigger buffer with a standard push-pull output. The device is designed for operation with a power supply range of 1.65V to 5.5V. The inputs are tolerant to 5.5V allowing this device to be used in a mixed voltage environment. 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. The gate performs the positive Boolean function:

$$Y = A$$

## **Pin Assignments**



## **Features**

- Wide Supply Voltage Range from 1.65V to 5.5V
- ±24mA Output Drive at 3.3V
- **CMOS Low Power Consumption**
- I<sub>OFF</sub> Supports Partial-Power-Down Mode Operation
- Inputs Accept up to 5.5V
- ESD Protection Tested per JESD 22

Exceeds 2000-V Human Body Model (A114))

Exceeds 1000-V Charged Device Model (C101)

- Latch-Up Exceeds 100mA per JESD 78, Class I
- Range of Package Options
- 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-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please contact us or your local Diodes representative.

https://www.diodes.com/quality/product-definitions/

An Automotive-Compliant Part is Available Under Separate Datasheet (74LVC1G17Q)

### **Applications**

- Voltage Level Shifting
- General Purpose Logic
- Power Down Signal Isolation
- Wide Array of Products such as:
  - PCs, Networking, Notebooks, Netbooks,

X2-DFN1409-6

Chip Scale Alternative

- Computer Peripherals, Hard Drives, CD/DVD ROM
- TV, DVD, DVR, Set Top Box
- Cell Phones, Personal Navigation / GPS
- MP3 Players, Cameras, Video Recorders

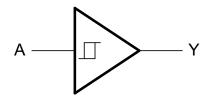
- 1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
- 2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free
- 3. Halogen- 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	Description
Α	Data Input
GND	Ground
Υ	Data Output
V <sub>CC</sub>	Supply Voltage

## **Logic Diagram**



## **Function Table**

Input	Output
Α	Υ
Н	Н
L	L

## Absolute Maximum Ratings (Notes 4 & 5)

Symbol	Description	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 6.5	V
V <sub>I</sub>	Input Voltage Range	-0.5 to 6.5	V
Vo	Voltage Applied to Output in High Impedance or I <sub>OFF</sub> State	-0.5 to 6.5	V
Vo	Voltage Applied to Output in High or Low State	-0.5 to V <sub>CC</sub> + 0.5	V
I <sub>IK</sub>	Input Clamp Current V <sub>I</sub> < 0	-50	mA
l <sub>ok</sub>	Output Clamp Current	-50	mA
Io	Continuous Output Current	±50	mA
I <sub>CC</sub> , I <sub>GND</sub>	Continuous Current through V <sub>CC</sub> or GND	±100	mA
$T_J$	Operating Junction Temperature	-40 to +150	°C
T <sub>STG</sub>	Storage Temperature	-65 to +150	°C

- 4. Stresses beyond the absolute maximum can result in immediate failure or reduced reliability. These are stress values and device operation should be within recommend values.
- 5. 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 voltage. The ratings of both current and voltage must be maintained within the controlled range.



# Recommended Operating Conditions (Note 6)

Symbol		Parameter	Min	Max	Unit
V	On a ration Valtage	Operating	1.65	5.5	V
Vcc	Operating Voltage	Data retention only	1.5	_	V
VI	Input Voltage		0	5.5	V
Vo	Output Voltage		0	V <sub>CC</sub>	V
		V <sub>CC</sub> = 1.65V	_	-4	
		V <sub>CC</sub> = 2.3V	_	-8	
	High Lavel Output accessed	V <sub>CC</sub> = 2.7V	_	-12	
Іон	High-Level Output current		_	-16	mA
		V <sub>CC</sub> = 3V	_	-24	
		V <sub>CC</sub> = 4.5V	_	-32	
		V <sub>CC</sub> = 1.65V	_	4	
		V <sub>CC</sub> = 2.3V	_	8	
	Lavel aval Outrot avanant	V <sub>CC</sub> = 2.7V	_	12	A
l <sub>OL</sub>	Low-Level Output current	V - 2V	_	16	mA
		$V_{CC} = 3V$	_	24	
		V <sub>CC</sub> = 4.5V	_	32	
T <sub>A</sub>	Operating Free-Air Temperature	_	-40	+125	°C

Note:

6. Unused inputs should be held at  $V_{\mbox{\footnotesize{CC}}}$  or Ground.



# **Electrical Characteristics** (@ $T_A$ = -40°C to +85°C. All typical values are at $V_{CC}$ = 3.3V, $T_A$ = +25°C.)

Symbol	Parameter	Test Conditions	V <sub>CC</sub>	Min	Тур	Max	Unit
		_	1.65V	0.70	_	1.20	_
		_	2.3V	1.11	_	1.60	_
$V_{T+}$	Positive-Going Input	_	3V	1.50	_	2.00	_
	Threshold Voltage	_	4.5V	2.16	_	2.74	_
		_	5.5V	2.61	_	3.33	_
		_	1.65V	0.30	_	0.72	_
		_	2.3V	0.58	_	1.00	_
$V_{T-}$	Negative-Going Input Threshold Voltage	_	3V	0.80	_	1.30	_
	Threshold Voltage	_	4.5V	1.21	_	1.95	_
		_	5.5V	1.45	_	2.35	_
		_	1.65V	0.30	1	0.62	_
		_	2.3V	0.40	1	0.80	
$\Delta V_T$	Hysteresis (V <sub>T+</sub> - V <sub>T-</sub> )	_	3V	0.35	1	1.00	
		_	4.5V	0.55	1	1.10	
		_	5.5V	0.60	1	1.20	1
		I <sub>OH</sub> = -100μA	1.65V to 5.5V	V <sub>CC</sub> – 0.1	1	_	
		I <sub>OH</sub> = -4mA	1.65V	1.2	-	_	
		$I_{OH} = -8mA$	2.3V	1.9	-	_	
VoH	High Level Output Voltage	I <sub>OH</sub> = -12mA	2.7V	2.2	-	_	V
		I <sub>OH</sub> = -16mA	3V	2.4	_	_	
		I <sub>OH</sub> = -24mA	3 V	2.3	-	_	
		I <sub>OH</sub> = -32mA	4.5V	3.8	_	_	
		I <sub>OL</sub> = 100μA	1.65V to 5.5V	_	_	0.1	
		I <sub>OL</sub> = 4mA	1.65V	_	_	0.45	
		I <sub>OL</sub> = 8mA	2.3V	_	_	0.3	
$V_{OL}$	Low-Level Output Voltage	I <sub>OL</sub> = 12mA	2.7V	_	_	0.4	V
		I <sub>OL</sub> = 16mA	3V	_	_	0.4	
		I <sub>OL</sub> = 24mA	JV	_	_	0.55	
		I <sub>OL</sub> = 32mA	4.5V	_	_	0.55	
II	Input Current	V <sub>I</sub> = 5.5V or GND	0 to 5.5V	_	_	± 5	μΑ
l <sub>OFF</sub>	Power Down Leakage Current	$V_1$ or $V_0 = 5.5V$	0	_	_	± 10	μΑ
Icc	Supply Current	V <sub>I</sub> = 5.5V of GND I <sub>O</sub> = 0	1.65V to 5.5V	_	_	10	μΑ
Δlcc	Additional Supply Current	Input at V <sub>CC</sub> – 0.6V	3V to 5.5V	_	_	500	μA



# **Electrical Characteristics** (continued) (@ $T_A = -40^{\circ}C$ to +125°C. All typical values are at $V_{CC} = 3.3V$ , $T_A = +25^{\circ}C$ .)

Symbol	Parameter	Test Conditions	Vcc	Min	Тур	Max	Unit	
Symbol	raiametei	rest conditions	1.65V	0.70		1.20	Onit	
			2.3V	1.11		1.60		
V <sub>T+</sub>	Positive-Going Input	<u> </u>	3V	1.11		2.00	_	
V 1+	Threshold Voltage		4.5V	2.16	_	2.74		
		<u> </u>	5.5V	2.10		3.33		
		<u> </u>	1.65V	0.30	<u> </u>	0.75	_	
		<u> </u>	2.3V	0.58		1.03	_	
V <sub>T-</sub>	Negative-Going Input	<u> </u>	3V	0.80		1.33	_	
v <sub>T-</sub>	Threshold Voltage	_					_	
		_	4.5V	1.21		1.95	_	
			5.5V	1.45		2.35	_	
		_	1.65V	0.30		0.62	_	
	Hysteresis	_	2.3V	0.37		0.80	_	
$\Delta V_{T}$	(V <sub>T+</sub> - V <sub>T-</sub> )	_	3V	0.32		1.00	_	
		_	4.5V	0.50		1.20	_	
		<del>_</del>	5.5V	0.55		1.40		
		I <sub>OH</sub> = -100μA	1.65V to 5.5V	V <sub>CC</sub> – 0.1	_	_		
		I <sub>OH</sub> = -4mA	1.65V	0.95		_		
		$I_{OH} = -8mA$	2.3V	1.7	_	_		
V <sub>OH</sub>	High Level Output Voltage	I <sub>OH</sub> = -12mA	2.7V	1.9	_	_	V	
		I <sub>OH</sub> = -16mA	3V	2.2	_	_		
		$I_{OH} = -24mA$		2.0	_	_		
		I <sub>OH</sub> = -32mA	4.5V	3.4		_		
		I <sub>OL</sub> = 100μA	1.65V to 5.5V	_	_	0.1		
		I <sub>OL</sub> = 4mA	1.65V	_	_	0.7		
		I <sub>OL</sub> = 8mA	2.3V	_	_	0.45		
$V_{OL}$	Low-Level Output Voltage	I <sub>OL</sub> = 12mA	2.7V	_	_	0.6	V	
		I <sub>OL</sub> = 16mA	3V	_	_	0.6		
		I <sub>OL</sub> = 24mA	3 V	_	_	0.8		
		I <sub>OL</sub> = 32mA	4.5V	_	_	0.8		
lı	Input Current	$V_I = 5.5V$ or GND	0 to 5.5V	_	_	±5	μA	
l <sub>OFF</sub>	Power Down Leakage Current	$V_1$ or $V_0 = 5.5V$	0	_	_	±10	μΑ	
Icc	Supply Current	V <sub>I</sub> = 5.5V of GND I <sub>O</sub> = 0	1.65V to 5.5V	_	_	10	μΑ	
Δlcc	Additional Supply Current	Input at V <sub>CC</sub> – 0.6V	3V to 5.5V	_	_	500	μA	



## Package Characteristics (All typical values are at V<sub>CC</sub> = 3.3V, T<sub>A</sub> = +25°C.)

Symbol	Parameter	Test Conditions	Vcc	Min	Тур	Max	Unit
		SOT25		_	204	_	
		SOT353		_	371	_	
		SOT553		_	231	_	
$\theta_{JA}$	Thermal Resistance Junction-to-Ambient	X2-DFN0808-4	(Note 7)	_	400	_	°C/W
	Junction-to-Ambient	X2-DFN1010-6		_	445	_	
		X2-DFN1409-6		_	470	_	
		X2-DFN1410-6		_	460	_	
		SOT25		_	52	_	
		SOT353		_	143	_	
		SOT553		_	105	_	
θЈС	Thermal Resistance	X2-DFN0808-4	(Note 7)	_	225	_	°C/W
	Junction-to-Case	X2-DFN1010-6		_	250	_	
		X2-DFN1409-6		_	275	_	
		X2-DFN1410-6		_	265	_	

Note:

## **Switching Characteristics**

 $T_A = -40$ °C to +85°C,  $C_L = 15$ pF as noted (See Figure 1)

Parameter	From To Input Outp		V <sub>CC</sub> = 1.8V ± 0.15V		V <sub>CC</sub> = 2.5V ± 0.2V		V <sub>CC</sub> = 3.3V ± 0.3V		V <sub>CC</sub> = 5V ± 0.5V		Unit
		Output	Min	Max	Min	Max	Min	Max	Min	Max	
t <sub>PD</sub>	Α	Υ	1.0	9.9	0.7	5.5	0.7	4.6	0.7	4.4	ns

 $T_A$  = -40°C to +85°C,  $C_L$  = 30pF or 50pF as noted (See Figure 2)

Parameter	From	From To Input Output	V <sub>CC</sub> = 1.8V ± 0.15V		V <sub>CC</sub> = 2.5V ± 0.2V		V <sub>CC</sub> = 3.3V ± 0.3V		V <sub>CC</sub> = 5V ± 0.5V		Unit
	Input		Min	Max	Min	Max	Min	Max	Min	Max	
t <sub>PD</sub>	Α	Υ	1.0	11	0.7	6.5	0.7	5.5	0.7	5	ns

 $T_A$  = -40°C to +125°C,  $C_L$  = 15pF as noted (See Figure 1)

Parameter	From Input			То	V <sub>CC</sub> = ± 0.			: 2.5V ).2V		: 3.3V ).3V		c = 5V 0.5V	Unit
		Output	Min	Max	Min	Max	Min	Max	Min	Max			
t <sub>PD</sub>	Α	Υ	1.0	12.5	0.7	7.5	0.7	6.5	0.7	5.5	ns		

 $T_A = -40$ °C to +125°C,  $C_L = 30$ pF or 50pF as noted (See Figure 2)

Parameter	From			V <sub>CC</sub> = 1.8V ± 0.15V		V <sub>CC</sub> = 2.5V ± 0.2V		V <sub>CC</sub> = 3.3V ± 0.3V		V <sub>CC</sub> = 5V ± 0.5V	
	Input	Input Output	Min	Max	Min	Max	Min	Max	Min	Max	
t <sub>PD</sub>	Α	Y	1.0	14.0	0.7	8.5	0.7	7.0	0.7	6.5	ns

<sup>7.</sup> Test condition for each of the 7 package types: Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

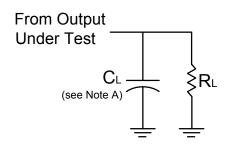


## **Operating Characteristics**

T<sub>A</sub> = +25°C

	Parameter		V <sub>CC</sub> = 1.8V Typ	V <sub>CC</sub> = 2.5V Typ	V <sub>CC</sub> = 3.3V Typ	V <sub>CC</sub> = 5V Typ	Unit
C <sub>PD</sub>	Power Dissipation Capacitance	f = 10MHz	20	22	23	25	pF

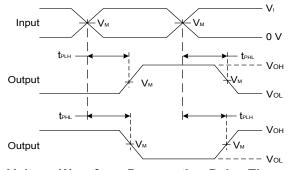
## **Parameter Measurement Information**



V	Inputs		V		Б
V <sub>CC</sub>	VI	t <sub>R</sub> /t <sub>F</sub>	V <sub>M</sub>	CL	R∟
1.8V±0.15V	V <sub>CC</sub>	≤2ns	V <sub>CC</sub> /2	15pF	1ΜΩ
2.5V±0.2V	V <sub>CC</sub>	≤2ns	V <sub>CC</sub> /2	15pF	1ΜΩ
3.3V±0.3V	3V	≤2.5ns	1.5V	15pF	1ΜΩ
5V±0.5V	V <sub>CC</sub>	≤2.5ns	V <sub>CC</sub> /2	15pF	1ΜΩ



**Voltage Waveform Pulse Duration** 



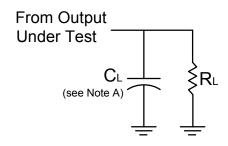
**Voltage Waveform Propagation Delay Times Inverting and Non Inverting Outputs** 

Figure 1. Load Circuit and Voltage Waveforms

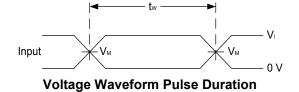
- A. Includes test lead and test apparatus capacitance. B. All pulses are supplied at pulse repetition rate  $\leq 10 MHz$ . C. Inputs are measured separately one transition per measurement. D.  $t_{PLH}$  and  $t_{PHL}$  are the same as  $t_{PD.}$

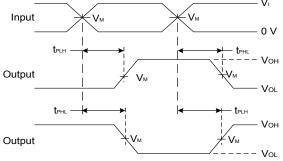


## **Parameter Measurement Information (continued)**



V	In	puts	V	Cı	R <sub>L</sub>
V <sub>CC</sub>	VI	t <sub>R</sub> /t <sub>F</sub>	V <sub>M</sub>	OL.	
1.8V±0.15V	V <sub>CC</sub>	≤2ns	V <sub>CC</sub> /2	30pF	1kΩ
2.5V±0.2V	Vcc	≤2ns	V <sub>CC</sub> /2	30pF	500Ω
3.3V±0.3V	3V	≤2.5ns	1.5V	50pF	500Ω
5V±0.5V	V <sub>CC</sub>	≤2.5ns	V <sub>CC</sub> /2	50pF	500Ω





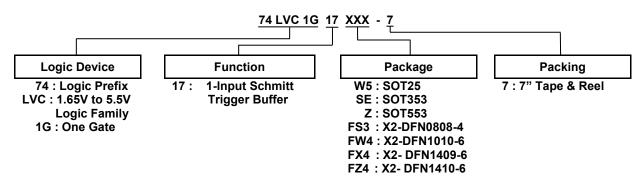
**Voltage Waveform Propagation Delay Times** Inverting and Non Inverting Outputs

Figure 2. Load Circuit and Voltage Waveforms

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



## Ordering Information (Note 8)



Davida	Dankana Oada	Package	7" Tape and Reel	
Device	Package Code	(Notes 9, 10)	Quantity	Part Number Suffix
74LVC1G17W5-7	W5	SOT25	3,000/Tape & Reel	-7
74LVC1G17SE-7	SE	SOT353	3,000/Tape & Reel	-7
74LVC1G17Z-7	Z	SOT553	4,000/Tape & Reel	-7
74LVC1G17FS3-7	FS3	X2-DFN0808-4	5,000/Tape & Reel	-7
74LVC1G17FW4-7	FW4	X2-DFN1010-6	5,000/Tape & Reel	-7
74LVC1G17FX4-7	FX4	X2-DFN1409-6 (Chip Scale Alternative)	5,000/Tape & Reel	-7
74LVC1G17FZ4-7	FZ4	X2-DFN1410-6	5,000/Tape & Reel	-7

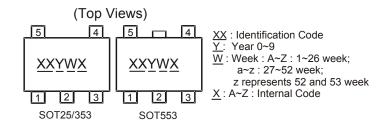
<sup>8.</sup> For packaging details, go to our website at https://www.diodes.com/design/support/packaging/diodes-packaging/.
9. Pad layout as shown in Diodes Incorporated's package outline PDFs, which can be found on our website at http://www.diodes.com/package-outlines.html.

<sup>10.</sup> The taping orientation is located on our website at https://www.diodes.com/assets/Packaging-Support-Docs/ap02007.pdf.



## **Marking Information**

#### (1) SOT25, SOT353 and SOT553



Part Number	Package	Identification Code
74LVC1G17W5-7	SOT25	UR
74LVC1G17SE-7	SOT353	UR
74LVC1G17Z-7	SOT553	UR

#### (2) DFN Packages

(Top View)

XX $\underline{Y} \underline{W} \underline{X}$ 

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

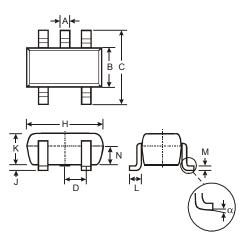
Part Number	Package	Identification Code
74LVC1G17FS3-7	X2-DFN0808-4	WR
74LVC1G17FW4-7	X2-DFN1010-6	UR
74LVC1G17FX4-7	X2-DFN1409-6	MH
74LVC1G17FZ4-7	X2-DFN1410-6	UR



## **Package Outline Dimensions**

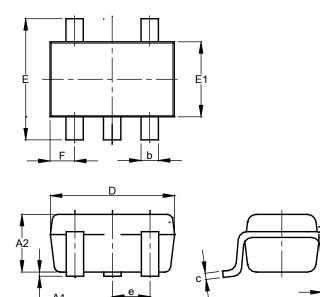
Please see http://www.diodes.com/package-outlines.html for the latest version.

### (1) Package Type: SOT25



	SOT25					
Dim	Min	Max	Тур			
Α	0.35	0.50	0.38			
В	1.50	1.70	1.60			
С	2.70	3.00	2.80			
D	ı	-	0.95			
Η	2.90	3.10	3.00			
7	0.013	0.10	0.05			
K	1.00	1.30	1.10			
١	0.35	0.55	0.40			
М	0.10	0.20	0.15			
N	0.70	0.80	0.75			
α	0°	8°	-			
All D	imensi	ons in	mm			

### (2) Package Type: SOT353



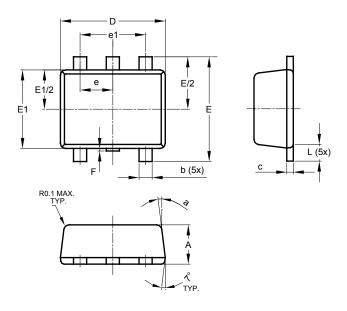
	SOT353					
Dim	Min	Max	Тур			
A1	0.00	0.10	0.05			
A2	0.90	1.00	0.95			
b	0.10	0.30	0.25			
С	0.10	0.22	0.11			
D	1.80	2.20	2.15			
Е	2.00	2.20	2.10			
E1	1.15	1.35	1.30			
е	C	).650 B	SC			
F	0.40	0.45	0.425			
L	0.25	0.40	0.30			
а	0°	8°				
All	Dimen	sions	in mm			



## Package Outline Dimensions (continued)

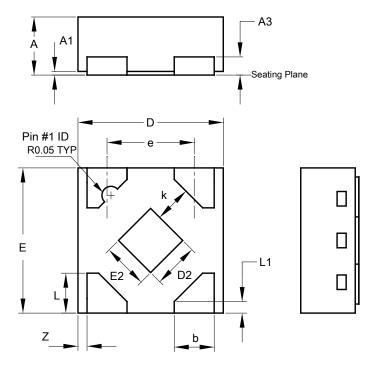
Please see http://www.diodes.com/package-outlines.html for the latest version.

#### (3) Package Type: SOT553



	SOT553					
Dim	Min	Max	Тур			
Α	0.55	0.62	0.60			
b	0.15	0.30	0.20			
С	0.10	0.18	0.15			
D	1.50	1.70	1.60			
Е	1.55	1.70	1.60			
E1	1.10	1.25	1.20			
е	0.50 BSC					
e1	1.0	00 BS	$\circ$			
F	0.00	0.10				
L	0.10	0.30	0.20			
а	6°	8°	7°			
AII	All Dimensions in mm					

#### (4) Package Type: X2-DFN0808-4



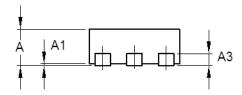
X2-DFN0808-4					
Dim	Min	Max	Тур		
Α	0.25	0.35	0.30		
A1	0	0.04	0.02		
A3	-	-	0.13		
b	0.17	0.27	0.22		
D	0.75	0.85	0.80		
D2	0.15	0.35	0.25		
E	0.75	0.85	0.80		
E2	0.15	0.35	0.25		
е	-	-	0.48		
k	0.20	-	-		
L	0.17	0.27	0.22		
L1	0.02	0.12	0.07		
z	-	-	0.05		
All Dimensions in mm					

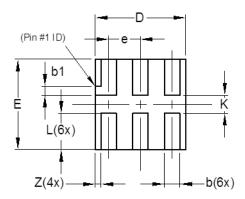


## Package Outline Dimensions (continued)

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

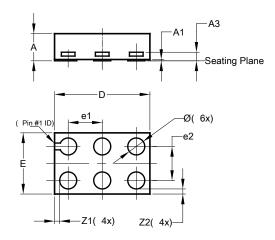
#### (5) Package Type: X2-DFN1010-6





	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			
Е	0.95	1.05	1.00			
е			0.35			
L	0.35	0.45	0.40			
K	0.15					
Z	_	_	0.065			
Α	All Dimensions in mm					

### (6) Package Type: X2-DFN1409-6



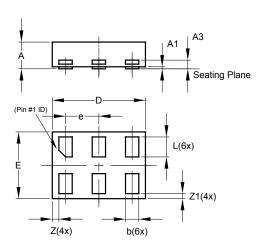
X2-DFN1409-6					
Dim	Min	Max	Тур		
Α	-	0.40	0.39		
A1	0	0.05	0.02		
A3	-	-	0.13		
Ø	0.20	0.30	0.25		
D	1.35	1.45	1.40		
Е	0.85	0.95	0.90		
e1	ı	-	0.50		
e2	ı	-	0.50		
<b>Z</b> 1	ı	1	0.075		
Z2	-	-	0.075		
All [	All Dimensions in mm				



## Package Outline Dimensions (continued)

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

### (7) Package Type: X2-DFN1410-6



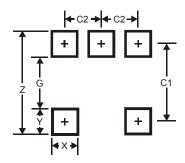
	X2-DFN1410-6					
Dim	Min	Max	Тур			
Α		0.40	0.39			
A1	0.00	0.05	0.02			
A3	_	_	0.13			
b	0.15	0.25	0.20			
D	1.35	1.45	1.40			
E	0.95	1.05	1.00			
е		_	0.50			
L	0.25	0.35	0.30			
Z			0.10			
<b>Z</b> 1	0.045	0.105	0.075			
All [	All Dimensions in mm					



## **Suggested Pad Layout**

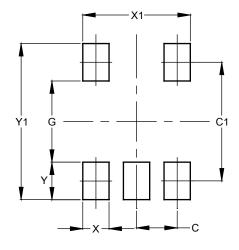
Please see http://www.diodes.com/package-outlines.html for the latest version.

### (1) Package Type: SOT25



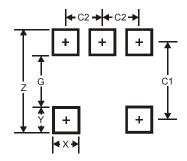
Dimensions	Value
Z	3.20
G	1.60
Х	0.55
Υ	0.80
C1	2.40
C2	0.95

### (2) Package Type: SOT353



Dimensions	Value (in mm)
С	0.650
C1	1.900
G	1.300
X	0.420
X1	1.720
Y	0.600
Y1	2.500

## (3) Package Type: SOT553



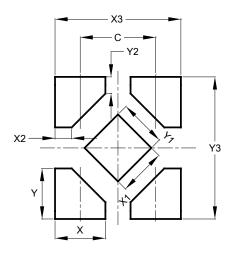
Dimensions	Value (in mm)
Z	2.2
G	1.2
Х	0.375
Υ	0.5
C1	1.7
C2	0.5



## Suggested Pad Layout (continued)

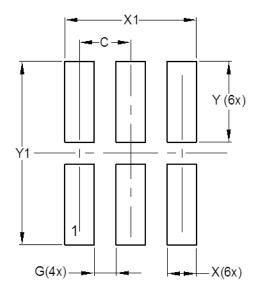
Please see http://www.diodes.com/package-outlines.html for the latest version.

### (4) Package Type: X2-DFN0808-4



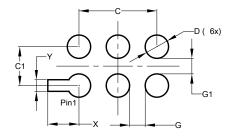
Dimensions	Value
С	0.480
Х	0.320
X1	0.300
X2	0.106
Х3	0.800
Υ	0.320
Y1	0.300
Y2	0.106
Y3	0.900

### (5) Package Type: X2-DFN1010-6



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

### (6) Package Type: X2-DFN1409-6



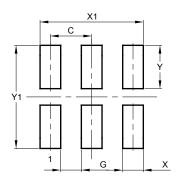
Dimensions	Value (in mm)
С	1.000
C1	0.500
D	0.300
G	0.200
G1	0.200
Х	0.400
Υ	0.150



## Suggested Pad Layout (continued)

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

#### (7) Package Type: X2-DFN1410-6



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

### **Mechanical Data**

#### SOT25

- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish Mate Tin Plated Leads, Solderable per MIL-STD-202, Method 208 @3
- Weight: 0.016 grams (Approximate)

#### **SOT353**

- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish Mate Tin Plated Leads, Solderable per MIL-STD-202, Method 208 <a>®</a>
- Weight: 0.006 grams (Approximate)

#### **SOT553**

- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish Mate Tin Plated Leads, Solderable per MIL-STD-202, Method 208 @3
- Weight: 0.003 grams (Approximate)

#### X2-DFN0808-4

- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish NiPdAu Nickel Palladium Gold, Solderable per MIL-STD-202, Method 208 @
- Weight: 0.001 grams (Approximate)

#### X2-DFN1010-6

- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish NiPdAu Nickel Palladium Gold, Solderable per MIL-STD-202, Method 208 @
- Weight: 0.001 grams (Approximate)

#### X2-DFN1409-6

- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish NiPdAu Nickel Palladium Gold, Solderable per MIL-STD-202, Method 208 @
- Weight: 0.002 grams (Approximate)

#### X2-DFN1410-6

- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish NiPdAu Nickel Palladium Gold, Solderable per MIL-STD-202, Method 208 @4
- Weight: 0.002 grams (Approximate)



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