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- Operating Range 2-V to 5.5-V V<sub>CC</sub>
- Latch-Up Performance Exceeds 250 mA Per JESD 17

### description/ordering information

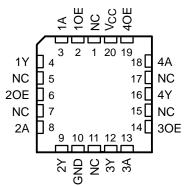
The 'AHC126 devices are quadruple bus buffer gates featuring independent line drivers with 3-state outputs. Each output is disabled when the associated output-enable (OE) input is low. When OE is high, the respective gate passes the data from the A input to its Y output.

To ensure the high-impedance state during power up or power down, OE should be tied to GND through a pulldown resistor; the minimum value of the resistor is determined by the current-sourcing capability of the driver.

#### SN54AHC126 . . . J OR W PACKAGE SN74AHC126 . . . D, DB, DGV, N, NS, OR PW PACKAGE (TOP VIEW)

	(10	/	,	
10E 1A 1Y 20E 2A 2Y GND	2 3 4 5	0	12 11 10	] V <sub>CC</sub> ] 4OE ] 4A ] 4Y ] 3OE ] 3A ] 3Y

SN54AHC126 . . . FK PACKAGE (TOP VIEW)



NC - No internal connection

#### **ORDERING INFORMATION**

T <sub>A</sub>	PACKA	GE†	ORDERABLE PART NUMBER	TOP-SIDE MARKING	
	PDIP – N	Tube	SN74AHC126N	SN74AHC126N	
	SOIC - D	Tube	SN74AHC126D	AHC126	
	3010 - 0	Tape and reel	SN74AHC126DR	A110120	
–40°C to 85°C	SOP – NS	Tape and reel	SN74AHC126NSR	AHC126	
40 0 10 00 0	SSOP – DB	Tape and reel	SN74AHC126DBR	HA126	
	TSSOP – PW	Tube	SN74AHC126PW	HA126	
	1330F - FW	Tape and reel	SN74AHC126PWR	11A120	
	TVSOP – DGV	Tape and reel	SN74AHC126DGVR	HA126	
	CDIP – J	Tube	SNJ54AHC126J	SNJ54AHC126J	
–55°C to 125°C	CFP – W	Tube	SNJ54AHC126W	SNJ54AHC126W	
	LCCC – FK	Tube	SNJ54AHC126FK	SNJ54AHC126FK	

<sup>†</sup> Package drawings, standard packing quantities, thermal data, symbolization, and PCB design guidelines are available at www.ti.com/sc/package.



Please be aware that an important notice concerning availability, standard warranty, and use in critical applications of Texas Instruments semiconductor products and disclaimers thereto appears at the end of this data sheet.

PRODUCTION DATA information is current as of publication date. Products conform to specifications per the terms of Texas Instruments standard warranty. Production processing does not necessarily include testing of all parameters.

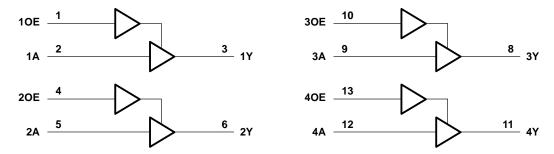


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FUNCTION TABLE (each buffer)										
INPUTS OUTPUT										
OE	Α	Y								
Н	Н	Н								
Н	L	L								
L	Х	Z								

### logic diagram (positive logic)



Pin numbers shown are for the D, DB, DGV, J, N, NS, PW, and W packages.

### absolute maximum ratings over operating free-air temperature range (unless otherwise noted)<sup>†</sup>

Supply voltage range, $V_{CC}$ Input voltage range, $V_I$ (see Note 1) Output voltage range, $V_O$ (see Note 1) Input clamp current, $I_{IK}$ ( $V_I < 0$ ) Output clamp current, $I_{OK}$ ( $V_O < 0$ or $V_O > V_{CC}$ Continuous output current, $I_O$ ( $V_O = 0$ to $V_{CC}$ ) Continuous current through $V_{CC}$ or GND Package thermal impedance, $\theta_{JA}$ (see Note 2)	c)	$\begin{array}{ccc} -0.5 \ \text{V to } 7 \ \text{V} \\ -0.5 \ \text{V to } V_{\text{CC}} + 0.5 \ \text{V} \\ -20 \ \text{mA} \\ \pm 20 \ \text{mA} \\ \pm 25 \ \text{mA} \\ \pm 50 \ \text{mA} \end{array}$
	DB package	
	DGV package	
	N package	80°C/W
	NS package	
	PW package	113°C/W
Storage temperature range, T <sub>stg</sub>		

<sup>†</sup> Stresses beyond those listed under "absolute maximum ratings" may 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-rated conditions for extended periods may affect device reliability.

NOTES: 1. The input and output voltage ratings may be exceeded if the input and output current ratings are observed.

2. The package thermal impedance is calculated in accordance with JESD 51-7.



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### recommended operating conditions (see Note 3)

			SN54A	HC126	SN74A	HC126	LINUT	
			MIN	MAX	MIN	MAX	UNIT	
VCC	Supply voltage		2	5.5	2	5.5	V	
		V <sub>CC</sub> = 2 V	1.5		1.5			
VIH	High-level input voltage	V <sub>CC</sub> = 3 V	2.1		2.1		V	
		V <sub>CC</sub> = 5.5 V	3.85		3.85			
		$V_{CC} = 2 V$		0.5		0.5		
VIL	Low-level input voltage	$V_{CC} = 3 V$		0.9		0.9	V	
		V <sub>CC</sub> = 5.5 V		1.65		1.65		
VI	Input voltage		0	5.5	0	5.5	V	
VO	Output voltage		0	VCC	0	VCC	V	
		$V_{CC} = 2 V$		-50		-50	μA	
IОН	High-level output current	$V_{CC} = 3.3 \text{ V} \pm 0.3 \text{ V}$		-4		-4		
		$V_{CC}$ = 5 V ± 0.5 V		-8	-8		mA	
		$V_{CC} = 2 V$		50		50	μΑ	
IOL	Low-level output current	$V_{CC}$ = 3.3 V ± 0.3 V		4		4		
		$V_{CC}$ = 5 V ± 0.5 V		8		8	mA	
A #/ A	Innut transition rise or fell rate	$V_{CC}$ = 3.3 V ± 0.3 V		100		100		
Δt/Δv	Input transition rise or fall rate	$V_{CC}$ = 5 V ± 0.5 V		20		20	ns/V	
TA	Operating free-air temperature	·	-55	125	-40	85	°C	

NOTE 3: All unused inputs of the device must be held at V<sub>CC</sub> or GND to ensure proper device operation. Refer to the TI application report, Implications of Slow or Floating CMOS Inputs, literature number SCBA004.

# electrical characteristics over recommended operating free-air temperature range (unless otherwise noted)

PARAMETER	TEST CONDITIONS	Vaa	Т	ς = 25°C	;	SN54A	HC126	SN74AHC126		UNIT	
PARAMETER	TEST CONDITIONS	Vcc	MIN	TYP	MAX	MIN	MAX	MIN	MAX	UNIT	
		2 V	1.9	2		1.9		1.9			
	I <sub>OH</sub> = -50 μA	3 V	2.9	3		2.9		2.9			
∨он		4.5 V	4.4	4.5		4.4		4.4		V	
	$I_{OH} = -4 \text{ mA}$	3 V	2.58			2.48		2.48			
	I <sub>OH</sub> = -8 mA	4.5 V	3.94			3.8		3.8			
		2 V			0.1		0.1		0.1		
	I <sub>OL</sub> = 50 μA	3 V			0.1		0.1		0.1		
VOL		4.5 V			0.1		0.1		0.1	V	
	I <sub>OL</sub> = 4 mA	3 V			0.36		0.5		0.44		
	I <sub>OL</sub> = 8 mA	4.5 V			0.36		0.5		0.44		
l	VI = 5.5 V or GND	0 V to 5.5 V			±0.1		±1*		±1	μA	
I <sub>OZ</sub>	$V_{O} = V_{CC}$ or GND	5.5 V			±0.25		±2.5		±2.5	μA	
ICC	$V_{I} = V_{CC} \text{ or } GND, \qquad I_{O} = 0$	5.5 V			4		40		40	μΑ	
Ci	$V_{I} = V_{CC}$ or GND	5 V		4	10				10	pF	

\* On products compliant to MIL-PRF-38535, this parameter is not production tested at  $V_{CC}$  = 0 V.



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# switching characteristics over recommended operating free-air temperature range, $V_{CC}$ = 3.3 V $\pm$ 0.3 V (unless otherwise noted) (see Figure 1)

00	•		, ,	-	,							
PARAMETER	FROM	то	LOAD	Τį	λ = 25°C	;	SN54A	HC126	SN74A	HC126	UNIT	
PARAMETER	(INPUT)	(OUTPUT)	CAPACITANCE	MIN	TYP	MAX	MIN	MAX	MIN	MAX	UNIT	
<sup>t</sup> PLH	А	Y	C <sub>I</sub> = 15 pF		5.6*	8*	1*	9.5*	1	9.5	ns	
<sup>t</sup> PHL	7	I	CL = 15 pr		5.6*	8*	1*	9.5*	1	9.5	115	
<sup>t</sup> PZH	OE	Y C <sub>L</sub> = 15 pF	CL = 15 pE		5.4*	8*	1*	9.5*	1	9.5	ns	
tPZL	UE			5.4*	8*	1*	9.5*	1	9.5	115		
<sup>t</sup> PHZ	OE	Y	C <sub>I</sub> = 15 pF		7*	9.7*	1*	11.5*	1	11.5	ns	
t <sub>PLZ</sub>	ÛE	I			7*	9.7*	1*	11.5*	1	11.5		
<sup>t</sup> PLH	٨	А	Y	C <sub>I</sub> = 50 pF		8.1	11.5	1	13	1	13	ns
<sup>t</sup> PHL	~	Ι	CL = 50 pF		8.1	11.5	1	13	1	13	115	
<sup>t</sup> PZH	OE	Y	$C_{I} = 50 \text{ pF}$		7.9	11.5	1	13	1	13	20	
<sup>t</sup> PZL	ÛE	I	CL = 30 pr		7.9	11.5	1	13	1	13	ns	
<sup>t</sup> PHZ	OE	Y	$C_{\rm L} = 50  \rm pE$		9.5	13.2	1	15	1	15	ns	
<sup>t</sup> PLZ		I I	CL = 50 pF		9.5	13.2	1	15	1	15	115	
<sup>t</sup> sk(o)			C <sub>L</sub> = 50 pF			1.5**				1.5	ns	

\* On products compliant to MIL-PRF-38535, this parameter is not production tested.

\*\* On products compliant to MIL-PRF-38535, this parameter does not apply.

# switching characteristics over recommended operating free-air temperature range, $V_{CC}$ = 5 V $\pm$ 0.5 V (unless otherwise noted) (see Figure 1)

	-			-	-						
PARAMETER	FROM	то	LOAD	Т	ן = 25°C	;	SN54A	HC126	SN74A	HC126	UNIT
PARAMETER	(INPUT)	(OUTPUT)	CAPACITANCE	MIN	TYP	MAX	MIN	MAX	MIN	MAX	UNIT
<sup>t</sup> PLH	А	Y	C <sub>I</sub> = 15 pF		3.8*	5.5*	1*	6.5*	1	6.5	ns
<sup>t</sup> PHL	A	T	CL = 15 pr		3.8*	5.5*	1*	6.5*	1	6.5	115
<sup>t</sup> PZH	OE	Y	C <sub>L</sub> = 15 pF		3.6*	5.1*	1*	6*	1	6	20
<sup>t</sup> PZL	ÛE	Ŷ			3.6*	5.1*	1*	6*	1	6	ns
<sup>t</sup> PHZ	OE	Y	C <sub>L</sub> = 15 pF		4.6*	6.8*	1*	8*	1	8	ns
<sup>t</sup> PLZ	ÛE	I			4.6*	6.8*	1*	8*	1	8	
<sup>t</sup> PLH	А	Y	CL = 50 pF		5.3	7.5	1	8.5	1	8.5	ns
<sup>t</sup> PHL	A	I			5.3	7.5	1	8.5	1	8.5	
<sup>t</sup> PZH	OE	Y	C <sub>L</sub> = 50 pF		5.1	7.1	1	8	1	8	ns
<sup>t</sup> PZL	ÛE	Ť	CL = 30 pr		5.1	7.1	1	8	1	8	115
<sup>t</sup> PHZ	OE	Y	$C_{I} = 50  pF$		6.1	8.8	1	10	1	10	
<sup>t</sup> PLZ	0E	ſ			6.1	8.8	1	10	1	10	ns
<sup>t</sup> sk(o)			C <sub>L</sub> = 50 pF			1**				1	ns

\* On products compliant to MIL-PRF-38535, this parameter is not production tested.

\*\* On products compliant to MIL-PRF-38535, this parameter does not apply.



# SN54AHC126, SN74AHC126 QUADRUPLE BUS BUFFER GATES WITH 3-STATE OUTPUTS SCLS257L – DECEMBER 1995 – REVISED JULY 2003

# noise characteristics, V<sub>CC</sub> = 5 V, C<sub>L</sub> = 50 pF, T<sub>A</sub> = 25°C (see Note 4)

DADAMETED	SN74A	UNIT	
PARAMETER	MIN	MAX	UNIT
Quiet output, maximum dynamic V <sub>OL</sub>		0.8	V
Quiet output, minimum dynamic V <sub>OL</sub>		-0.8	V
Quiet output, minimum dynamic V <sub>OH</sub>	4.4		V
High-level dynamic input voltage	3.5		V
Low-level dynamic input voltage		1.5	V
	Quiet output, minimum dynamic V <sub>OL</sub> Quiet output, minimum dynamic V <sub>OH</sub> High-level dynamic input voltage	PARAMETER MIN   Quiet output, maximum dynamic V <sub>OL</sub> Quiet output, minimum dynamic V <sub>OL</sub> Quiet output, minimum dynamic V <sub>OH</sub> 4.4   High-level dynamic input voltage 3.5	MIN MAX   Quiet output, maximum dynamic V <sub>OL</sub> 0.8   Quiet output, minimum dynamic V <sub>OL</sub> -0.8   Quiet output, minimum dynamic V <sub>OH</sub> 4.4   High-level dynamic input voltage 3.5

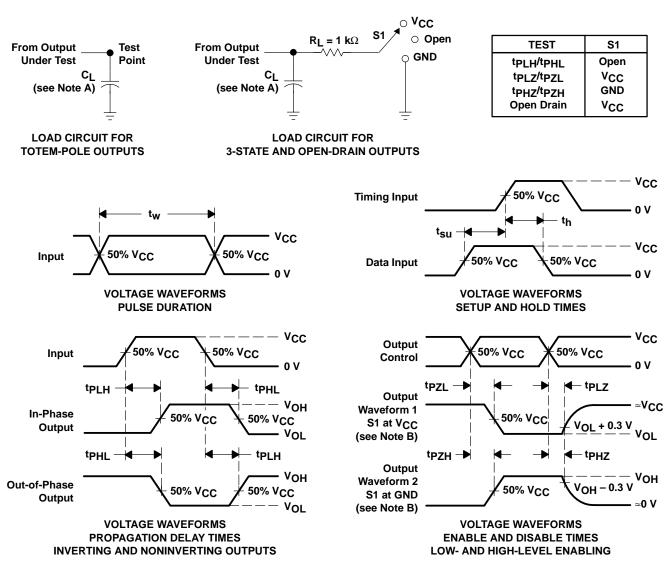
NOTE 4: Characteristics are for surface-mount packages only.

## operating characteristics, V<sub>CC</sub> = 5 V, T<sub>A</sub> = $25^{\circ}$ C

	PARAMETER	TEST CO	ONDITIONS	TYP	UNIT
Cpd	Power dissipation capacitance	No load,	f = 1 MHz	14	pF



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PARAMETER MEASUREMENT INFORMATION

NOTES: A. C<sub>L</sub> includes probe and jig capacitance.

- B. Waveform 1 is for an output with internal conditions such that the output is low except when disabled by the output control. Waveform 2 is for an output with internal conditions such that the output is high except when disabled by the output control.
- C. All input pulses are supplied by generators having the following characteristics: PRR  $\leq$  1 MHz, Z<sub>O</sub> = 50  $\Omega$ , t<sub>f</sub>  $\leq$  3 ns, t<sub>f</sub>  $\leq$  3 ns.
- D. The outputs are measured one at a time with one input transition per measurement.
- E. All parameters and waveforms are not applicable to all devices.

#### Figure 1. Load Circuit and Voltage Waveforms



4-Jun-2007

### **PACKAGING INFORMATION**

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Orderable Device	Status <sup>(1)</sup>	Package Type	Package Drawing	Pins	Package Qty	e Eco Plan <sup>(2)</sup>	Lead/Ball Finisł	n MSL Peak Temp <sup>(3)</sup>
5962-9686201Q2A	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type
5962-9686201QCA	ACTIVE	CDIP	J	14	1	TBD	A42 SNPB	N / A for Pkg Type
5962-9686201QDA	ACTIVE	CFP	W	14	1	TBD	A42	N / A for Pkg Type
SN74AHC126D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126DBLE	OBSOLETE	SSOP	DB	14		TBD	Call TI	Call TI
SN74AHC126DBR	ACTIVE	SSOP	DB	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126DBRE4	ACTIVE	SSOP	DB	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126DBRG4	ACTIVE	SSOP	DB	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126DE4	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126DG4	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126DGVR	ACTIVE	TVSOP	DGV	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126DGVRE4	ACTIVE	TVSOP	DGV	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126DGVRG4	ACTIVE	TVSOP	DGV	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126DR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126DRE4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126DRG4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126N	ACTIVE	PDIP	Ν	14	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type
SN74AHC126NE4	ACTIVE	PDIP	Ν	14	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type
SN74AHC126NSR	ACTIVE	SO	NS	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126NSRE4	ACTIVE	SO	NS	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126NSRG4	ACTIVE	SO	NS	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126PW	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126PWE4	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126PWG4	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126PWLE	OBSOLETE	TSSOP	PW	14		TBD	Call TI	Call TI
SN74AHC126PWR	ACTIVE	TSSOP	PW	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC126PWRE4	ACTIVE	TSSOP	PW	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM

Orderable Device	Status <sup>(1)</sup>	Package Type	Package Drawing	Pins	Package Qty	e Eco Plan <sup>(2)</sup>	Lead/Ball Finish	MSL Peak Temp <sup>(3)</sup>
SN74AHC126PWRG4	ACTIVE	TSSOP	PW	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SNJ54AHC126FK	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type
SNJ54AHC126J	ACTIVE	CDIP	J	14	1	TBD	A42 SNPB	N / A for Pkg Type
SNJ54AHC126W	ACTIVE	CFP	W	14	1	TBD	A42	N / A for Pkg Type

<sup>(1)</sup> The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.

NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.

PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

**OBSOLETE:** TI has discontinued the production of the device.

<sup>(2)</sup> Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check http://www.ti.com/productcontent for the latest availability information and additional product content details.

**TBD:** The Pb-Free/Green conversion plan has not been defined.

**Pb-Free (RoHS):** TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

**Pb-Free (RoHS Exempt):** This component has a RoHS exemption for either 1) lead-based flip-chip solder bumps used between the die and package, or 2) lead-based die adhesive used between the die and leadframe. The component is otherwise considered Pb-Free (RoHS compatible) as defined above.

Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

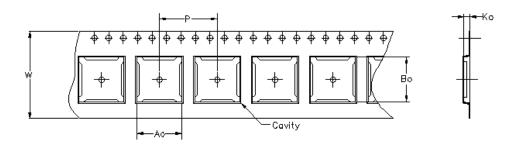
<sup>(3)</sup> MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

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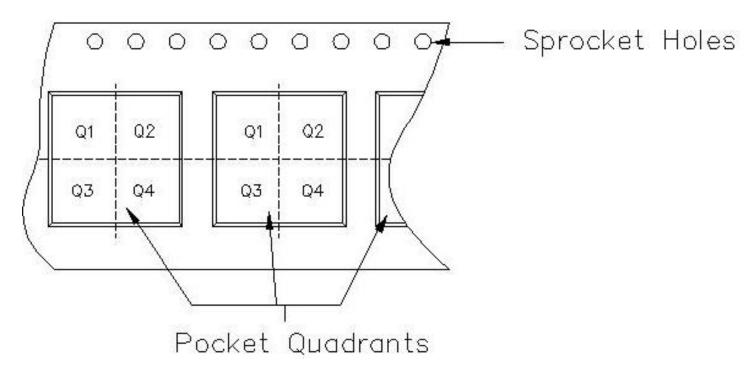


16-Jul-2007



Carrier tape design is defined largely by the component lentgh, width, and thickness.

Ao = Dimension designed to accommodate the component width.							
Bo = Dimension designed to accommodate the component length.							
Ko = Dimension designed to accommodate the component thickness.							
W = Overall width of the carrier tape.							
P = Pitch between successive cavity centers.							



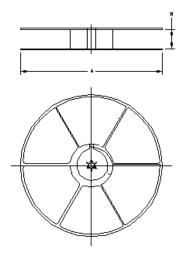
TAPE AND REEL INFORMATION

# PACKAGE MATERIALS INFORMATION



16-Jul-2007

Device	Package	Pins	Site	Reel Diameter (mm)	Reel Width (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
SN74AHC126DBR	DB	14	MLA	330	16	8.2	6.6	2.5	12	16	Q1
SN74AHC126DGVR	DGV	14	MLA	330	12	6.8	4.0	1.6	8	16	Q1
SN74AHC126DR	D	14	MLA	330	16	6.5	9.0	2.1	8	16	Q1
SN74AHC126NSR	NS	14	MLA	330	16	8.2	10.5	2.5	12	16	Q1
SN74AHC126PWR	PW	14	MLA	330	12	7.0	5.6	1.6	8	12	Q1



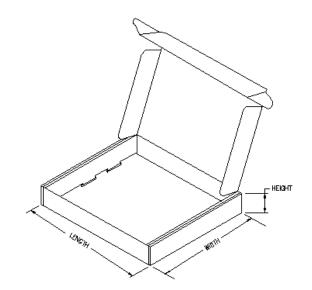
### TAPE AND REEL BOX INFORMATION

Device	Package	Pins	Site	Length (mm)	Width (mm)	Height (mm)
SN74AHC126DBR	DB	14	MLA	346.0	346.0	33.0
SN74AHC126DGVR	DGV	14	MLA	346.0	346.0	29.0
SN74AHC126DR	D	14	MLA	346.0	346.0	33.0
SN74AHC126NSR	NS	14	MLA	346.0	346.0	33.0
SN74AHC126PWR	PW	14	MLA	346.0	346.0	29.0



# PACKAGE MATERIALS INFORMATION

16-Jul-2007



J (R-GDIP-T\*\*) 14 LEADS SHOWN

CERAMIC DUAL IN-LINE PACKAGE



NOTES: A. All linear dimensions are in inches (millimeters).

- B. This drawing is subject to change without notice.
- C. This package is hermetically sealed with a ceramic lid using glass frit.
- D. Index point is provided on cap for terminal identification only on press ceramic glass frit seal only.
- E. Falls within MIL STD 1835 GDIP1-T14, GDIP1-T16, GDIP1-T18 and GDIP1-T20.

W (R-GDFP-F14)

CERAMIC DUAL FLATPACK



- A. All linear dimensions are in inches (millimeters).
  - B. This drawing is subject to change without notice.
  - C. This package can be hermetically sealed with a ceramic lid using glass frit.
  - D. Index point is provided on cap for terminal identification only.
  - E. Falls within MIL STD 1835 GDFP1-F14 and JEDEC MO-092AB



MLCC006B - OCTOBER 1996

### FK (S-CQCC-N\*\*)

#### LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



NOTES: A. All linear dimensions are in inches (millimeters).

- B. This drawing is subject to change without notice.
- C. This package can be hermetically sealed with a metal lid.
- D. The terminals are gold plated.
- E. Falls within JEDEC MS-004



# N (R-PDIP-T\*\*)

PLASTIC DUAL-IN-LINE PACKAGE

16 PINS SHOWN



NOTES:

- A. All linear dimensions are in inches (millimeters).B. This drawing is subject to change without notice.
- Falls within JEDEC MS-001, except 18 and 20 pin minimum body length (Dim A).
- $\triangle$  The 20 pin end lead shoulder width is a vendor option, either half or full width.



PLASTIC SMALL-OUTLINE

MPDS006C - FEBRUARY 1996 - REVISED AUGUST 2000

### DGV (R-PDSO-G\*\*)

24 PINS SHOWN



NOTES: A. All linear dimensions are in millimeters.

B. This drawing is subject to change without notice.

- C. Body dimensions do not include mold flash or protrusion, not to exceed 0,15 per side.
- D. Falls within JEDEC: 24/48 Pins MO-153

14/16/20/56 Pins – MO-194



D (R-PDSO-G14)

PLASTIC SMALL-OUTLINE PACKAGE



NOTES: A. All linear dimensions are in inches (millimeters).

- B. This drawing is subject to change without notice.
- Body length does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed .006 (0,15) per end.

Body width does not include interlead flash. Interlead flash shall not exceed .017 (0,43) per side.

E. Reference JEDEC MS-012 variation AB.



### PLASTIC SMALL-OUTLINE PACKAGE

#### 0,51 0,35 ⊕0,25⊛ 1,27 8 14 0,15 NOM 5,60 8,20 5,00 7,40 $\bigcirc$ Gage Plane ₽ 0,25 7 1 1,05 0,55 0-10 Δ 0,15 0,05 Seating Plane — 2,00 MAX 0,10PINS \*\* 14 16 20 24 DIM 10,50 10,50 12,90 15,30 A MAX A MIN 9,90 9,90 12,30 14,70 4040062/C 03/03

NOTES: A. All linear dimensions are in millimeters.

NS (R-PDSO-G\*\*)

**14-PINS SHOWN** 

- B. This drawing is subject to change without notice.
- C. Body dimensions do not include mold flash or protrusion, not to exceed 0,15.



MSSO002E - JANUARY 1995 - REVISED DECEMBER 2001

### DB (R-PDSO-G\*\*)

PLASTIC SMALL-OUTLINE

28 PINS SHOWN



NOTES: A. All linear dimensions are in millimeters.

- B. This drawing is subject to change without notice.
- C. Body dimensions do not include mold flash or protrusion not to exceed 0,15.
- D. Falls within JEDEC MO-150



MTSS001C - JANUARY 1995 - REVISED FEBRUARY 1999

# PW (R-PDSO-G\*\*)

### PLASTIC SMALL-OUTLINE PACKAGE

14 PINS SHOWN



NOTES: A. All linear dimensions are in millimeters.

- B. This drawing is subject to change without notice.
- C. Body dimensions do not include mold flash or protrusion not to exceed 0,15.
- D. Falls within JEDEC MO-153



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