#### SN54153, SN54LS153, SN54S153 SN74153, SN74LS153, SN74S153 DUAL 4-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS

SDLS055A - DECEMBER 1972 - REVISED MAY 2007

- Permits Multiplexing from N lines to 1 line
- Performs Parallel-to-Serial Conversion
- Strobe (Enable) Line Provided for Cascading (N lines to n lines)
- High-Fan-Out, Low-Impedance, Totem-Pole Outputs
- Fully Compatible with most TTL Circuits

	Т	YPICAL AVERA	AGE	TYPICAL
TYPE	PROPA	GATION DELA	Y TIMES	POWER
	FROM	FROM	FROM	DISSIPATION
	DATA	STROBE	SELECT	
153	14 ns	17 ns	22 ns	180 mW
<b>LS153</b>	14 ns	19 ns	22 ns	31 mW
'S153	6 ns	9.5 ns	12 ns	225 mW

#### description

Each of these monolithic, data selectors/multiplexers contains inverters and drivers to supply fully complementary, on-chip, binary decoding data selection to the AND-OR gates. Separate strobe inputs are provided for each of the two four-line sections.

#### **FUNCTION TABLE**

- F	LECT PUTS		ATA	INPUT:	3	STROBE	OUTPUT
В	Α	CO	C1	C2	C3	Ğ	Y
×	×	X	X	Х	×	Н	L
L	L	L	X	X	x	Ł.	L
L	L	н	Х	X	х	L	н
L	Н	х	L	×	×	L	L
L	н	×	Н	X	×	L	н
н	L	х	х	L	x	L	L
Н	L	x	Х	Н	×	L	н
Н	Н	×	Х	X	ㄴ	Ł	L
Н	H	Х	Х_	Х	н	L	н

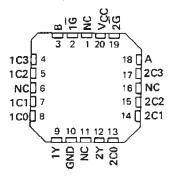
Select inputs A and B are common to both sections.

H = high level, L = low level, X = irrelevant

# SN54153, SN54LS153, SN54S153...J OR W PACKAGE<sup>(1)</sup> SN74153...N PACKAGE SN74LS153, SN74S153...D OR N PACKAGE (TOP VIEW)

1 <u>G</u> [	1	U <sub>16</sub>	∐ vcc
вС	2	15	2 G
1C3 🗆	3	14	□ A
1C2	4	13	2C3
1C1 🗆	5	12	2C2
1 CO [	6	11	2C1
1Y 🗌	7	10	2C0
GND [	8	9	_ 2Y

### SN54LS153, SN54S153 . . . FK PACKAGE <sup>(1)</sup> (TOP VIEW)



NC - No internal connection

(1) SN54S153, SN74153, and SN74S153 are obsolete.

#### absolute maximum ratings over operating free-air temperature range (unless otherwise noted)

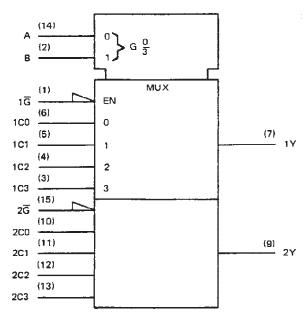
Supply voltage, Vo	C (See Note 1)			 	 		 	 	 			7	V
Input voltage: '15	3, <b>'</b> S153			 	 		 	 	 			5.5	V
'LS'	1 <b>53</b>			 	 		 	 	 			7	V
Operating free-air t	emperature range:	SN541		 	 	<i></i>	 	 	 _	55°	C to	125°0	3
		SN747		 . ,	 		 	 	 	. 0	°C t	o 70°0	2
Storage temperatur	e range		•	 	 		 	 	 _	65 °	C to	150°0	2

NOTE 1: Voltage values are with respect to network ground terminal.

PRODUCTION DATA documents contain information 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.

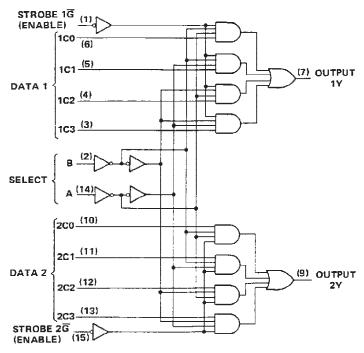


#### logic symbol<sup>†</sup>



<sup>&</sup>lt;sup>†</sup>This symbol is in accordance with ANSI/IEEE Std. 91-1984 and IEC Publication 617-12.

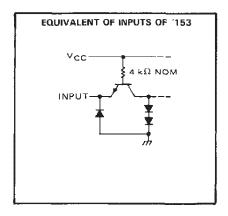
#### logic diagrams (positive logic)

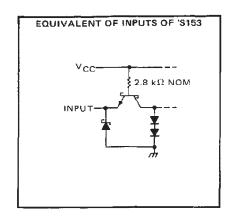


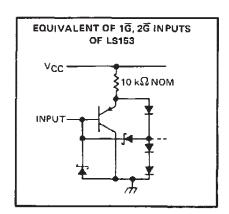
Pin numbers shown are for D, J, N, and W packages.

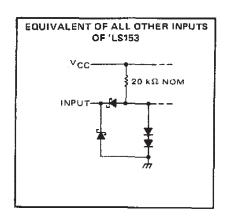


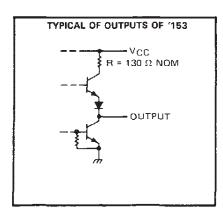
#### schematics of inputs and outputs

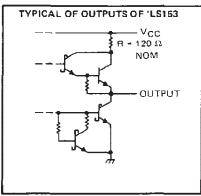


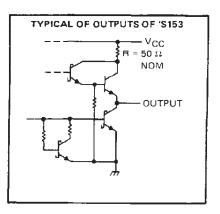












## SN54153, SN74153 DUAL 4-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS

#### recommended operating conditions

		SN5415	3		UNIT		
	MIN	NOM	MAX	MIN	NOM	MAX	< OIVII
Supply voltage, V <sub>CC</sub>	4.5	5	5.5	4.75	5	5.25	V
High-level output current, IOH			-800			-800	μА
Low-level output current, IOL		-	16		·	16	mA
Operating free-air temperature, TA	-55		125	0		70	°C

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

		TEST COMPLETIONS!		SN5415	3		UNIT		
	PARAMETER	TEST CONDITIONS <sup>†</sup>	MIN	TYP#	MAX	MIN	ТҮР‡	MAX	UNIT
VIH	High-level input voltage		2			2			٧
VIL	Low-level input voltage				8.0			8.0	V
VIK	Input clamp voltage	V <sub>CC</sub> = MIN, I <sub>1</sub> = -12 mA			-1.5			-1.5	V
voн	High-level output voltage	V <sub>CC</sub> = MIN, V <sub>IH</sub> = 2 V, V <sub>IL</sub> = 0.8 V, I <sub>OH</sub> = -800 μA	2.4	3.4		2.4	3.4		٧
VOL	Low-level output voltage	V <sub>CC</sub> = MIN, V <sub>IH</sub> = 2 V, V <sub>IL</sub> = 0.8 V, I <sub>OL</sub> = 16 mA		0.2	0.4		0.2	0.4	V
f g	Input current at maximum input voltage	V <sub>CC</sub> = MAX, V <sub>I</sub> = 5.5 V			1			1	mΑ
ίн	High-level input current	V <sub>CC</sub> = MAX, V <sub>I</sub> = 2.4 V			40			40	μΑ
IIL	Low-level input current	V <sub>CC</sub> = MAX, V <sub>I</sub> = 0.4 V			-1.6			-1.6	mA
los	Short-circuit output current §	V <sub>CC</sub> = MAX	-20		-55	18	<del></del>	-57	mA
ICCL	Supply current, output low	V <sub>CC</sub> = MAX, See Note 2		36	52		36	60	mA

For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions.

#### switching characteristics, VCC = 5 V, TA = 25°C

PARAMETER¶	FROM	то	TEST CONDITIONS	MIN	TYP	MAX	LINIT
FARAWEIGN	(INPUT)	(DUTPUT)	TEST CONDITIONS			10000	0,,,,
tPLH	Data	Y			12	18	ns
tPHL	Data	Y	7		15	23	กร
tPLH	Select	Y	C <sub>L</sub> = 30 pF, R <sub>L</sub> = 400 Ω,		22	34	ns
tPHL	Select	Y	See Note 3		22	34	П\$
tPLH	Strobe G	Y	7		19	30	กร
tpHL	Strobe G	Y	7		15	23	กร

 $<sup>\</sup>P_{tPLH} = propagation delay time, low-to-high-level output$ 

 $<sup>^{\</sup>ddagger}$ All typical values are at  $V_{CC} = 5 \text{ V}$ ,  $T_{A} = 25 ^{\circ}\text{C}$ .

SNot more than one output should be shorted at a time.

NOTE 2: I<sub>CCL</sub> is measured with the outputs open and all inputs grounded.

tpHL = propagation delay time, high-to-low-level output

NOTE 3: Load circuits and voltage waveforms are shown in Section 1.

#### recommended operating conditions

		S	N54LS1	53	S	UNIT		
		MIN	NOM	MAX	MIN	NOM	MAX	ONTI
Vcc	Supply voltage	4.5	5	5,5	4.75	5	5.25	V
VіН	High-level input voltage	2			2			٧
VIL	Low-level input voltage			0.7			0.8	V
ЮН	High-level output current			- 0.4			- 0.4	mΑ
loL	Low-level output current			4			8	mΑ
TA	Operating free-air temperature	55		125	Ö		70	°C

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

PARAMETER	TEST CONDIT	TONE T		S	N54LS1	153	s	UNIT		
PANAIVIETEN	FEST CONDIT	10105 1		MIN	TYP‡	MAX	MIN	TYP‡	MAX	וואטן
Vik	V <sub>CC</sub> = MIN, I <sub>1</sub> = - 18 mA					- 1.5		-	- 1.5	V
Voн	V <sub>CC</sub> = MIN, V <sub>IH</sub> = 2 V, ! <sub>OH</sub> = -0.4 mA	VIL = MAX		2.5	3.4		2,7	3.4		٧
Va	V <sub>CC</sub> = MIN, V <sub>IH</sub> = 2 V,		IOL = 4 mA		0.25	0.4		0.25	0.4	V
VOL	VIL = MAX,	Ī	I <sub>OL</sub> = 8 mA	]		·		0.35	0.5	1 '
I4	VCC = MAX, VI = 7 V				-	0.1			0.1	mΑ
IrH	V <sub>CC</sub> = MAX, V <sub>1</sub> = 2.7 V		•			20			20	μА
1G, 2G	V <sub>CC</sub> = MAX, V <sub>J</sub> = 0.4 V					- 0.2	1		-0.2	
All other	VCC = WAX, VI = 0.4 V					- 0.4			- 0.4	mA
loss	Vcc = MAX			20		<b>— 100</b>	- 20		- 100	mA
ICCL	V <sub>CC</sub> = MAX, See Note 2			ŀ	6.2	10		6.2	10	mΑ

<sup>†</sup> For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions.

NOTE 2: ICCL is measured with the outputs open and all inputs grounded.

#### switching characteristics, VCC = 5 V, TA = 25°C

PARAMETER¶	FROM (INPUT)	TO (OUTPUT)	TEST CONDITIONS	MIN	TYP	MAX	UNIT
tpLH	Data	Y			10	15	ns
tPHL.	Data	Y	C <sub>L</sub> = 15 pF,		17	26	п\$
tPLH	Select	Y	$R_{L} = 2 k\Omega$ ,		19	29	пѕ
tPHL	Select	Y	See Note 3		25	38	ns
tPLH	Strobe G	Y	See Note S		16	24	nş
tPHL	Strabe G	Y			21	32	ns

 $<sup>\</sup>P_{\text{tpLH}}$  = propagation delay time, low-to-high-level output

NOTE 3: Load circuits and voltage waveforms are shown in Section 1.

 $<sup>\</sup>ddagger$  All typical values are at V  $_{CC}$  = 5 V, T  $_{A}$  = 25  $^{\circ}$  C.

<sup>§</sup>Not more than one output should be shorted at a time.

tpHL = propagation delay time, high-to-low-level output

### SN54S153, SN74S153 DUAL 4-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS

#### recommended operating conditions

	S	N54S15	3	SN74S153			דומט
	MIN	NOM	MAX	MIN	NOM	MAX	וואוט
Supply voltage, VCC	4.5	5	5.5	4.75	5	5.25	٧
High-level output current, IOH			-1			-1	mΑ
Low-level output current, IQL			20			20	mA
Operating free-air temperature, TA	-55		125	0		70	,C

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

	PARAMETER	TEST CONDITIONS†	MIN	TYP	MAX	UNIT
VIH	High-level input voltage		2			٧
VIL	Low-level input voltage				8.0	V
VIK	Input clamp voltage	V <sub>CC</sub> = MIN, I <sub>1</sub> = -18 mA			-1.2	٧
V	High lavel output valtage	V <sub>CC</sub> = MIN, V <sub>IH</sub> = 2 V, Series 54	2.5	3.4		V
VOH	High-level output voltage	V <sub>IL</sub> = 0.8 V, IOH = -1 mA Series 74	3 2.7	3.4		ľ
	Low-level output voltage	V <sub>CC</sub> = MIN, V <sub>IH</sub> = 2 V,	- 1	_	0.5	V
OF	Low-level output vortage	V <sub>IL</sub> = 0.8 V, I <sub>OL</sub> = 20 mA			0.5	L
T <sub>I</sub>	Input current at maximum input voltage	V <sub>CC</sub> = MAX, V <sub>I</sub> = 5.5 V			1	mΑ
ЧН	High-level input current	V <sub>CC</sub> = MAX, V <sub>I</sub> = 2.7 V			50	μA
HL	Low-level input current	V <sub>CC</sub> = MAX, V <sub>I</sub> = 0.5 V			-2	mA
los	Short-circuit output current \$	V <sub>CC</sub> = MAX	-40		-100	mΑ
CCL	Supply current, low-level output	V <sub>CC</sub> = MAX, See Note 2		45	70	mΑ

<sup>†</sup> For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions.

#### switching characteristics, VCC = 5 V, TA = 25°C

PARAMETER¶	FROM (INPUT)	TO (OUTPUT)	TEST CONDITIONS	MIN	TYP	MAX	UNIT
<sup>t</sup> PLH	Data	Y			6	9	ns
tPHL	Data	Y	7		6	9	ns
<sup>t</sup> PLH	Select	Y	CL = 15 pF, RL = 280 Ω,		11.5	18	пѕ
tPHL	Select	Y	See Note 3		12	18	ns
tРLН	Strobe G	Y	7		10	15	пѕ
teht.	Strobe 🛱	Y			9	13.5	ns

 $t_{PLH} = propagation delay time, low-to-high-level output$ 

NOTE 3: Load circuits and voltage waveforms are shown in Section 1.



 $<sup>\</sup>frac{1}{2}$ All typical values are at  $V_{CC} \approx 5 \text{ V. T}_{A} = 25^{\circ}\text{C.}$ 

<sup>§</sup>Not more than one output should be shorted at a time and duration of short-circuit should not exceed one second.

NOTE 2: ICCL is measured with the outputs open and all inputs grounded.

tpHL = propagation dalay time, high-to-low-level output

25-Jan-2012

#### **PACKAGING INFORMATION**

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan <sup>(2)</sup>	Lead/ Ball Finish	MSL Peak Temp <sup>(3)</sup>	Samples (Requires Login)
76011012A	ACTIVE	LCCC	FK	20	1	TBD	Call TI	Call TI	
7601101EA	ACTIVE	CDIP	J	16	1	TBD	Call TI	Call TI	
7601101FA	ACTIVE	CFP	W	16	1	TBD	Call TI	Call TI	
JM38510/07902BEA	OBSOLETE	CDIP	J	16		TBD	Call TI	Call TI	
JM38510/07902BFA	OBSOLETE	CFP	W	16		TBD	Call TI	Call TI	
JM38510/30902B2A	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	
JM38510/30902BEA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	
M38510/30902B2A	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	
M38510/30902BEA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	
SN54153J	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	
SN54LS153J	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	
SN54S153J	OBSOLETE	CDIP	J	16		TBD	Call TI	Call TI	
SN74153N	OBSOLETE	PDIP	N	16		TBD	Call TI	Call TI	
SN74LS153D	ACTIVE	SOIC	D	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74LS153DE4	ACTIVE	SOIC	D	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74LS153DG4	ACTIVE	SOIC	D	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74LS153DR	ACTIVE	SOIC	D	16	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74LS153DRE4	ACTIVE	SOIC	D	16	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74LS153DRG4	ACTIVE	SOIC	D	16	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74LS153J	OBSOLETE	CDIP	J	16		TBD	Call TI	Call TI	
SN74LS153N	ACTIVE	PDIP	N	16	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type	
SN74LS153N3	OBSOLETE	PDIP	N	16		TBD	Call TI	Call TI	
SN74LS153NE4	ACTIVE	PDIP	N	16	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type	
SN74LS153NSR	ACTIVE	SO	NS	16	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	





www.ti.com 25-Jan-2012

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan <sup>(2)</sup>	Lead/ Ball Finish	MSL Peak Temp <sup>(3)</sup>	Samples (Requires Login)
SN74LS153NSRE4	ACTIVE	SO	NS	16	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74LS153NSRG4	ACTIVE	SO	NS	16	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74S153D	OBSOLETE	SOIC	D	16		TBD	Call TI	Call TI	
SN74S153N	OBSOLETE	PDIP	N	16		TBD	Call TI	Call TI	
SN74S153N3	OBSOLETE	PDIP	N	16		TBD	Call TI	Call TI	
SNJ54153J	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	
SNJ54153W	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	
SNJ54LS153FK	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	
SNJ54LS153J	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	
SNJ54LS153W	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	
SNJ54S153FK	OBSOLETE	LCCC	FK	20		TBD	Call TI	Call TI	
SNJ54S153J	OBSOLETE	CDIP	J	16		TBD	Call TI	Call TI	
SNJ54S153W	OBSOLETE	CFP	W	16		TBD	Call TI	Call TI	

(1) 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.

**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>(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.

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



#### **PACKAGE OPTION ADDENDUM**

25-Jan-2012

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In no event shall TI's liability arising out of such information exceed the total purchase price of the TI part(s) at issue in this document sold by TI to Customer on an annual basis.

#### OTHER QUALIFIED VERSIONS OF SN54153, SN54LS153, SN54S153, SN74LS153, SN74LS153, SN74S153:

Catalog: SN74153, SN74LS153, SN74S153

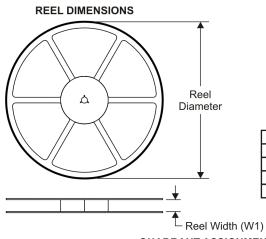
• Military: SN54153, SN54LS153, SN54S153

NOTE: Qualified Version Definitions:

- Catalog TI's standard catalog product
- Military QML certified for Military and Defense Applications



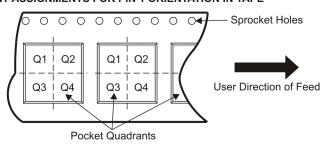
#### TAPE AND REEL INFORMATION





	Dimension designed to accommodate the component width
B0	Dimension designed to accommodate the component length
K0	Dimension designed to accommodate the component thickness
W	Overall width of the carrier tape
P1	Pitch between successive cavity centers

QUADRANT ASSIGNMENTS FOR PIN 1 ORIENTATION IN TAPE



#### \*All dimensions are nominal

Device	Package Type	Package Drawing			Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
SN74LS153DR	SOIC	D	16	2500	330.0	16.4	6.5	10.3	2.1	8.0	16.0	Q1
SN74LS153NSR	SO	NS	16	2000	330.0	16.4	8.2	10.5	2.5	12.0	16.0	Q1





\*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Length (mm)	Width (mm)	Height (mm)
SN74LS153DR	SOIC	D	16	2500	333.2	345.9	28.6
SN74LS153NSR	SO	NS	16	2000	346.0	346.0	33.0

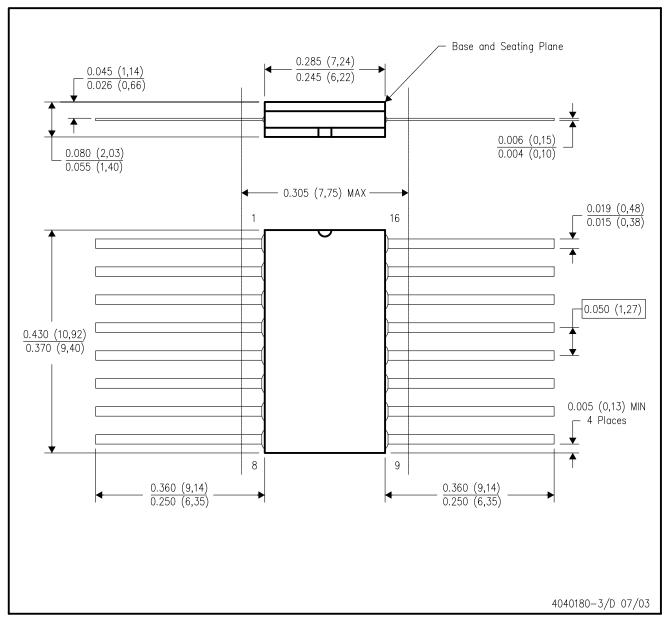
#### 14 LEADS SHOWN



- 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-F16)

#### 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-F16 and JEDEC MO-092AC



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

#### LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



- 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. Falls within JEDEC MS-004



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

#### PLASTIC DUAL-IN-LINE PACKAGE

16 PINS SHOWN



- 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).
- The 20 pin end lead shoulder width is a vendor option, either half or full width.



#### D (R-PDS0-G16)

#### PLASTIC SMALL OUTLINE



- 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 0.006 (0,15) each side.
- Body width does not include interlead flash. Interlead flash shall not exceed 0.017 (0,43) each side.
- E. Reference JEDEC MS-012 variation AC.



#### **MECHANICAL DATA**

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

### 14-PINS SHOWN

#### PLASTIC SMALL-OUTLINE PACKAGE



- 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.



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