SN54LS257B, SN54LS258B, SN54S257, SN54S258 SN74LS257B, SN74LS258B, SN74S257, SN74S258 QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS SDLS148 – OCTOBER 1976 – REVISED MARCH 1988

- Three-State Outputs Interface Directly with System Bus
- 'LS257B and 'LS258B Offer Three Times the Sink-Current Capability of the Original 'LS257 and 'LS258
- Same Pin Assignments as SN54LS157, SN74LS157, SN54S157, SN74S157, and SN54LS158, SN74LS158, SN54S158, SN74S158
- Provides Bus Interface from Multiple Sources in High-Performance Systems

	AVERAGE PROPAGATION	TYPICAL
	DELAY FROM	POWER
	DATA INPUT	DISSIPATIONT
'LS257B	9 ns	55 mW
'LS258B	9 ns	55 mW
'S257	4.8 ns	320 mW
'S258	4 ns	280 mW
'LS258B 'S257	DATA INPUT 9 ns 9 ns 4.8 ns	DISSIPATION [†] 55 mW 55 mW 320 mW

[†]Off state (worst case)

description

These devices are designed to multiplex signals from four-bit data sources to four-output data lines in busorganized systems. The 3-state outputs will not load the data lines when the output control pin (\overline{G}) is at a highlogic level.

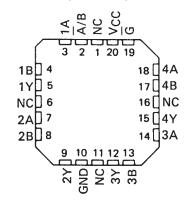
Series 54LS and 54S are characterized for operation over the full military temperature range of -55° C to 125°C; Series 74LS and 74S are characterized for operation from 0°C to 70°C.

SN54LS257B, SN54S257, SN54LS258B, SN54S258...J OR W PACKAGE SN74LS257B, SN74S257, SN74LS258B, SN74S258...D OR N PACKAGE

(TOP VIEW)

Ā/B[1	U_{16}	□vcc
1AC	2	15	G
1BC	3	14	4 A
1Y[4	13] 4B
2A 🗌	5	12	□4Y
2вС	6	11] 3A
2 Y 🗌	7	10	□зв
GND	8	9]] 3Y





NC-No internal connection.

	FUN	CTION	ТАВ	LE	
	INPUTS			OUTE	Y TU
OUTPUT CONTROL	SELECT	A	B	′LS257В ′S257	'LS258B 'S258
н	х	х	Х	Z	Z
L	L,	L	Х	L	н
L.	L	н	х	н	L
L	н	Х	L	L	н
L	Н	х	Н	н	L

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

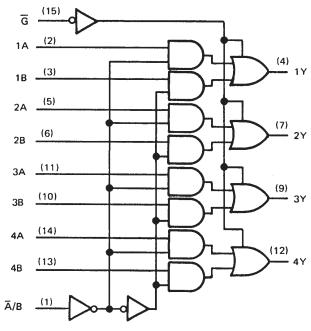
Z = high impedance (off)

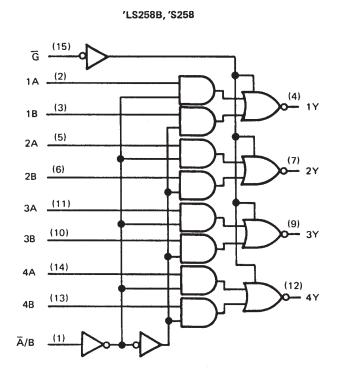


SN54LS257B, SN54LS258B, SN54S257, SN54S258 SN74LS257B, SN74LS258B, SN74S257, SN74S258 **QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS** SDLS148 – OCTOBER 1976 – REVISED MARCH 1988

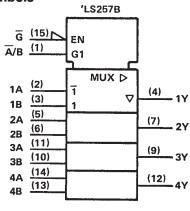
logic diagrams (positive logic)

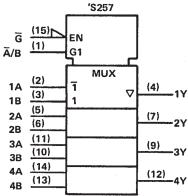


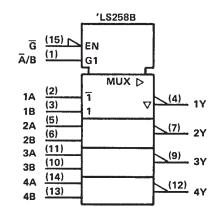


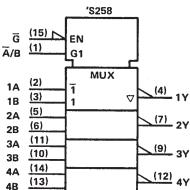


logic symbols[†]









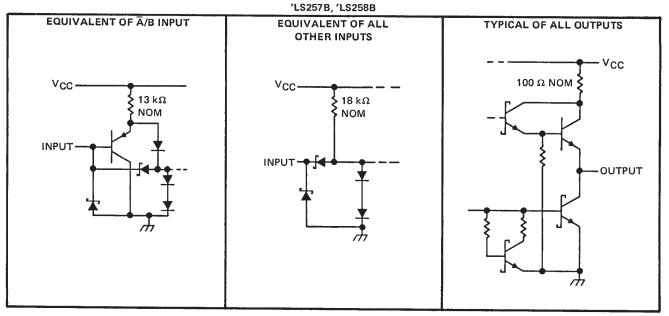
[†]These symbols are in accordance with ANSI/IEEE Std 91-1984 and IEC Publication 617-12. Pin numbers shown are for D, J, N, and W packages.



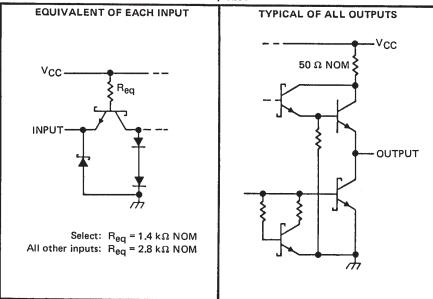
SN54LS257B, SN54LS258B, SN54S257, SN54S258 SN74LS257B, SN74LS258B, SN74S257, SN74S258 **QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS**

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schematics of inputs and outputs



'S257, 'S258



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

Supply voltage, V _{CC} (see Note 1)	
Input voltage: 'LS257B, 'LS258B Circuit	····· 7 V
'S257, 'S258 Circuits	5.5 V
Off-state output voltage	5.5 V
Operating free-air temperature range: SN	⁴ LS', SN54S' Circuits
	4LS', SN74S' Circuits 0°C to 70°C
Storage temperature range	

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



SN54LS257B, SN54LS258B, SN54S257, SN54S258 SN74LS257B, SN74LS258B, SN74S257, SN74S258 QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS

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recommended operating conditions

			S	N54LS	57		SN74LS	5'	
		MIN		NOM	MAX	MIN	NOM	MAX	
Vcc	Supply voltage	4.5	;	5	5.5	4.75	5	5.25	V
VIH	High-level input voltage	2	2			2			V
VIL	Low-level input voltage				0.7			0.8	V
ЮН	High-level output current				- 1			- 2.6	mA
IOL	Low-level output current				12			24	mA
TA	Operating free-air temperature	- 55	;		125	0		70	°C

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

1	PARAMETER	TE	ST CONDITION	uet		SN54LS	s'		SN74LS	5'	
		• •			MIN	түр‡	MAX	MIN	TYP‡	MAX	UNIT
VIK		V _{CC} = MIN, 1 ₁ = 18 mA					- 1.5			1.5	V
VOH		V _{CC} = MIN, I _{OH} = MAX	V _{IH} = 2 V,	V _{IL} = MAX,	2.4	3.4		2.4	3.1		v
VOL		$V_{CC} = MIN,$	V _{IH} = 2 V,	I _{OL} = 12 mA	0.25 0.4		0.4		0.25	0.4	<u> </u>
		VIL = MAX,		I _{OL} = 24 mA				0.3		0.5	V
^I OZH			V _{IH} = 2 V,	V _O = 2.7 V			20			20	μA
IOZL		V _{CC} -MAX,	V _{1H} = 2 V,	V _O = 0.4 V			20			- 20	μΑ
1		V _{CC} = MAX,	V] = 7 V				0.1			0.1	mA
<u>_IH</u>		$V_{CC} = MAX,$	V1 = 2.7 V				20			20	μΑ
<u>կլ</u>		V _{CC} = MAX,	V _I = 0.4 V				- 0.4			- 0.4	mA
loss		V _{CC} = MAX,			- 30		- 130	- 30		- 130	mA
	All outputs high					8	12		8	12	
	All outputs low			'LS257B		12	18		12	18	1
	All outputs off	Uts off V _{CC} = MAX, See Note 2				13	19		13	19	1
lcc	All outputs high	VCC = WAX,	., See Note 2			6	9		6	9	1 mA
	All outputs low			'LS258B		10	15		10	15	1
	All outputs off					11	16		11	16	1

[†]For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions. ‡All typical values are at $V_{CC} = 5 V$, $T_A = 25^{\circ}C$.

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

NOTE 2: ICC is measured with all outputs open and all possible inputs grounded while achieving the stated output conditions.

switching characteristics, V_{CC} = 5 V, T_A = 25°C, R_L = 667 Ω

PARAMETER	FROM	то	TEST CON	TEST CONDITIONS			В	'LS258B				
	(INPUT)	(OUTPUT)	TEST CON	MIN	ТҮР	MAX	MIN	ТҮР	MAX	UNIT		
^t PLH	Data	Any				8	13		7	12		
^t PHL	Data	Ally				10	15		11	17	ns	
^t PLH	Select	Any	C _L = 45 pF,	See Note 3		16	21		14	21		
tphl	001000			CL - 45 pF,	See Note 3		17	24		19	24	ns
^t PZH	Output	Any				15	30		15	30		
^t PZL	Control					1	19 3	30		20	30	ns
^t PHZ	Output	Δον		See Mate 2		18	30		18	30		
tplz	Control	Any	C _L = 5 pF,	See Note 3		16	25		16	25	ns	

 f_{tpLH} = propagation delay time, low-to-high-level output

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

tpzH = output enable time to high level

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

tpzL = output enable time to low level

tpHZ = output disable time from high level

tpLZ = output disable time from low level



SN54LS257B, SN54LS258B, SN54S257, SN54S258 SN74LS257B, SN74LS258B, SN74S257, SN74S258 **QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS**

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recommended operating conditions

		SN54S'		SN74S'			
	MIN	NOM	MAX	MIN	NOM	MAX	
Supply voltage, V _{CC}	4.5	5	5.5	4.75	5	5.25	V
High-level output current, IOH			-2			6.5	mA
Low-level output current, IOL			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)

							'S257			'S 258		UNIT
	PARAME	TER	TEST	CONDITIONS	Ì	MIN	түр‡	MAX	MIN	түр‡	MAX	UNT
VIH	High-level input	voltage				2			2			V
VIL	Low-level input							0.8			0.8	V
VIK	Input clamp vol		Vcc = MIN,	lı = -18 mA				1.2			-1.2	V
	High-level output voltage		$V_{CC} = MIN,$ $V_{IL} = 0.8 V,$	V _{IH} = 2 V, I _{OH} = -1 mA	SN74S'	2.7			2.7			v
∨он	High-level outpu	ut voltage	V _{CC} = MIN,	V _{IH} = 2 V,	SN54S'	2.4	3.4		2.4	3.4		Ť
			VIL = 0.8 V,	I _{OH} = MAX	SN74S'	2.4	3.2		2.4	3.2		
VOL	Low-level output	ut voltage	V _{CC} = MIN, V _{IL} = 0.8 V,	V _{1H} = 2 V, I _{OL} = 20 mA				0.5			0.5	v
Iozh	Off-state output		$V_{CC} = MAX,$ $V_{O} = 2.4 V$	V _{IH} = 2 V,				50			50	μA
IOZL	Off-state outpu	t current,	V _{CC} = MAX, V _O = 0.5 V	V _{IH} = 2 V,				-50			-50	μΑ
lį.	Input current a input voltage	t maximum	V _{CC} = MAX,	V _I = 5.5 V				1			1	mA
	High-level	S input		N 0 7 M		1		100			100	μΑ
ЧΗ	input current	Any other	V _{CC} = MAX,	v] = 2.7 v	= 2.7 V			50			50	
	Low-level	S input		N - OEM				4			-4	- mA
ЧL	input current	Any other	V _{CC} = MAX	v j = 0.5 v				-2			2	
los	Short-circuit ou	Itput current §	V _{CC} = MAX			-40		-100	-40		-100	mA
		All outputs high					44	68		36	56	
Icc	Supply current	All outputs low	V _{CC} = MAX,	, See Note 2			60	93		52	81	mA
		All outputs off]				64	99		56	87	

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

[‡]All typical values are at $V_{CC} = 5 V$, $T_A = 25^{\circ}C$.

\$ Not more than one output should be shorted at a time and duration of the short-circuit should not exceed one second.

NOTE 2: ICC is measured with all outputs open and all possible inputs grounded while achieving the stated output conditions.

switching characteristics, VCC = 5 V, TA = 25°C, RL = 280 Ω

	FROM	то	TEST	'S257						
PARAMETER	(INPUT)	(OUTPUT)	CONDITIONS	MIN	ТҮР	MAX	MIN	ТҮР	MAX	וואוטן
^t PLH					5	7.5		4	6	ns
tPHL	Data	Any			4.5	6.5		4	6	
tPLH			C _L = 15 pF,		8.5	15		8	12	ns
tPHL	Select	Any	See Note 3		8.5	15		7.5	12	113
tPZH	Output		1		13	19.5		13	19.5	ns
tPZL	Control	Αηγ			14	21		14	21	1
tPHZ	Output	<u> </u>	$C_L = 5 pF$,		5.5	8.5		5.5	8.5	ns
tPLZ	Control	Any	See Note 3		9	14		9	14	

¶f_{max} = Maximum clock frequency

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

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

tpZH = output enable time to high level

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

tPZL ≡ output enable time to low level $t_{PHZ} \equiv$ output disable time from high level

 $t_{PLZ} \equiv$ output disable time from low level





31-May-2014

PACKAGING INFORMATION

Orderable Device	Status	Package Type	•	Pins	•	Eco Plan	Lead/Ball Finish	MSL Peak Temp	Op Temp (°C)	Device Marking	Samples
	(1)		Drawing		Qty	(2)	(6)	(3)		(4/5)	
5962-7603701VEA	ACTIVE	CDIP	J	16	25	TBD	A42	N / A for Pkg Type	-55 to 125	5962-7603701VE A	Samples
										SNV54LS257BJ	
5962-7603701VFA	ACTIVE	CFP	W	16	25	TBD	A42	N / A for Pkg Type	-55 to 125	5962-7603701VF A	Samples
										SNV54LS257BW	
5962-7603701VFA	ACTIVE	CFP	W	16	25	TBD	A42	N / A for Pkg Type	-55 to 125	5962-7603701VF A	Samples
										SNV54LS257BW	
7603701EA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603701EA SNJ54LS257BJ	Samples
7603701EA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603701EA SNJ54LS257BJ	Samples
7603701FA	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603701FA SNJ54LS257BW	Samples
7603701FA	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603701FA SNJ54LS257BW	Samples
76038012A	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	-55 to 125	76038012A SNJ54LS 258BFK	Samples
76038012A	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	-55 to 125	76038012A SNJ54LS 258BFK	Samples
7603801EA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603801EA SNJ54LS258BJ	Samples
7603801EA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603801EA SNJ54LS258BJ	Samples
7603801FA	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603801FA SNJ54LS258BW	Samples
7603801FA	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603801FA SNJ54LS258BW	Samples
8002301EA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	8002301EA SNJ54S258J	Samples
8002301EA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	8002301EA SNJ54S258J	Samples

31-May-2014



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Orderable Device	Status	Package Type	Package Drawing	Pins	Package Qty	Eco Plan	Lead/Ball Finish	MSL Peak Temp	Op Temp (°C)	Device Marking	Sample
8002301FA	(1) ACTIVE	CFP	W	16	1	(2) TBD	(6) A42	(3) N / A for Pkg Type	-55 to 125		Sample
8002301FA	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	8002301FA SNJ54S258W	Sample
JM38510/07906BEA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 07906BEA	Sample
JM38510/07906BEA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 07906BEA	Sampl
JM38510/07906BFA	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 07906BFA	Sampl
JM38510/07906BFA	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 07906BFA	Sampl
JM38510/30906B2A	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	-55 to 125	JM38510/ 30906B2A	Sampl
JM38510/30906B2A	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	-55 to 125	JM38510/ 30906B2A	Sampl
JM38510/30906BEA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 30906BEA	Sampl
JM38510/30906BEA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 30906BEA	Sampl
JM38510/30906BFA	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 30906BFA	Sampl
JM38510/30906BFA	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 30906BFA	Sampl
M38510/07906BEA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 07906BEA	Sampl
M38510/07906BEA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 07906BEA	Sampl
M38510/07906BFA	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 07906BFA	Sampl
M38510/07906BFA	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 07906BFA	Samp
M38510/30906B2A	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	-55 to 125	JM38510/ 30906B2A	Samp
M38510/30906B2A	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	-55 to 125	JM38510/ 30906B2A	Samp



Orderable Device	Status	Package Type	Package Drawing	Pins	Package Qty	Eco Plan	Lead/Ball Finish	MSL Peak Temp	Op Temp (°C)	Device Marking	Sample
	(1)		Drawing			(2)	(6)	(3)		(4/5)	
M38510/30906BEA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 30906BEA	Samples
M38510/30906BEA	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 30906BEA	Samples
M38510/30906BFA	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 30906BFA	Samples
M38510/30906BFA	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	JM38510/ 30906BFA	Samples
SN54LS257BJ	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	SN54LS257BJ	Samples
SN54LS257BJ	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	SN54LS257BJ	Samples
SN54LS258BJ	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	SN54LS258BJ	Samples
SN54LS258BJ	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	SN54LS258BJ	Samples
SN54S257J	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	SN54S257J	Samples
SN54S257J	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	SN54S257J	Samples
SN54S258J	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	SN54S258J	Samples
SN54S258J	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	SN54S258J	Samples
SN74LS257BD	ACTIVE	SOIC	D	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 70	LS257B	Samples
SN74LS257BD	ACTIVE	SOIC	D	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 70	LS257B	Samples
SN74LS257BDE4	ACTIVE	SOIC	D	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 70	LS257B	Samples
SN74LS257BDE4	ACTIVE	SOIC	D	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 70	LS257B	Samples
SN74LS257BDG4	ACTIVE	SOIC	D	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 70	LS257B	Samples
SN74LS257BDG4	ACTIVE	SOIC	D	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 70	LS257B	Samples
SN74LS257BDR	ACTIVE	SOIC	D	16	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 70	LS257B	Samples



Orderable Device	Status	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead/Ball Finish (6)	MSL Peak Temp	Op Temp (°C)	Device Marking (4/5)	Samp
SN74LS257BDR	ACTIVE	SOIC	D	16	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 70	LS257B	Samp
SN74LS257BDRE4	ACTIVE	SOIC	D	16		TBD	Call TI	Call TI	0 to 70		Samp
SN74LS257BDRE4	ACTIVE	SOIC	D	16		TBD	Call TI	Call TI	0 to 70		Samp
SN74LS257BDRG4	ACTIVE	SOIC	D	16		TBD	Call TI	Call TI	0 to 70		Samp
SN74LS257BDRG4	ACTIVE	SOIC	D	16		TBD	Call TI	Call TI	0 to 70		Samp
SN74LS257BN	ACTIVE	PDIP	Ν	16	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type	0 to 70	SN74LS257BN	Samp
SN74LS257BN	ACTIVE	PDIP	Ν	16	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type	0 to 70	SN74LS257BN	Samj
SN74LS257BN3	OBSOLETE	PDIP	Ν	16		TBD	Call TI	Call TI	0 to 70		
SN74LS257BN3	OBSOLETE	PDIP	Ν	16		TBD	Call TI	Call TI	0 to 70		
SN74LS257BNE4	ACTIVE	PDIP	Ν	16	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type	0 to 70	SN74LS257BN	Sam
SN74LS257BNE4	ACTIVE	PDIP	Ν	16	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type	0 to 70	SN74LS257BN	Samj
SN74LS257BNSR	ACTIVE	SO	NS	16	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 70	74LS257B	Samj
SN74LS257BNSR	ACTIVE	SO	NS	16	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 70	74LS257B	Sam
SN74LS257BNSRE4	ACTIVE	SO	NS	16		TBD	Call TI	Call TI	0 to 70		Sam
SN74LS257BNSRE4	ACTIVE	SO	NS	16		TBD	Call TI	Call TI	0 to 70		Sam
SN74LS257BNSRG4	ACTIVE	SO	NS	16		TBD	Call TI	Call TI	0 to 70		Sam
SN74LS257BNSRG4	ACTIVE	SO	NS	16		TBD	Call TI	Call TI	0 to 70		Sam
SN74LS258BD	ACTIVE	SOIC	D	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 70	LS258B	Sam
SN74LS258BD	ACTIVE	SOIC	D	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 70	LS258B	Sam
SN74LS258BDE4	ACTIVE	SOIC	D	16		TBD	Call TI	Call TI	0 to 70		Sam



Orderable Device	Status	Package Type	-	Pins		Eco Plan	Lead/Ball Finish	MSL Peak Temp	Op Temp (°C)	Device Marking	Sample
	(1)		Drawing		Qty	(2)	(6)	(3)		(4/5)	
SN74LS258BDE4	ACTIVE	SOIC	D	16		TBD	Call TI	Call TI	0 to 70		Sample
SN74LS258BDG4	ACTIVE	SOIC	D	16		TBD	Call TI	Call TI	0 to 70		Sample
SN74LS258BDG4	ACTIVE	SOIC	D	16		TBD	Call TI	Call TI	0 to 70		Sample
SN74LS258BDR	ACTIVE	SOIC	D	16	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 70	LS258B	Sample
SN74LS258BDR	ACTIVE	SOIC	D	16	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 70	LS258B	Sample
SN74LS258BDRE4	ACTIVE	SOIC	D	16		TBD	Call TI	Call TI	0 to 70		Sample
SN74LS258BDRE4	ACTIVE	SOIC	D	16		TBD	Call TI	Call TI	0 to 70		Sample
SN74LS258BDRG4	ACTIVE	SOIC	D	16		TBD	Call TI	Call TI	0 to 70		Sample
SN74LS258BDRG4	ACTIVE	SOIC	D	16		TBD	Call TI	Call TI	0 to 70		Sample
SN74LS258BN	ACTIVE	PDIP	Ν	16	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type	0 to 70	SN74LS258BN	Sampl
SN74LS258BN	ACTIVE	PDIP	Ν	16	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type	0 to 70	SN74LS258BN	Sample
SN74LS258BN3	OBSOLET	PDIP	N	16		TBD	Call TI	Call TI	0 to 70		
SN74LS258BN3	OBSOLET	E PDIP	N	16		TBD	Call TI	Call TI	0 to 70		
SN74LS258BNE4	ACTIVE	PDIP	Ν	16		TBD	Call TI	Call TI	0 to 70		Sampl
SN74LS258BNE4	ACTIVE	PDIP	Ν	16		TBD	Call TI	Call TI	0 to 70		Sampl
SN74S257N	NRND	PDIP	Ν	16	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type	0 to 70	SN74S257N	
SN74S257N	NRND	PDIP	N	16	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type	0 to 70	SN74S257N	
SN74S257N3	OBSOLET	E PDIP	N	16		TBD	Call TI	Call TI	0 to 70		
SN74S257N3	OBSOLET	E PDIP	N	16		TBD	Call TI	Call TI	0 to 70		
SN74S257NE4	NRND	PDIP	N	16		TBD	Call TI	Call TI	0 to 70		
SN74S257NE4	NRND	PDIP	N	16		TBD	Call TI	Call TI	0 to 70		
SN74S258DR	OBSOLETI		D	16		TBD	Call TI	Call TI	0 to 70		
SN74S258DR	OBSOLET		 D	16		TBD	Call TI	Call TI	0 to 70		



Orderable Device	Status	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead/Ball Finish (6)	MSL Peak Temp	Op Temp (°C)	Device Marking (4/5)	Samples
SN74S258N	OBSOLETE	PDIP	N	16	۹.,	TBD	Call TI	Call TI	0 to 70	(4/5)	
SN74S258N	OBSOLETE		N	16		TBD	Call TI	Call TI	0 to 70		
SN74S258N3	OBSOLETE	PDIP	N	16		TBD	Call TI	Call TI	0 to 70		
SN74S258N3	OBSOLETE	PDIP	N	16		TBD	Call TI	Call TI	0 to 70		
SNJ54LS257BFK	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	-55 to 125	SNJ54LS 257BFK	Sample
SNJ54LS257BFK	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	-55 to 125	SNJ54LS 257BFK	Samples
SNJ54LS257BJ	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603701EA SNJ54LS257BJ	Samples
SNJ54LS257BJ	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603701EA SNJ54LS257BJ	Samples
SNJ54LS257BW	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603701FA SNJ54LS257BW	Samples
SNJ54LS257BW	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603701FA SNJ54LS257BW	Samples
SNJ54LS258BFK	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	-55 to 125	76038012A SNJ54LS 258BFK	Samples
SNJ54LS258BFK	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	-55 to 125	76038012A SNJ54LS 258BFK	Samples
SNJ54LS258BJ	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603801EA SNJ54LS258BJ	Samples
SNJ54LS258BJ	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603801EA SNJ54LS258BJ	Samples
SNJ54LS258BW	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603801FA SNJ54LS258BW	Samples
SNJ54LS258BW	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	7603801FA SNJ54LS258BW	Samples
SNJ54S257FK	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	-55 to 125	SNJ54S 257FK	Samples
SNJ54S257FK	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	-55 to 125	SNJ54S 257FK	Samples
SNJ54S257J	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	SNJ54S257J	Samples



31-May-2014

Orderable Device	Status	Package Type	Package	Pins	Package	Eco Plan	Lead/Ball Finish	MSL Peak Temp	Op Temp (°C)	Device Marking	Samples
	(1)		Drawing		Qty	(2)	(6)	(3)		(4/5)	
SNJ54S257J	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	SNJ54S257J	Samples
SNJ54S257W	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	SNJ54S257W	Samples
SNJ54S257W	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	SNJ54S257W	Samples
SNJ54S258FK	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	-55 to 125	SNJ54S 258FK	Samples
SNJ54S258FK	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	-55 to 125	SNJ54S 258FK	Samples
SNJ54S258J	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	8002301EA SNJ54S258J	Samples
SNJ54S258J	ACTIVE	CDIP	J	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	8002301EA SNJ54S258J	Samples
SNJ54S258W	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	8002301FA SNJ54S258W	Samples
SNJ54S258W	ACTIVE	CFP	W	16	1	TBD	A42	N / A for Pkg Type	-55 to 125	8002301FA SNJ54S258W	Samples

⁽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.

(2) 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)

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

⁽⁴⁾ There may be additional marking, which relates to the logo, the lot trace code information, or the environmental category on the device.



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PACKAGE OPTION ADDENDUM

31-May-2014

(5) Multiple Device Markings will be inside parentheses. Only one Device Marking contained in parentheses and separated by a "~" will appear on a device. If a line is indented then it is a continuation of the previous line and the two combined represent the entire Device Marking for that device.

⁽⁶⁾ Lead/Ball Finish - Orderable Devices may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead/Ball Finish values may wrap to two lines if the finish value exceeds the maximum column width.

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OTHER QUALIFIED VERSIONS OF SN54LS257B, SN54LS257B-SP, SN54LS258B, SN54S257, SN54S258, SN74LS257B, SN74LS258B, SN74S257, SN74S258 :

- Catalog: SN74LS257B, SN54LS257B, SN74LS258B, SN74S257, SN74S258
- Military: SN54LS257B, SN54LS258B, SN54S257, SN54S258
- Space: SN54LS257B-SP

NOTE: Qualified Version Definitions:

- Catalog TI's standard catalog product
- Military QML certified for Military and Defense Applications
- Space Radiation tolerant, ceramic packaging and qualified for use in Space-based application

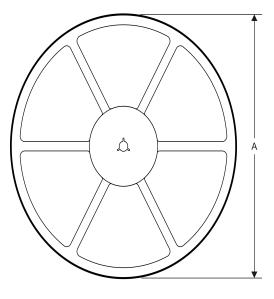
PACKAGE MATERIALS INFORMATION

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TAPE AND REEL INFORMATION

REEL DIMENSIONS

TEXAS INSTRUMENTS





TAPE AND REEL INFORMATION

TAPE DIMENSIONS



A0	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

*All dimensions are nomina	I											
Device	Package Type	Package Drawing		SPQ	Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
SN74LS257BDR	SOIC	D	16	2500	330.0	16.4	6.5	10.3	2.1	8.0	16.0	Q1
SN74LS257BNSR	SO	NS	16	2000	330.0	16.4	8.2	10.5	2.5	12.0	16.0	Q1
SN74LS258BDR	SOIC	D	16	2500	330.0	16.4	6.5	10.3	2.1	8.0	16.0	Q1

TEXAS INSTRUMENTS

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PACKAGE MATERIALS INFORMATION

14-Jul-2012



*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Length (mm)	Width (mm)	Height (mm)
SN74LS257BDR	SOIC	D	16	2500	333.2	345.9	28.6
SN74LS257BNSR	SO	NS	16	2000	367.0	367.0	38.0
SN74LS258BDR	SOIC	D	16	2500	333.2	345.9	28.6

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-F16)

CERAMIC DUAL FLATPACK



- 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 ceramic lid using glass frit.
 - D. Index point is provided on cap for terminal identification only.
 - E. Falls within MIL STD 1835 GDFP2-F16



LEADLESS CERAMIC CHIP CARRIER

FK (S-CQCC-N**) 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. 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.



D (R-PDSO-G16)

PLASTIC SMALL OUTLINE



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 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.



4211283-4/E 08/12

D (R-PDSO-G16) PLASTIC SMALL OUTLINE Stencil Openings (Note D) Example Board Layout (Note C) –16x0,55 -14x1,27 -14x1,27 16x1,50 5,40 5.40 Example Non Soldermask Defined Pad Example Pad Geometry (See Note C) 0,60 .55 Example 1. Solder Mask Opening (See Note E) -0,07 All Around

NOTES: A. All linear dimensions are in millimeters.

- B. This drawing is subject to change without notice.
- C. Publication IPC-7351 is recommended for alternate designs.
- D. Laser cutting apertures with trapezoidal walls and also rounding corners will offer better paste release. Customers should contact their board assembly site for stencil design recommendations. Refer to IPC-7525 for other stencil recommendations.
 E. Customers should contact their board fabrication site for solder mask tolerances between and around signal pads.



MECHANICAL DATA

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.



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