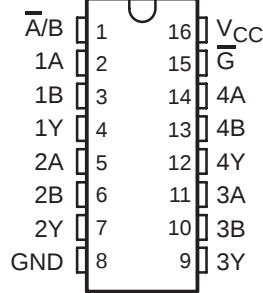


SN54HC257, SN54HC258, SN74HC257, SN74HC258 QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS WITH 3-STATE OUTPUTS

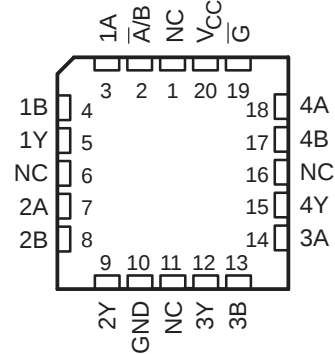
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- Wide Operating Voltage Range of 2 V to 6 V
- High-Current Inverting Outputs Drive Up To 15 LSTTL Loads
- Low Power Consumption, 80- μ A Max I_{CC}
- 'HC257 . . . Typical $t_{pd} = 9$ ns
- 'HC258 . . . Typical $t_{pd} = 12$ ns
- ± 6 -mA Output Drive at 5 V
- Low Input Current of 1 μ A Max
- Provides Bus Interface from Multiple Sources in High-Performance Systems

SN54HC257, SN54HC258 . . . J PACKAGE
SN74HC257, SN74HC258 . . . D, N, NS, OR PW PACKAGE
(TOP VIEW)



SN54HC257, SN54HC258 . . . FK PACKAGE
(TOP VIEW)



NC – No internal connection

description/ordering information

ORDERING INFORMATION

TA	PACKAGE†		ORDERABLE PART NUMBER	TOP-SIDE MARKING
–40°C to 85°C	PDIP – N	Tube of 25	SN74HC257N	SN74HC257N
			SN74HC258N	SN74HC258N
	SOIC – D	Tube of 40	SN74HC257D	HC257
		Reel of 2500	SN74HC257DR	
		Reel of 250	SN74HC257DT	
		Tube of 40	SN74HC258D	HC258
		Reel of 2500	SN74HC258DR	
		Reel of 250	SN74HC258PWT	
	SOP – NS	Reel of 2000	SN74HC257NSR	HC257
			SN74HC258NSR	HC258
	TSSOP – PW	Tube of 90	SN74HC257PW	HC257
		Reel of 2000	SN74HC257PWR	
		Reel of 250	SN74HC257PWT	
		Tube of 90	SN74HC258PW	HC258
		Reel of 2000	SN74HC258PWR	
		Reel of 250	SN74HC258PWT	
–55°C to 125°C	CDIP – J	Tube of 25	SNJ54HC257J	SNJ54HC257J
			SNJ54HC258J	SNJ54HC258J
	LCCC – FK	Tube of 55	SNJ54HC257FK	SNJ54HC257FK
			SNJ54HC258FK	SNJ54HC258FK

† 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.

**TEXAS
INSTRUMENTS**

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On products compliant to MIL-PRF-38535, all parameters are tested unless otherwise noted. On all other products, production processing does not necessarily include testing of all parameters.

SN54HC257, SN54HC258, SN74HC257, SN74HC258
QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS
WITH 3-STATE OUTPUTS

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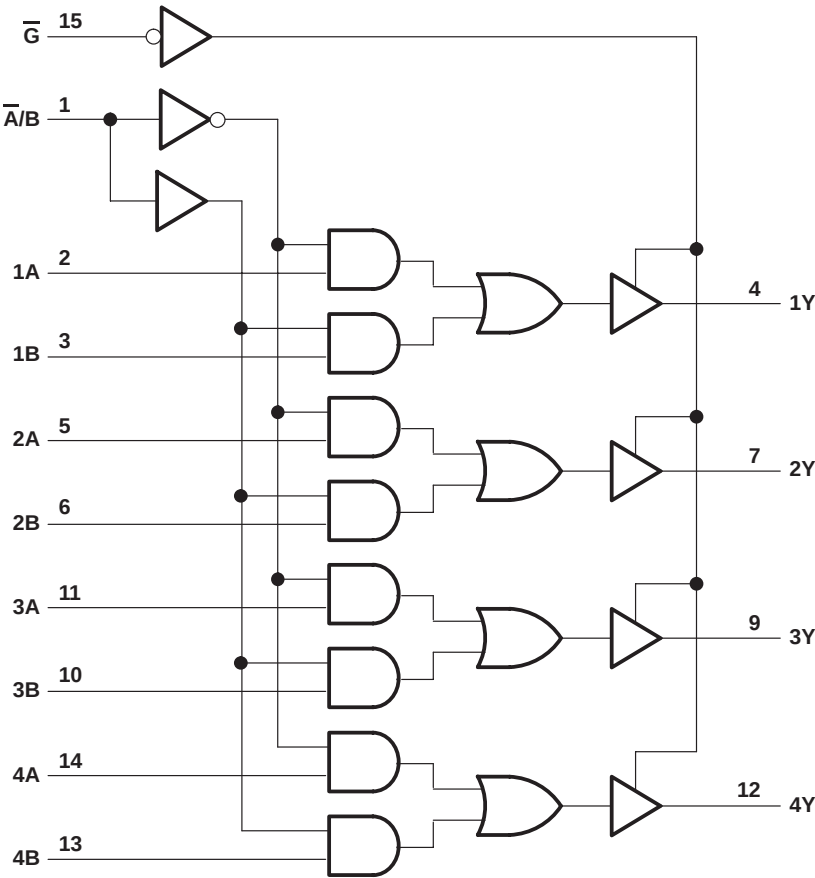
description/ordering information (continued)

These devices are designed to multiplex signals from 4-bit data sources to 4-output data lines in bus-organized systems. The 3-state outputs do not load the data lines when the output-enable ($\overline{G}$) input is at a high logic level.

To ensure the high-impedance state during power up or power down, $\overline{G}$ should be tied to V_{CC} through a pullup resistor; the minimum value of the resistor is determined by the current-sinking capability of the driver.

FUNCTION TABLE					
INPUTS				OUTPUT Y	
$\overline{G}$	$\overline{A/B}$	A	B	'HC257	'HC258
H	X	X	X	Z	Z
L	L	L	X	L	H
L	L	H	X	H	L
L	H	X	L	L	H
L	H	X	H	H	L

'HC257 logic diagram (positive logic)



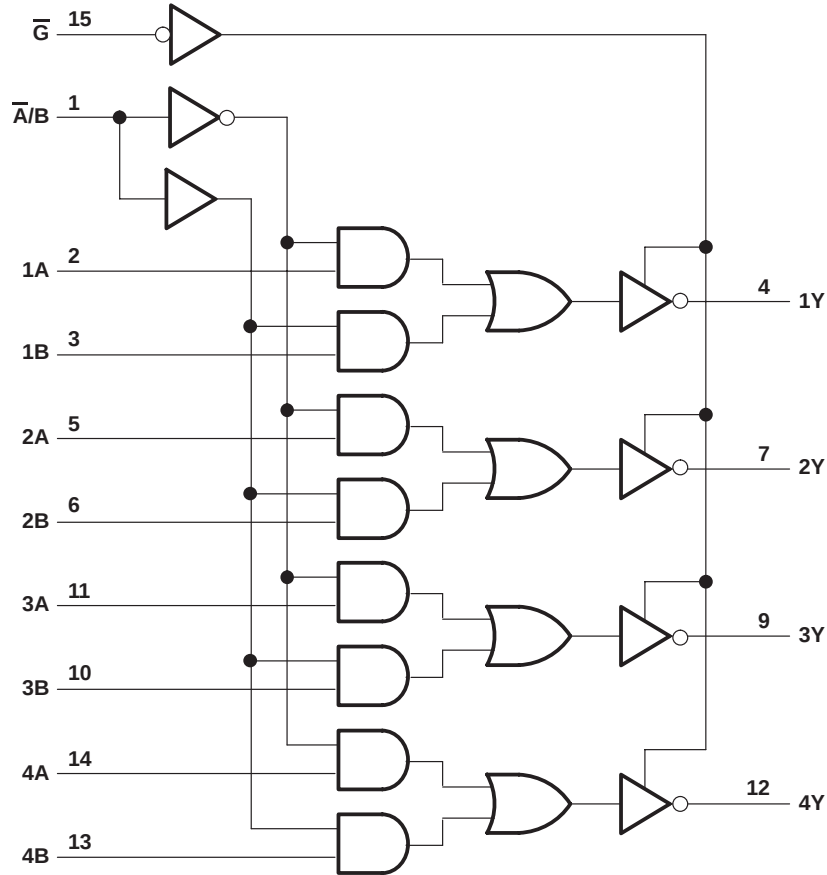
Pin numbers shown are for the D, J, N, NS, and PW packages.



SN54HC257, SN54HC258, SN74HC257, SN74HC258 QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS WITH 3-STATE OUTPUTS

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'HC258 logic diagram (positive logic)



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

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

Supply voltage range, V_{CC}	–0.5 V to 7 V
Input clamp current, I_{IK} ($V_I < 0$ or $V_I > V_{CC}$)	±20 mA
Output clamp current, I_{OK} ($V_O < 0$ or $V_O > V_{CC}$)	±20 mA
Continuous output current, I_O ($V_O = 0$ to V_{CC})	±35 mA
Continuous current through V_{CC} or GND	±70 mA
Package thermal impedance, θ_{JA} (see Note 1): D package	73°C/W
N package	67°C/W
NS package	64°C/W
PW package	108°C/W
Storage temperature range, T_{stg}	–65°C to 150°C

[†] 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.

NOTE 1: The package thermal impedance is calculated in accordance with JESD 51-7.

SN54HC257, SN54HC258, SN74HC257, SN74HC258

QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS

WITH 3-STATE OUTPUTS

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recommended operating conditions (see Note 2)

			SN54HC257, SN54HC258			SN74HC257, SN74HC258			UNIT
			MIN	NOM	MAX	MIN	NOM	MAX	
V _{CC}	Supply voltage		2	5	6	2	5	6	V
V _{IH}	High-level input voltage	V _{CC} = 2 V	1.5			1.5			V
		V _{CC} = 4.5 V	3.15			3.15			
		V _{CC} = 6 V	4.2			4.2			
V _{IL}	Low-level input voltage	V _{CC} = 2 V			0.3			0.5	V
		V _{CC} = 4.5 V			0.9			1.35	
		V _{CC} = 6 V			1.2			1.8	
V _I	Input voltage		0		V _{CC}	0		V _{CC}	V
V _O	Output voltage		0		V _{CC}	0		V _{CC}	V
Δt/Δv	Input transition rise/fall time	V _{CC} = 2 V			1000			1000	ns
		V _{CC} = 4.5 V			500			500	
		V _{CC} = 6 V			400			400	
T _A	Operating free-air temperature		–55		125	–40		85	°C

NOTE 2: All unused inputs of the device must be held at V_{CC} 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		V _{CC}	T _A = 25°C			SN54HC257, SN54HC258		SN74HC257, SN74HC258		UNIT
				MIN	TYP	MAX	MIN	MAX	MIN	MAX	
V _{OH}	V _I = V _{IH} or V _{IL}	I _{OH} = –20 μA	2 V	1.9	1.998		1.9		1.9		V
			4.5 V	4.4	4.499		4.4		4.4		
			6 V	5.9	5.999		5.9		5.9		
		I _{OH} = –6 mA	4.5 V	3.98	4.3		3.7		3.84		
		I _{OH} = –7.8 mA	6 V	5.48	5.8		5.2		5.34		
V _{OL}	V _I = V _{IH} or V _{IL}	I _{OL} = 20 μA	2 V		0.002	0.1		0.1		0.1	V
			4.5 V		0.001	0.1		0.1		0.1	
			6 V		0.001	0.1		0.1		0.1	
		I _{OL} = 6 mA	4.5 V		0.17	0.26		0.4		0.33	
		I _{OL} = 7.8 mA	6 V		0.15	0.26		0.4		0.33	
I _I	V _I = V _{CC} or 0		6 V		±0.1	±100		±1000		±1000	nA
I _{OZ}	V _O = V _{CC} or 0		6 V		±0.01	±0.5		±10		±5	μA
I _{CC}	V _I = V _{CC} or 0, I _O = 0		6 V			8		160		80	μA
C _i			2 V to 6 V		3	10		10		10	pF



SN54HC257, SN54HC258, SN74HC257, SN74HC258

QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS

WITH 3-STATE OUTPUTS

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switching characteristics over recommended operating free-air temperature range, $C_L = 50 \text{ pF}$ (unless otherwise noted) (see Figure 1)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	V_{CC}	$T_A = 25^\circ\text{C}$			SN54HC257		SN74HC257		UNIT
				MIN	TYP	MAX	MIN	MAX	MIN	MAX	
t_{pd}	A or B	Any Y	2 V		50	100		150		125	ns
			4.5 V		10	20		30		25	
			6 V		9	17		25		21	
	$\bar{A}/B$	Any Y	2 V		50	100		150		125	
			4.5 V		10	20		30		25	
			6 V		9	17		25		21	
t_{en}	$\bar{G}$	Any Y	2 V		75	150		225		190	ns
			4.5 V		15	30		45		38	
			6 V		13	26		38		32	
t_{dis}	$\bar{G}$	Any Y	2 V		75	150		225		190	ns
			4.5 V		15	30		45		38	
			6 V		13	26		38		32	
t_t		Any Y	2 V		28	60		90		75	ns
			4.5 V		8	12		18		15	
			6 V		6	10		15		13	

switching characteristics over recommended operating free-air temperature range, $C_L = 150 \text{ pF}$ (unless otherwise noted) (see Figure 1)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	V_{CC}	$T_A = 25^\circ\text{C}$			SN54HC257		SN74HC257		UNIT
				MIN	TYP	MAX	MIN	MAX	MIN	MAX	
t_{pd}	A or B	Any Y	2 V		75	150		245		190	ns
			4.5 V		15	30		45		38	
			6 V		13	26		38		32	
	$\bar{A}/B$	Any Y	2 V		75	150		245		190	
			4.5 V		15	30		45		38	
			6 V		13	26		38		32	
t_{en}	$\bar{G}$	Any Y	2 V		100	200		300		250	ns
			4.5 V		24	40		60		50	
			6 V		18	34		51		43	
t_t		Any Y	2 V		45	210		315		265	ns
			4.5 V		17	42		63		53	
			6 V		13	36		53		45	



SN54HC257, SN54HC258, SN74HC257, SN74HC258

QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS

WITH 3-STATE OUTPUTS

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switching characteristics over recommended operating free-air temperature range, $C_L = 50$ pF (unless otherwise noted) (see Figure 1)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	V_{CC}	$T_A = 25^\circ\text{C}$			SN54HC258		SN74HC258		UNIT
				MIN	TYP	MAX	MIN	MAX	MIN	MAX	
t_{pd}	A or B	Any Y	2 V		60	100		150		125	ns
			4.5 V		13	20		30		25	
			6 V		12	17		25		21	
	$\overline{A/B}$	Any Y	2 V		60	115		175		145	
			4.5 V		13	23		35		29	
			6 V		12	20		30		25	
t_{en}	$\overline{G}$	Any Y	2 V		70	150		225		190	ns
			4.5 V		15	30		45		38	
			6 V		13	26		38		32	
t_{dis}	$\overline{G}$	Any Y	2 V		75	150		225		190	ns
			4.5 V		15	30		45		38	
			6 V		13	26		38		32	
t_t		Any Y	2 V		28	60		90		75	ns
			4.5 V		8	12		18		15	
			6 V		6	10		15		13	

switching characteristics over recommended operating free-air temperature range, $C_L = 150$ pF (unless otherwise noted) (see Figure 1)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	V_{CC}	$T_A = 25^\circ\text{C}$			SN54HC258		SN74HC258		UNIT
				MIN	TYP	MAX	MIN	MAX	MIN	MAX	
t_{pd}	A or B	Any Y	2 V		95	150		245		190	ns
			4.5 V		23	30		45		38	
			6 V		21	26		38		32	
	$\overline{A/B}$	Any Y	2 V		95	165		240		210	
			4.5 V		23	33		48		42	
			6 V		21	28		41		36	
t_{en}	$\overline{G}$	Any Y	2 V		100	200		300		250	ns
			4.5 V		24	40		60		50	
			6 V		18	34		51		43	
t_t		Any Y	2 V		45	210		315		265	ns
			4.5 V		17	42		63		53	
			6 V		13	36		53		45	

operating characteristics, $T_A = 25^\circ\text{C}$

PARAMETER		TEST CONDITIONS	TYP	UNIT
C_{pd}	Power dissipation capacitance per multiplexer	No load	40	pF

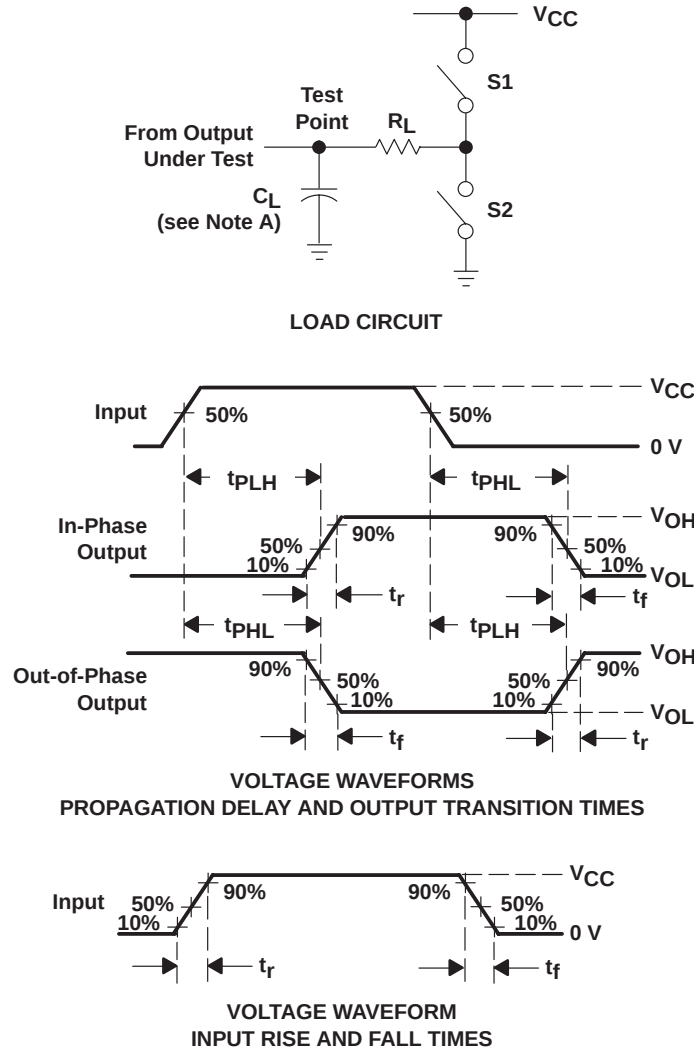


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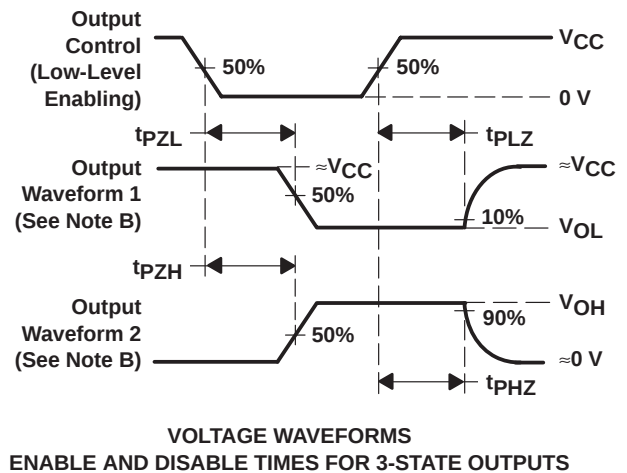
SN54HC257, SN54HC258, SN74HC257, SN74HC258 QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS WITH 3-STATE OUTPUTS

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PARAMETER MEASUREMENT INFORMATION



PARAMETER	R_L	C_L	S1	S2
t_{en}	$1\text{ k}\Omega$	50 pF or 150 pF	Open	Closed
			Closed	Open
t_{dis}	$1\text{ k}\Omega$	50 pF	Open	Closed
			Closed	Open
t_{pd} or t_t	--	50 pF or 150 pF	Open	Open



- NOTES:
- A. C_L includes probe and test-fixture 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. Phase relationships between waveforms were chosen arbitrarily. All input pulses are supplied by generators having the following characteristics: $PRR \leq 1\text{ MHz}$, $Z_O = 50\text{ }\Omega$, $t_r = 6\text{ ns}$, $t_f = 6\text{ ns}$.
 - D. The outputs are measured one at a time with one input transition per measurement.
 - E. t_{PLZ} and t_{PHZ} are the same as t_{dis} .
 - F. t_{PZL} and t_{PZH} are the same as t_{en} .
 - G. t_{PLH} and t_{PHL} are the same as t_{pd} .

Figure 1. Load Circuit and Voltage Waveforms

PACKAGING INFORMATION

Orderable part number	Status (1)	Material type (2)	Package Pins	Package qty Carrier	RoHS (3)	Lead finish/ Ball material (4)	MSL rating/ Peak reflow (5)	Op temp (°C)	Part marking (6)
85124012A	Active	Production	LCCC (FK) 20	55 TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	85124012A SNJ54HC 257FK
8512401EA	Active	Production	CDIP (J) 16	25 TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	8512401EA SNJ54HC257J
SN54HC257J	Active	Production	CDIP (J) 16	25 TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	SN54HC257J
SN54HC257J.A	Active	Production	CDIP (J) 16	25 TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	SN54HC257J
SN74HC257D	Obsolete	Production	SOIC (D) 16	-	-	Call TI	Call TI	-40 to 85	HC257
SN74HC257DR	Active	Production	SOIC (D) 16	2500 LARGE T&R	Yes	NIPDAU SN	Level-1-260C-UNLIM	-40 to 85	HC257
SN74HC257DR.A	Active	Production	SOIC (D) 16	2500 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HC257
SN74HC257DRG4	Active	Production	SOIC (D) 16	2500 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HC257
SN74HC257DRG4.A	Active	Production	SOIC (D) 16	2500 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HC257
SN74HC257DT	Obsolete	Production	SOIC (D) 16	-	-	Call TI	Call TI	-40 to 85	HC257
SN74HC257N	Active	Production	PDIP (N) 16	25 TUBE	Yes	NIPDAU	N/A for Pkg Type	-40 to 85	SN74HC257N
SN74HC257N.A	Active	Production	PDIP (N) 16	25 TUBE	Yes	NIPDAU	N/A for Pkg Type	-40 to 85	SN74HC257N
SN74HC257NSR	Active	Production	SOP (NS) 16	2000 LARGE T&R	Yes	NIPDAU NIPDAU	Level-1-260C-UNLIM	-40 to 85	HC257
SN74HC257NSR.A	Active	Production	SOP (NS) 16	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HC257
SN74HC257PW	Obsolete	Production	TSSOP (PW) 16	-	-	Call TI	Call TI	-40 to 85	HC257
SN74HC257PWR	Active	Production	TSSOP (PW) 16	2000 LARGE T&R	Yes	NIPDAU SN NIPDAU	Level-1-260C-UNLIM	-40 to 85	HC257
SN74HC257PWR.A	Active	Production	TSSOP (PW) 16	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HC257
SN74HC257PWR1G4	Active	Production	TSSOP (PW) 16	2000 LARGE T&R	Yes	NIPDAU NIPDAU	Level-1-260C-UNLIM	-40 to 85	HC257
SN74HC258D	Obsolete	Production	SOIC (D) 16	-	-	Call TI	Call TI	-40 to 85	HC258
SN74HC258DR	Active	Production	SOIC (D) 16	2500 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HC258
SN74HC258DR.A	Active	Production	SOIC (D) 16	2500 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HC258
SN74HC258N	Active	Production	PDIP (N) 16	25 TUBE	Yes	NIPDAU	N/A for Pkg Type	-40 to 85	SN74HC258N
SN74HC258N.A	Active	Production	PDIP (N) 16	25 TUBE	Yes	NIPDAU	N/A for Pkg Type	-40 to 85	SN74HC258N
SN74HC258NSR	Active	Production	SOP (NS) 16	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HC258
SN74HC258NSR.A	Active	Production	SOP (NS) 16	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HC258
SN74HC258PW	Obsolete	Production	TSSOP (PW) 16	-	-	Call TI	Call TI	-40 to 85	HC258
SN74HC258PWR	Active	Production	TSSOP (PW) 16	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HC258

Orderable part number	Status (1)	Material type (2)	Package Pins	Package qty Carrier	RoHS (3)	Lead finish/ Ball material (4)	MSL rating/ Peak reflow (5)	Op temp (°C)	Part marking (6)
SN74HC258PWR.A	Active	Production	TSSOP (PW) 16	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HC258
SNJ54HC257FK	Active	Production	LCCC (FK) 20	55 TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	85124012A SNJ54HC 257FK
SNJ54HC257FK.A	Active	Production	LCCC (FK) 20	55 TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	85124012A SNJ54HC 257FK
SNJ54HC257J	Active	Production	CDIP (J) 16	25 TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	8512401EA SNJ54HC257J
SNJ54HC257J.A	Active	Production	CDIP (J) 16	25 TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	8512401EA SNJ54HC257J

⁽¹⁾ **Status:** For more details on status, see our [product life cycle](#).

⁽²⁾ **Material type:** When designated, preproduction parts are prototypes/experimental devices, and are not yet approved or released for full production. Testing and final process, including without limitation quality assurance, reliability performance testing, and/or process qualification, may not yet be complete, and this item is subject to further changes or possible discontinuation. If available for ordering, purchases will be subject to an additional waiver at checkout, and are intended for early internal evaluation purposes only. These items are sold without warranties of any kind.

⁽³⁾ **RoHS values:** Yes, No, RoHS Exempt. See the [TI RoHS Statement](#) for additional information and value definition.

⁽⁴⁾ **Lead finish/Ball material:** Parts may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead finish/Ball material values may wrap to two lines if the finish value exceeds the maximum column width.

⁽⁵⁾ **MSL rating/Peak reflow:** The moisture sensitivity level ratings and peak solder (reflow) temperatures. In the event that a part has multiple moisture sensitivity ratings, only the lowest level per JEDEC standards is shown. Refer to the shipping label for the actual reflow temperature that will be used to mount the part to the printed circuit board.

⁽⁶⁾ **Part marking:** There may be an additional marking, which relates to the logo, the lot trace code information, or the environmental category of the part.

Multiple part markings will be inside parentheses. Only one part marking contained in parentheses and separated by a "-" will appear on a part. If a line is indented then it is a continuation of the previous line and the two combined represent the entire part marking for that device.

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OTHER QUALIFIED VERSIONS OF SN54HC257, SN74HC257 :

- Catalog : [SN74HC257](#)
- Military : [SN54HC257](#)

NOTE: Qualified Version Definitions:

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

TAPE AND REEL INFORMATION



*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
SN74HC257DR	SOIC	D	16	2500	330.0	16.4	6.5	10.3	2.1	8.0	16.0	Q1
SN74HC257DRG4	SOIC	D	16	2500	330.0	16.4	6.5	10.3	2.1	8.0	16.0	Q1
SN74HC257NSR	SOP	NS	16	2000	330.0	16.4	8.45	10.55	2.5	12.0	16.2	Q1
SN74HC257PWR	TSSOP	PW	16	2000	330.0	12.4	6.9	5.6	1.6	8.0	12.0	Q1
SN74HC257PWR	TSSOP	PW	16	2000	330.0	12.4	6.85	5.45	1.6	8.0	12.0	Q1
SN74HC257PWR1G4	TSSOP	PW	16	2000	330.0	12.4	6.9	5.6	1.6	8.0	12.0	Q1
SN74HC258DR	SOIC	D	16	2500	330.0	16.4	6.5	10.3	2.1	8.0	16.0	Q1
SN74HC258NSR	SOP	NS	16	2000	330.0	16.4	8.1	10.4	2.5	12.0	16.0	Q1

TAPE AND REEL BOX DIMENSIONS



*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Length (mm)	Width (mm)	Height (mm)
SN74HC257DR	SOIC	D	16	2500	353.0	353.0	32.0
SN74HC257DRG4	SOIC	D	16	2500	353.0	353.0	32.0
SN74HC257NSR	SOP	NS	16	2000	353.0	353.0	32.0
SN74HC257PWR	TSSOP	PW	16	2000	353.0	353.0	32.0
SN74HC257PWR	TSSOP	PW	16	2000	366.0	364.0	50.0
SN74HC257PWR1G4	TSSOP	PW	16	2000	356.0	356.0	35.0
SN74HC258DR	SOIC	D	16	2500	353.0	353.0	32.0
SN74HC258NSR	SOP	NS	16	2000	353.0	353.0	32.0

TUBE



*All dimensions are nominal

Device	Package Name	Package Type	Pins	SPQ	L (mm)	W (mm)	T (μm)	B (mm)
85124012A	FK	LCCC	20	55	506.98	12.06	2030	NA
SN74HC257N	N	PDIP	16	25	506	13.97	11230	4.32
SN74HC257N	N	PDIP	16	25	506	13.97	11230	4.32
SN74HC257N.A	N	PDIP	16	25	506	13.97	11230	4.32
SN74HC257N.A	N	PDIP	16	25	506	13.97	11230	4.32
SN74HC258N	N	PDIP	16	25	506	13.97	11230	4.32
SN74HC258N	N	PDIP	16	25	506	13.97	11230	4.32
SN74HC258N.A	N	PDIP	16	25	506	13.97	11230	4.32
SN74HC258N.A	N	PDIP	16	25	506	13.97	11230	4.32
SNJ54HC257FK	FK	LCCC	20	55	506.98	12.06	2030	NA
SNJ54HC257FK.A	FK	LCCC	20	55	506.98	12.06	2030	NA

D (R-PDSO-G16)

PLASTIC SMALL OUTLINE



4040047-6/M 06/11

- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. 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.
 - D. 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**)

PLASTIC SMALL-OUTLINE PACKAGE

14-PINS SHOWN



DIM \ PINS **	14	16	20	24
A MAX	10,50	10,50	12,90	15,30
A MIN	9,90	9,90	12,30	14,70

4040062/C 03/03

- 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.

GENERIC PACKAGE VIEW

FK 20

LCCC - 2.03 mm max height

8.89 x 8.89, 1.27 mm pitch

LEADLESS CERAMIC CHIP CARRIER

This image is a representation of the package family, actual package may vary.
Refer to the product data sheet for package details.



4229370VA\

J (R-GDIP-T**)

14 LEADS SHOWN

CERAMIC DUAL IN-LINE PACKAGE

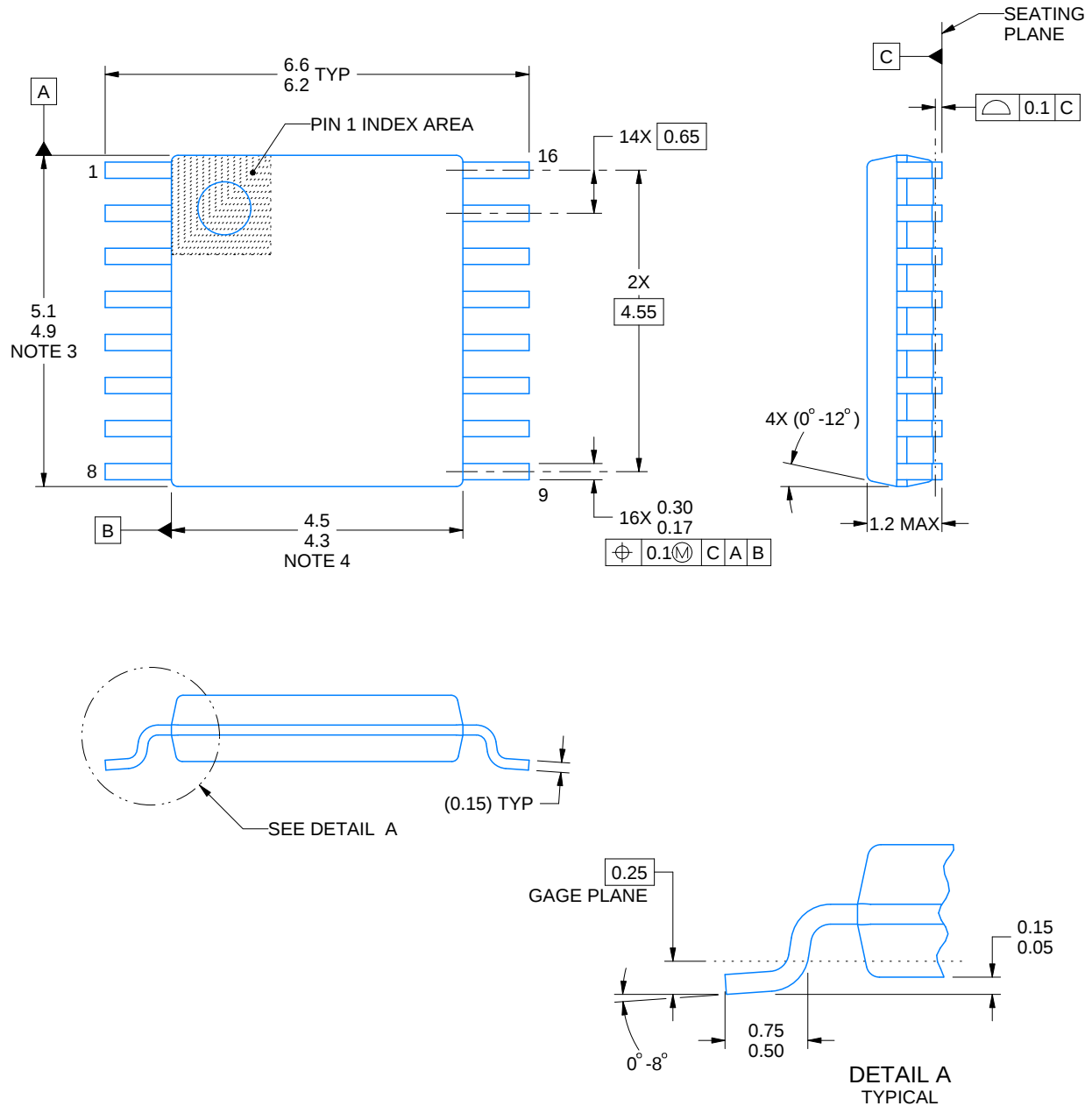
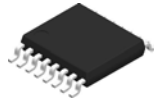


PINS ** DIM	14	16	18	20
A	0.300 (7,62) BSC	0.300 (7,62) BSC	0.300 (7,62) BSC	0.300 (7,62) BSC
B MAX	0.785 (19,94)	.840 (21,34)	0.960 (24,38)	1.060 (26,92)
B MIN	—	—	—	—
C MAX	0.300 (7,62)	0.300 (7,62)	0.310 (7,87)	0.300 (7,62)
C MIN	0.245 (6,22)	0.245 (6,22)	0.220 (5,59)	0.245 (6,22)



4040083/F 03/03

- 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.



4220204/B 12/2023

NOTES:

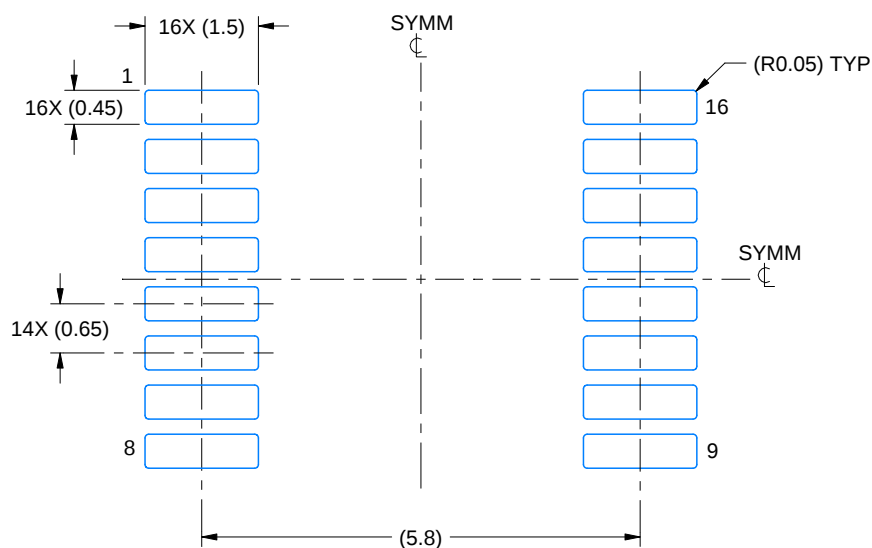
1. All linear dimensions are in millimeters. Any dimensions in parenthesis are for reference only. Dimensioning and tolerancing per ASME Y14.5M.
2. This drawing is subject to change without notice.
3. This dimension does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed 0.15 mm per side.
4. This dimension does not include interlead flash. Interlead flash shall not exceed 0.25 mm per side.
5. Reference JEDEC registration MO-153.

EXAMPLE BOARD LAYOUT

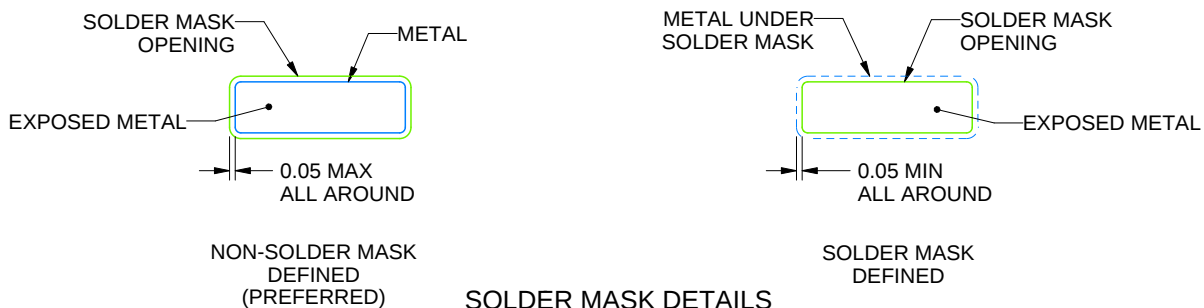
PW0016A

TSSOP - 1.2 mm max height

SMALL OUTLINE PACKAGE



LAND PATTERN EXAMPLE
EXPOSED METAL SHOWN
SCALE: 10X



SOLDER MASK DETAILS

4220204/B 12/2023

NOTES: (continued)

6. Publication IPC-7351 may have alternate designs.

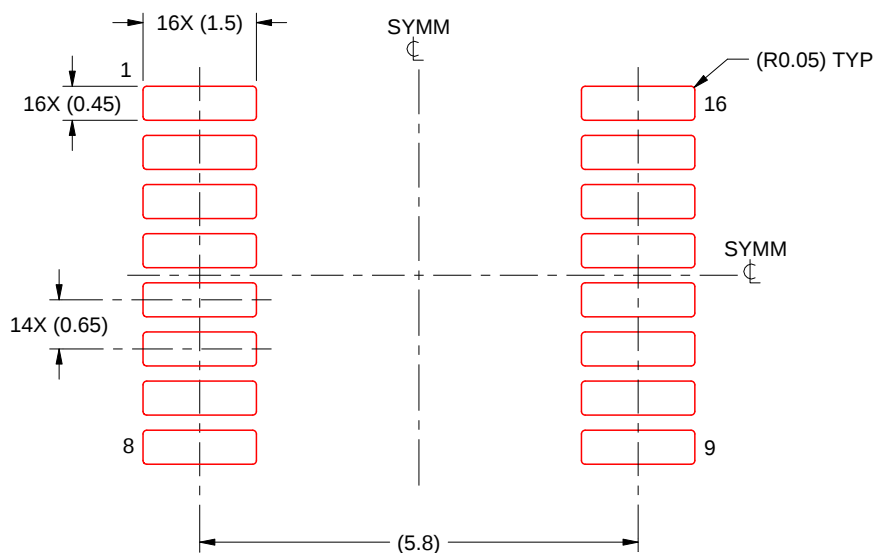
7. Solder mask tolerances between and around signal pads can vary based on board fabrication site.

EXAMPLE STENCIL DESIGN

PW0016A

TSSOP - 1.2 mm max height

SMALL OUTLINE PACKAGE



SOLDER PASTE EXAMPLE
BASED ON 0.125 mm THICK STENCIL
SCALE: 10X

4220204/B 12/2023

NOTES: (continued)

8. Laser cutting apertures with trapezoidal walls and rounded corners may offer better paste release. IPC-7525 may have alternate design recommendations.
9. Board assembly site may have different recommendations for stencil design.

N (R-PDIP-T**)

16 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



PINS **	14	16	18	20
DIM				
A MAX	0.775 (19,69)	0.775 (19,69)	0.920 (23,37)	1.060 (26,92)
A MIN	0.745 (18,92)	0.745 (18,92)	0.850 (21,59)	0.940 (23,88)
MS-001 VARIATION	AA	BB	AC	AD



4040049/E 12/2002

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



PACKAGE OUTLINE

NS0016A

SOP - 2.00 mm max height

SOP



4220735/A 12/2021

NOTES:

1. All linear dimensions are in millimeters. Dimensions in parenthesis are for reference only. Dimensioning and tolerancing per ASME Y14.5M.
2. This drawing is subject to change without notice.
3. This dimension does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed 0.15 mm, per side.
4. This dimension does not include interlead flash. Interlead flash shall not exceed 0.25 mm, per side.



SOLDER PASTE EXAMPLE
 BASED ON 0.125 mm THICK STENCIL
 SCALE:7X

4220735/A 12/2021

NOTES: (continued)

7. Laser cutting apertures with trapezoidal walls and rounded corners may offer better paste release. IPC-7525 may have alternate design recommendations.
8. Board assembly site may have different recommendations for stencil design.

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