TEXAS INSTRUMENTS
SN54HCT373, SN74HCT373
JAJSNH7G – MARCH 1984 – REVISED JULY 2022

SNx4HCT373 3 ステート出力、オクタル・トランスペアレント D タイプ・ラッチ

1 特長

- 4.5V～5.5V の動作電源電圧範囲
- 大電流 3 ステート出力により最大 15 個の LSTTL 負荷を駆動可能
- 低消費電力、I_{CC}：80µA 以下
- t_{pd} = 21ns (標準値)
- 5V で ±6mA の出力駆動能力
- 低い入力電流：最大 1µA
- 入力は TTL 電圧互換
- 8 個の 大電流ラッチを 1 つのパッケージに搭載
- 読み込み時の完全並列アクセス

2 概要

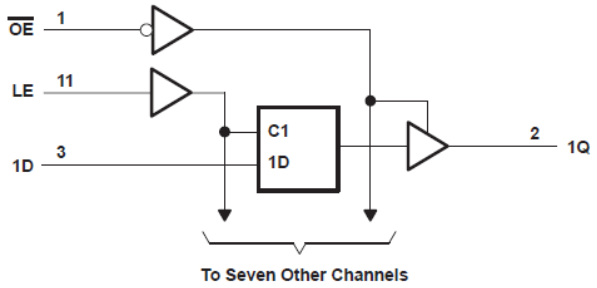
これらの 8 ビット・ラッチは、大きな容量性負荷または比較的低いインピーダンスの負荷の駆動用に設計された 3 ステート出力を備えています。特に、バッファ・レジスタ、I/O ポート、双方向バス・ドライバ、作業レジスタの実装に適しています。

'HCT373 デバイスの 8 つのラッチは、トランスペアレント D タイプ・ラッチです。ラッチ・イネーブル (LE) 入力が HIGH の場合、Q 出力はデータ (D) 入力に追従します。LE を LOW にすると、そのとき D 入力で設定されたレベルで Q 出力がラッチされます。

製品情報

部品番号	パッケージ(1)	本体サイズ (公称)
SN74HCT373DW	SOIC (20)	12.80mm × 7.50mm
SN74HCT373N	PDIP (20)	25.40mm × 6.35mm
SN74HCT373NSR	SO (20)	15.00mm × 5.30mm
SN74HCT373PW	TSSOP (20)	6.50mm × 4.40mm
SN54HCT373J	CDIP (20)	26.92mm × 6.92mm
SNJ54HCT373FK	LCCC (20)	8.89 mm×8.45mm
SNJ54HCT373W	CFP (20)	13.72mm × 6.92mm

(1) 利用可能なパッケージについては、このデータシートの末尾にある注文情報を参照してください。



機能ブロック図

英語版の TI 製品についての情報を翻訳したこの資料は、製品の概要を確認する目的で便宜的に提供しているものです。該当する正式な英語版の最新情報は、www.ti.com で閲覧でき、その内容が常に優先されます。TI では翻訳の正確性および妥当性につきましては一切保証いたしません。実際の設計などの前には、必ず最新版の英語版をご参照くださいますようお願いいたします。

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3 Revision History

資料番号末尾の英字は改訂を表しています。その改訂履歴は英語版に準じています。

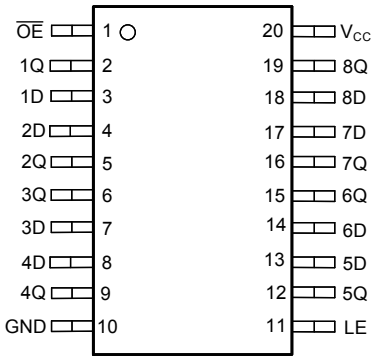
Changes from Revision F (December 2021) to Revision G (July 2022)	Page
• Removed DB package	4

Changes from Revision E (December 2021) to Revision F (December 2021)	Page
• Junction-to-ambient thermal resistance values increased. DW was 58 is now 109.1, N was 69 is now 84.6, NS was 60 is now 113.4, DB was 70 is now 122.7, PW was 83 is now 131.8	4

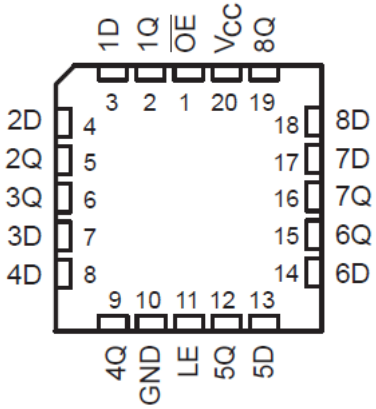
Changes from Revision D (August 2003) to Revision E (December 2021)	Page
• 最新のデータシート規格を反映するように、文書全体の採番、書式設定、表、図、相互参照を更新	1

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4 Pin Configuration and Functions



J, W, DB, DW, N, NS, or PW package
20-Pin CDIP, CFP, SOIC, PDIP, SO, TSSOP
Top View



FK package
20-Pin LCCC
Top View

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5 Specifications

5.1 Absolute Maximum Ratings

over operating free-air temperature range (unless otherwise noted)(1)

			MIN	MAX	UNIT
V_{CC}	Supply voltage range		–0.5	7	V
I_{IK}	Input clamp current(2)	$V_I < 0$ or $V_I > V_{CC}$		± 20	mA
I_{OK}	Output clamp current(2)	$V_O < 0$ or $V_O > V_{CC}$		± 20	mA
I_O	Continuous output current	$V_O = 0$ to V_{CC}		± 35	mA
	Continuous current through V_{CC} or GND			± 70	mA
T_J	Junction temperature			150	℃
T_{stg}	Storage temperature range		–65	150	℃

(1) 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.
(2) The input and output voltage ratings may be exceeded if the input and output current ratings are observed.

5.2 Recommended Operating Conditions(1)

			SN54HCT373			SN74HCT373			UNIT
			MIN	NOM	MAX	MIN	NOM	MAX	
V_{CC}	Supply voltage		4.5	5	5.5	4.5	5	5.5	V
V_{IH}	High-level input voltage	V_{CC} = 4.5 V to 5.5 V	2			2			V
V_{IL}	Low-level input voltage	V_{CC} = 4.5 V to 5.5 V			0.8			0.8	V
V_I	Input voltage		0		V_{CC}	0		V_{CC}	V
V_O	Output voltage		0		V_{CC}	0		V_{CC}	V
t_t	Input transition rise/fall time				500			500	ns
T_A	Operating free-air temperature		–55		125	–40		85	°C

(1) 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.

5.3 Thermal Information

THERMAL METRIC		SN74HCT373				UNIT
		DW (SOIC)	N (PDIP)	NS (SO)	PW (TSSOP)	
		20 PINS	20 PINS	20 PINS	20 PINS	
$R_{\theta JA}$	Junction-to-ambient thermal resistance(1)	109.1	84.6	113.4	131.8	°C/W
$R_{\theta JC\ (top)}$	Junction-to-case (top) thermal resistance	76	72.5	78.6	72.2	°C/W
$R_{\theta JB}$	Junction-to-board thermal resistance	77.6	65.3	78.4	82.8	°C/W
Ψ_{JT}	Junction-to-top characterization parameter	51.5	55.3	47.1	21.5	°C/W
Ψ_{JB}	Junction-to-board characterization parameter	77.1	65.2	78.1	82.4	°C/W
$R_{\theta JC\ (bot)}$	Junction-to-case (bottom) thermal resistance	N/A	N/A	N/A	N/A	°C/W

(1) For more information about traditional and new thermal metrics, see the *Semiconductor and IC package thermal metrics* application report.

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5.4 Electrical Characteristics

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

PARAMETER	TEST CONDITIONS		V_{CC}	T_A = 25°C			SN54HCT373		SN74HCT373		UNIT
				MIN	TYP	MAX	MIN	MAX	MIN	MAX	
V_{OH}	V_I = V_{IH} or V_{IL}	I_{OH} = –20 mA	4.5 V	4.4	4.499		4.4		4.4		V
		I_{OH} = –6 mA		3.98	4.3		3.7		3.84		
V_{OL}	V_I = V_{IH} or V_{IL}	I_{OL} = 20 mA	4.5 V		0.001	0.1		0.1		0.1	V
		I_{OL} = 6 mA			0.17	0.26		0.4		0.33	
I_I	V_I = V_{CC} or 0		5.5 V		±0.1	±100		±1000		±1000	nA
I_{OZ}	V_O = V_{CC} or 0		5.5 V		±0.01	±0.5		±10		±5	µA
I_{CC}	V_i = V_{CC} or 0,	I_O = 0	5.5 V			8		160		80	µA
ΔI_{CC} (1)	One input at 0.5 V or 2.4 V, Other inputs at 0 or V_{CC}		5.5 V		1.4	2.4		3		2.9	mA
C_i			4.5 V to 5.5 V		3	10		10		10	pF

(1) This is the increase in supply current for each input that is at one of the specified TTL voltage levels, rather than 0 V or V_{CC}.

5.5 Timing Requirements

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

		V_{CC}	T_A = 25°C		SN54HCT373		SN74HCT373		UNIT
			MIN	MAX	MIN	MAX	MIN	MAX	
tw	Pulse duration, LE high	4.5V	20		30		25		ns
		5.5V	17		27		23		
tsu	Setup time, data before LE ↓	4.5V	10		15		13		ns
		5.5V	9		14		12		
th	Hold time, data after LE ↓	4.5V	10		10		10		ns
		5.5V	10		10		10		

5.6 Switching Characteristics

over recommended operating free-air temperature range, C_L = 50 pF (unless otherwise noted) (see Parameter Measurement Information)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	V_{CC}	T_A = 25°C			SN54HCT373		SN74HCT373		UNIT
				MIN	TYP	MAX	MIN	MAX	MIN	MAX	
t_{pd}	D	Q	4.5 V		25	35		53		44	ns
			5.5 V		21	32		48		40	
	LE	Any Q	4.5 V		28	35		53		44	
			5.5 V		25	32		48		40	
t_{en}	$\overline{OE}$	Any Q	4.5 V		26	35		53		44	ns
			5.5 V		23	32		48		40	
t_{dis}	$\overline{OE}$	Any Q	4.5 V		23	35		53		44	ns
			5.5 V		22	32		48		40	
t_t		Any Q	4.5 V		10	12		18		15	ns
			5.5 V		9	11		16		14	

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5.7 Switching Characteristics

over recommended operating free-air temperature range, C_L = 150 pF (unless otherwise noted) (see Parameter Measurement Information)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	V_{CC}	T_A = 25°C			SN54HCT373		SN74HCT373		UNIT
				MIN	TYP	MAX	MIN	MAX	MIN	MAX	
t_{pd}	D	Q	4.5 V		32	52		79		65	ns
			5.5 V		27	47		71		59	
	LE	Any Q	4.5 V		38	52		79		65	
			5.5 V		36	47		71		59	
t_{en}	$\overline{OE}$	Any Q	4.5 V		33	52		79		65	ns
			5.5 V		28	47		71		59	
t_r		Any Q	4.5 V		18	42		63		53	ns
			5.5 V		16	38		57		48	

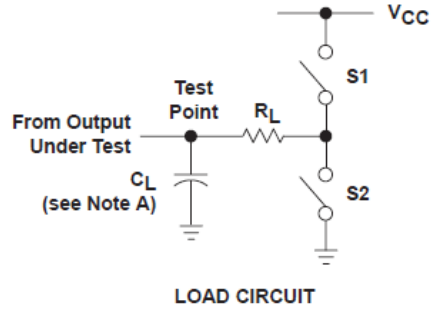
5.8 Operating Characteristics

T_A = 25°C

PARAMETER		TEST CONDITIONS	TYP	UNIT
C_{pd}	Power dissipation capacitance per latch	No load	50	pF

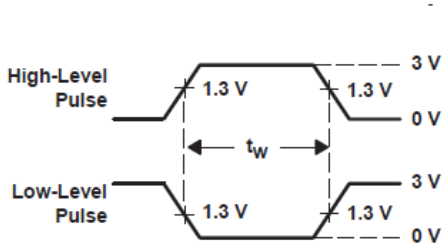
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6 Parameter Measurement Information

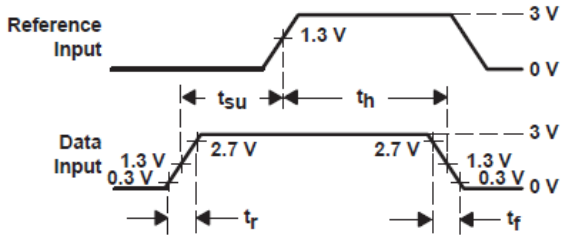


LOAD CIRCUIT

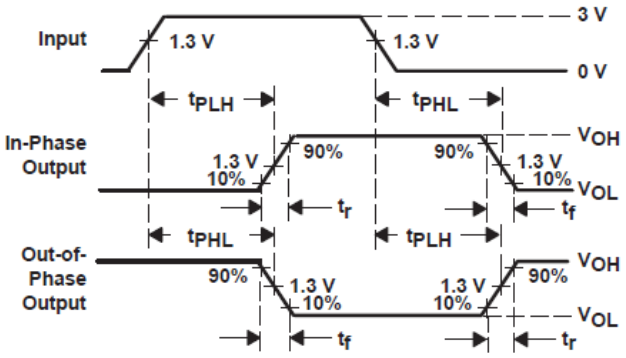
PARAMETER		R_L	C_L	S1	S2
t_{en}	t_{PZH}	1 kΩ	50 pF or 150 pF	Open	Closed
	t_{PZL}			Closed	Open
t_{dis}	t_{PHZ}	1 kΩ	50 pF	Open	Closed
	t_{PLZ}			Closed	Open
t_{pd} or t_t		—	50 pF or 150 pF	Open	Open



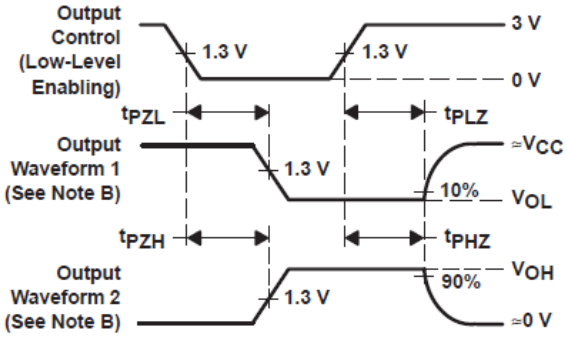
VOLTAGE WAVEFORMS
PULSE DURATIONS



VOLTAGE WAVEFORMS
SETUP AND HOLD AND INPUT RISE AND FALL TIMES



VOLTAGE WAVEFORMS
PROPAGATION DELAY AND OUTPUT RISE AND FALL TIMES



VOLTAGE WAVEFORMS
ENABLE AND DISABLE TIMES FOR 3-STATE OUTPUTS

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 ≤ 1 MHz, Z_O = 50 Ω, t_r = 6 ns, t_f = 6 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}.

図 6-1. Load Circuit and Voltage Waveforms

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7 Detailed Description

7.1 Overview

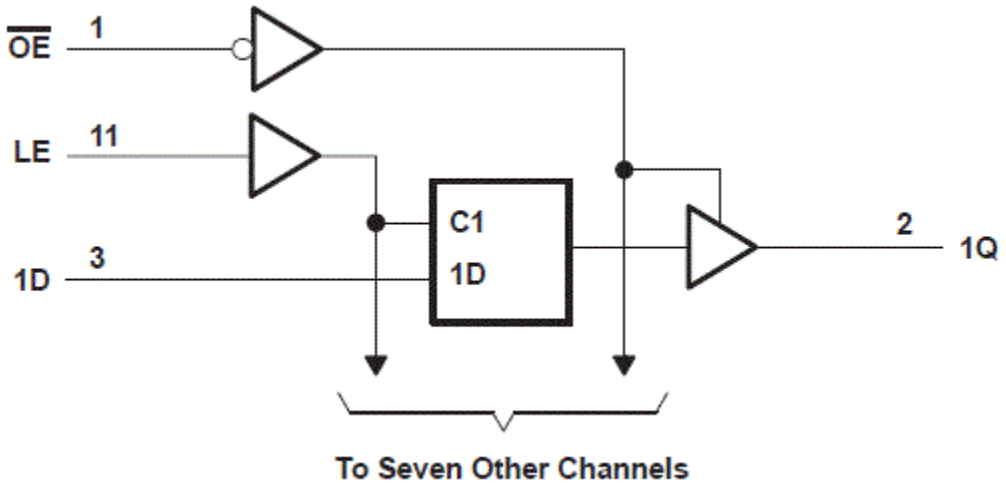
These 8-bit latches feature 3-state outputs designed specifically for driving highly capacitive or relatively low-impedance loads. They are particularly suitable for implementing buffer registers, I/O ports, bidirectional bus drivers, and working registers.

The eight latches of the ’HCT373 devices are transparent D-type latches. While the latch-enable (LE) input is high, the Q outputs follow the data (D) inputs. When LE is taken low, the Q outputs are latched at the levels that were set up at the D inputs.

An output-enable ($\overline{OE}$) input places the eight outputs in either a normal logic state (high or low logic levels) or the high-impedance state. In the high-impedance state, the outputs neither load nor drive the bus lines significantly. The high-impedance state and increased drive provide the capability to drive bus lines without interface or pullup components.

$\overline{OE}$ does not affect the internal operations of the latches. Old data can be retained or new data can be entered while the outputs are off.

7.2 Functional Block Diagram



7.3 Device Functional Modes

表 7-1. Function Table (Each Latch)

INPUTS			OUTPUT Q
$\overline{OE}$	LE	D	
L	H	H	H
L	H	L	L
L	L	X	Q_0
H	X	X	Z

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8 Power Supply Recommendations

The power supply can be any voltage between the minimum and maximum supply voltage rating located in the *Recommended Operating Conditions*. Each V_{CC} terminal should have a good bypass capacitor to prevent power disturbance. A 0.1-µF capacitor is recommended for this device. It is acceptable to parallel multiple bypass caps to reject different frequencies of noise. The 0.1-µF and 1-µF capacitors are commonly used in parallel. The bypass capacitor should be installed as close to the power terminal as possible for best results.

9 Layout

9.1 Layout Guidelines

When using multiple-input and multiple-channel logic devices inputs must not ever be left floating. In many cases, functions or parts of functions of digital logic devices are unused; for example, when only two inputs of a triple-input AND gate are used or only 3 of the 4 buffer gates are used. Such unused input pins must not be left unconnected because the undefined voltages at the outside connections result in undefined operational states. All unused inputs of digital logic devices must be connected to a logic high or logic low voltage, as defined by the input voltage specifications, to prevent them from floating. The logic level that must be applied to any particular unused input depends on the function of the device. Generally, the inputs are tied to GND or V_{CC}, whichever makes more sense for the logic function or is more convenient.

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10 Device and Documentation Support

TI offers an extensive line of development tools. Tools and software to evaluate the performance of the device, generate code, and develop solutions are listed below.

10.1 Receiving Notification of Documentation Updates

To receive notification of documentation updates, navigate to the device product folder on ti.com. Click on *Subscribe to updates* to register and receive a weekly digest of any product information that has changed. For change details, review the revision history included in any revised document.

10.2 サポート・リソース

TI E2E™ サポート・フォーラムは、エンジニアが検証済みの回答と設計に関するヒントをエキスパートから迅速かつ直接得ることができる場所です。既存の回答を検索したり、独自の質問をしたりすることで、設計で必要な支援を迅速に得ることができます。

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10.3 Trademarks

TI E2E™ is a trademark of Texas Instruments.
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10.4 Electrostatic Discharge Caution



This integrated circuit can be damaged by ESD. Texas Instruments recommends that all integrated circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedures can cause damage.

ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet its published specifications.

10.5 Glossary

TI Glossary	This glossary lists and explains terms, acronyms, and definitions.

11 Mechanical, Packaging, and Orderable Information

The following pages include mechanical, packaging, and orderable information. This information is the most current data available for the designated devices. This data is subject to change without notice and revision of this document. For browser-based versions of this data sheet, refer to the left-hand navigation.

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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)
5962-86867012A	Active	Production	LCCC (FK) | 20	55 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	5962-86867012A SNJ54HCT373FK
5962-8686701RA	Active	Production	CDIP (J) | 20	20 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	5962-8686701RA SNJ54HCT373J
5962-8686701VSA	Active	Production	CFP (W) | 20	25 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	5962-8686701VSA SNV54HCT373W
5962-8686701VSA.A	Active	Production	CFP (W) | 20	25 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	5962-8686701VSA SNV54HCT373W
JM38510/65453BRA	Active	Production	CDIP (J) | 20	20 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	JM38510/65453BRA
JM38510/65453BRA.A	Active	Production	CDIP (J) | 20	20 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	JM38510/65453BRA
JM38510/65453BSA	Active	Production	CFP (W) | 20	25 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	JM38510/65453BSA
JM38510/65453BSA.A	Active	Production	CFP (W) | 20	25 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	JM38510/65453BSA
M38510/65453BRA	Active	Production	CDIP (J) | 20	20 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	JM38510/65453BRA
M38510/65453BSA	Active	Production	CFP (W) | 20	25 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	JM38510/65453BSA
SN54HCT373J	Active	Production	CDIP (J) | 20	20 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	SN54HCT373J
SN54HCT373J.A	Active	Production	CDIP (J) | 20	20 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	SN54HCT373J
SN74HCT373DW	Obsolete	Production	SOIC (DW) | 20	-	-	Call TI	Call TI	-40 to 85	HCT373
SN74HCT373DWR	Active	Production	SOIC (DW) | 20	2000 | LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HCT373
SN74HCT373DWR.A	Active	Production	SOIC (DW) | 20	2000 | LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HCT373
SN74HCT373N	Active	Production	PDIP (N) | 20	20 | TUBE	Yes	NIPDAU	N/A for Pkg Type	-40 to 85	SN74HCT373N
SN74HCT373N.A	Active	Production	PDIP (N) | 20	20 | TUBE	Yes	NIPDAU	N/A for Pkg Type	-40 to 85	SN74HCT373N
SN74HCT373NE4	Active	Production	PDIP (N) | 20	20 | TUBE	Yes	NIPDAU	N/A for Pkg Type	-40 to 85	SN74HCT373N
SN74HCT373NSR	Active	Production	SOP (NS) | 20	2000 | LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HCT373

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)
SN74HCT373NSR.A	Active	Production	SOP (NS) | 20	2000 | LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HCT373
SN74HCT373PW	Obsolete	Production	TSSOP (PW) | 20	-	-	Call TI	Call TI	-40 to 85	HT373
SN74HCT373PWR	Active	Production	TSSOP (PW) | 20	2000 | LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HT373
SN74HCT373PWR.A	Active	Production	TSSOP (PW) | 20	2000 | LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	HT373
SNJ54HCT373FK	Active	Production	LCCC (FK) | 20	55 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	5962-86867012A SNJ54HCT 373FK
SNJ54HCT373FK.A	Active	Production	LCCC (FK) | 20	55 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	5962-86867012A SNJ54HCT 373FK
SNJ54HCT373J	Active	Production	CDIP (J) | 20	20 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	5962-8686701RA SNJ54HCT373J
SNJ54HCT373J.A	Active	Production	CDIP (J) | 20	20 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	5962-8686701RA SNJ54HCT373J
SNJ54HCT373W	Active	Production	CFP (W) | 20	25 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	SNJ54HCT373W
SNJ54HCT373W.A	Active	Production	CFP (W) | 20	25 | TUBE	No	SNPB	N/A for Pkg Type	-55 to 125	SNJ54HCT373W

(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.

Important Information and Disclaimer: The information provided on this page represents TI's knowledge and belief as of the date that it is provided. TI bases its knowledge and belief on information provided by third parties, and makes no representation or warranty as to the accuracy of such information. Efforts are underway to better integrate information from third parties. TI has taken and continues to take reasonable steps to provide representative and accurate information but may not have conducted destructive testing or chemical analysis on incoming materials and chemicals. TI and TI suppliers consider certain information to be proprietary, and thus CAS numbers and other limited information may not be available for release.

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 SN54HCT373, SN54HCT373-SP, SN74HCT373 :

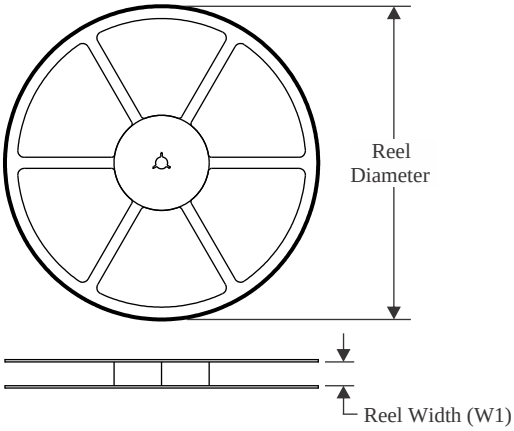
- Catalog : SN74HCT373, SN54HCT373
- Military : SN54HCT373
- Space : SN54HCT373-SP

NOTE: Qualified Version Definitions:

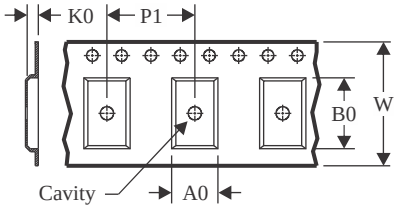
- Catalog - TI's standard catalog product
- Military - QML certified for Military and Defense Applications
- Space - Radiation tolerant, ceramic packaging and qualified for use in Space-based application

TAPE AND REEL INFORMATION

REEL DIMENSIONS

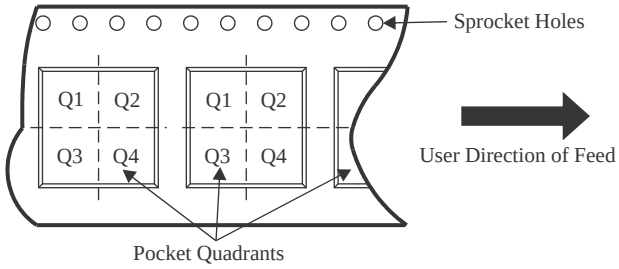


TAPE DIMENSIONS



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

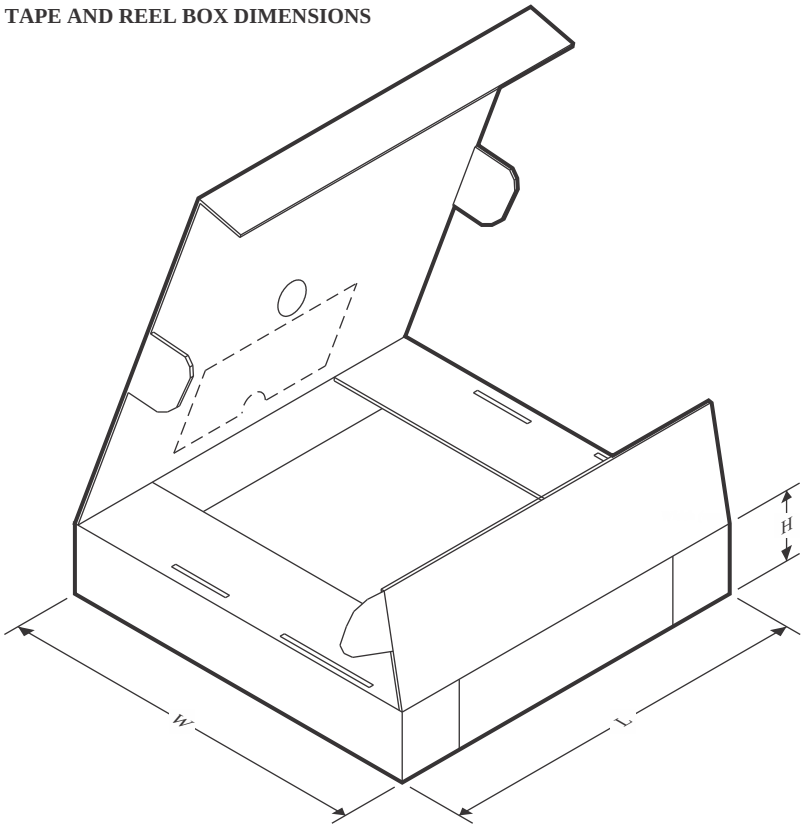
QUADRANT ASSIGNMENTS FOR PIN 1 ORIENTATION IN TAPE



*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
SN74HCT373DWR	SOIC	DW	20	2000	330.0	24.4	10.9	13.3	2.7	12.0	24.0	Q1
SN74HCT373DWR	SOIC	DW	20	2000	330.0	24.4	10.8	13.3	2.7	12.0	24.0	Q1
SN74HCT373NSR	SOP	NS	20	2000	330.0	24.4	8.4	13.0	2.5	12.0	24.0	Q1
SN74HCT373PWR	TSSOP	PW	20	2000	330.0	16.4	6.95	7.0	1.4	8.0	16.0	Q1

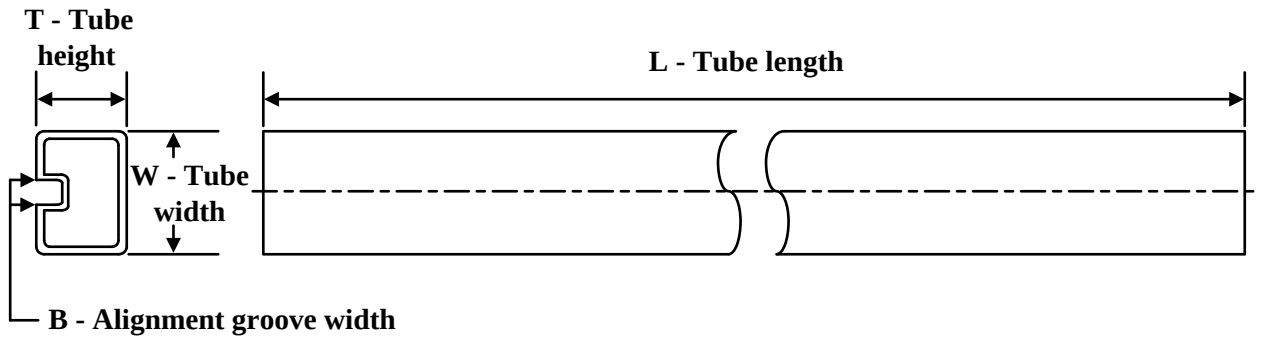
TAPE AND REEL BOX DIMENSIONS



*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Length (mm)	Width (mm)	Height (mm)
SN74HCT373DWR	SOIC	DW	20	2000	356.0	356.0	45.0
SN74HCT373DWR	SOIC	DW	20	2000	356.0	356.0	45.0
SN74HCT373NSR	SOP	NS	20	2000	356.0	356.0	45.0
SN74HCT373PWR	TSSOP	PW	20	2000	353.0	353.0	32.0

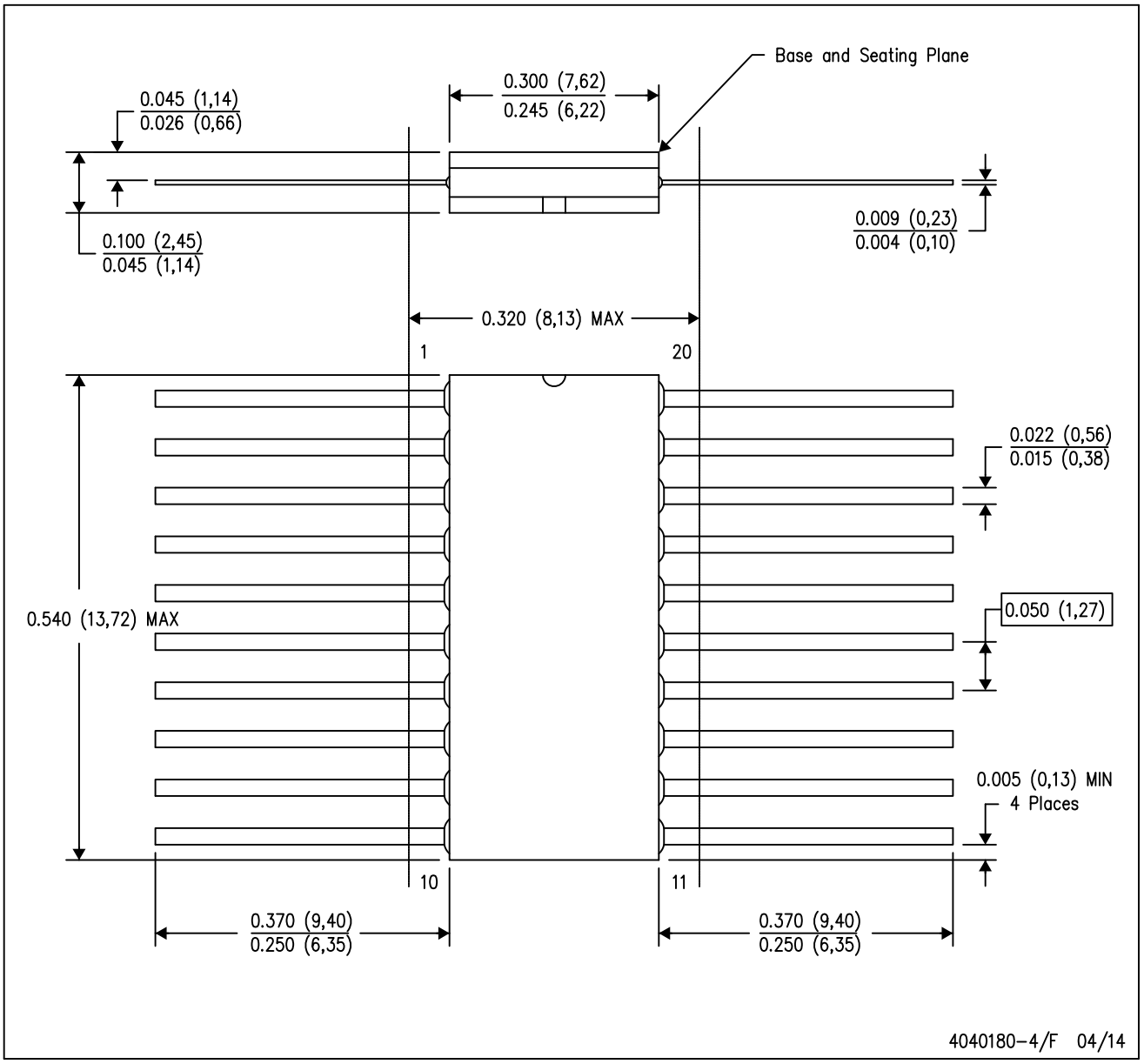
TUBE



*All dimensions are nominal

Device	Package Name	Package Type	Pins	SPQ	L (mm)	W (mm)	T (µm)	B (mm)
5962-86867012A	FK	LCCC	20	55	506.98	12.06	2030	NA
5962-8686701VSA	W	CFP	20	25	506.98	26.16	6220	NA
5962-8686701VSA.A	W	CFP	20	25	506.98	26.16	6220	NA
JM38510/65453BSA	W	CFP	20	25	506.98	26.16	6220	NA
JM38510/65453BSA.A	W	CFP	20	25	506.98	26.16	6220	NA
M38510/65453BSA	W	CFP	20	25	506.98	26.16	6220	NA
SN74HCT373N	N	PDIP	20	20	506	13.97	11230	4.32
SN74HCT373N.A	N	PDIP	20	20	506	13.97	11230	4.32
SN74HCT373NE4	N	PDIP	20	20	506	13.97	11230	4.32
SNJ54HCT373FK	FK	LCCC	20	55	506.98	12.06	2030	NA
SNJ54HCT373FK.A	FK	LCCC	20	55	506.98	12.06	2030	NA
SNJ54HCT373W	W	CFP	20	25	506.98	26.16	6220	NA
SNJ54HCT373W.A	W	CFP	20	25	506.98	26.16	6220	NA

W (R–GDFP–F20) CERAMIC DUAL FLATPACK



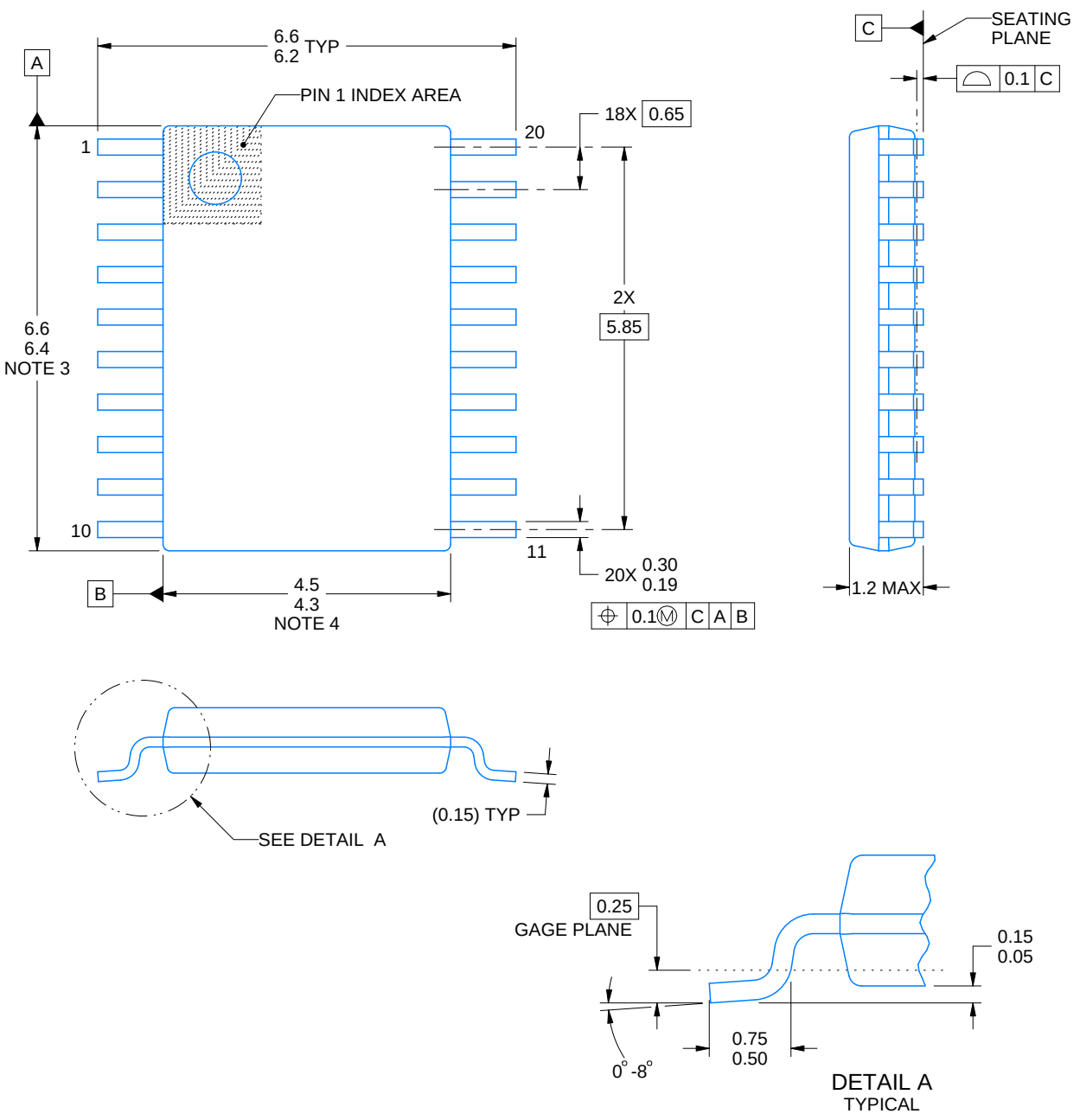
NOTES:
A. All linear dimensions are in inches (millimeters).
B. This drawing is subject to change without notice.
C. This package can be hermetically sealed with a ceramic lid using glass frit.
D. Index point is provided on cap for terminal identification only.
E. Falls within Mil–Std 1835 GDFP2–F20

PACKAGE OUTLINE

PW0020A

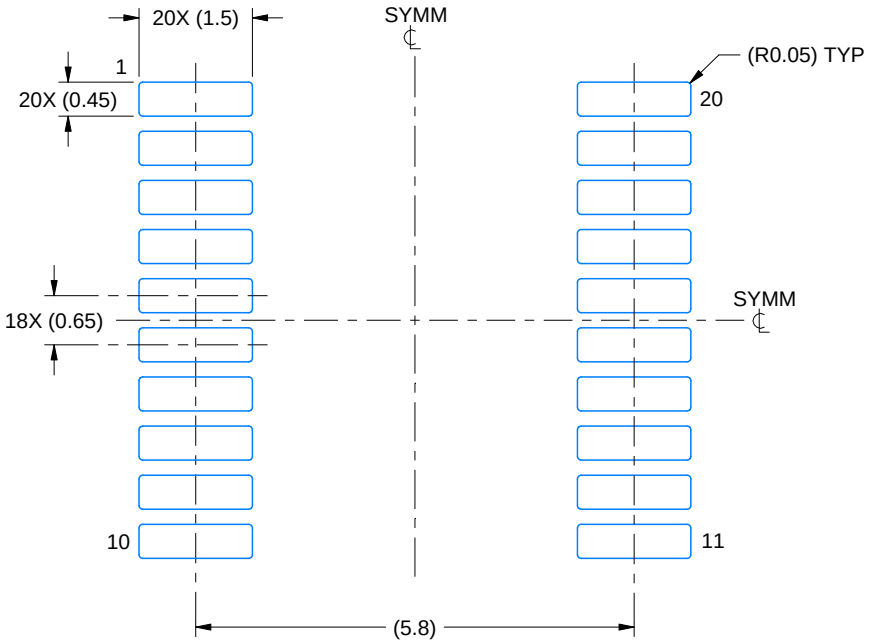
TSSOP - 1.2 mm max height

SMALL OUTLINE PACKAGE



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.



LAND PATTERN EXAMPLE
EXPOSED METAL SHOWN
SCALE: 10X

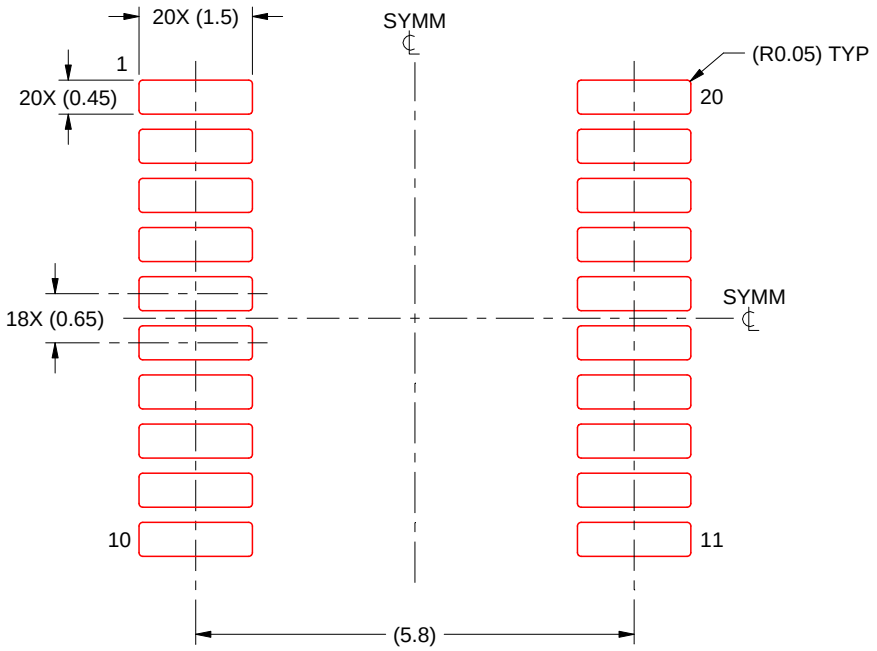


SOLDER MASK DETAILS

4220206/A 02/2017

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.



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

4220206/A 02/2017

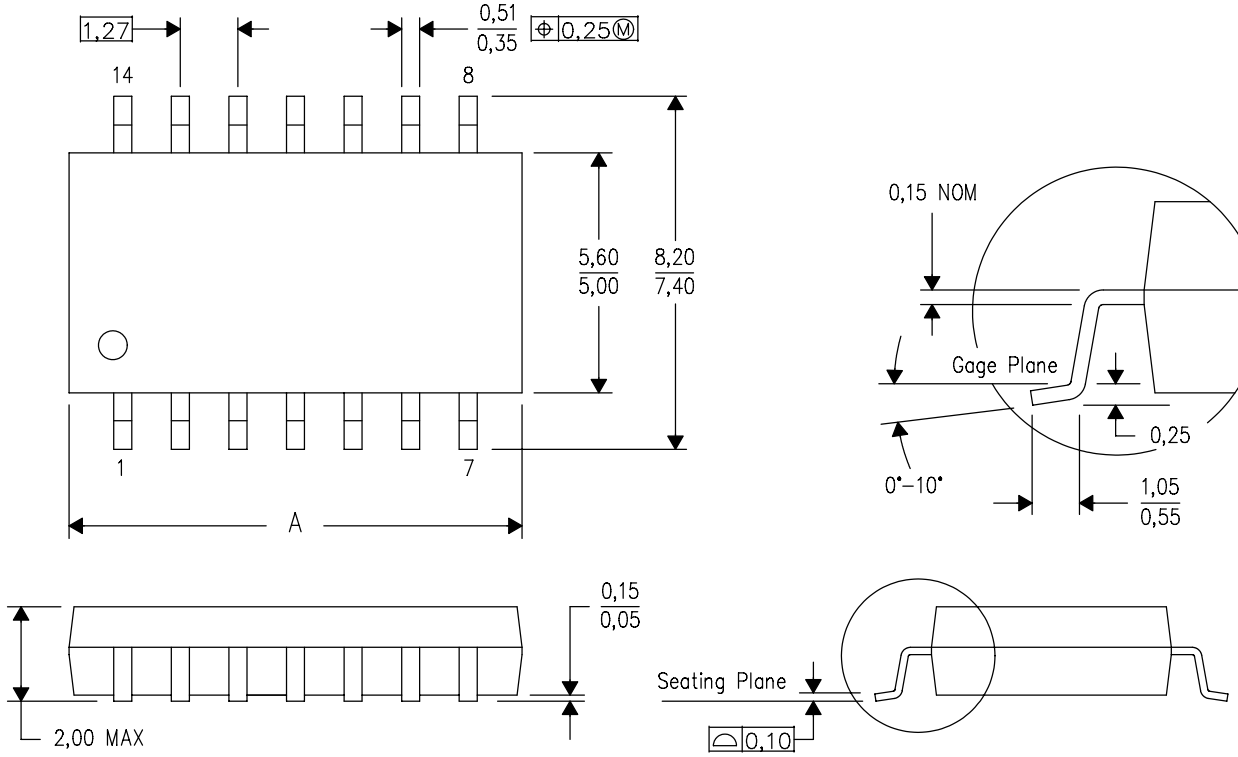
NOTES: (continued)

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.

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

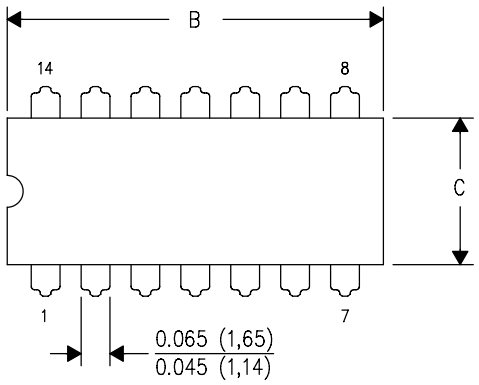
4040062/C 03/03

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.

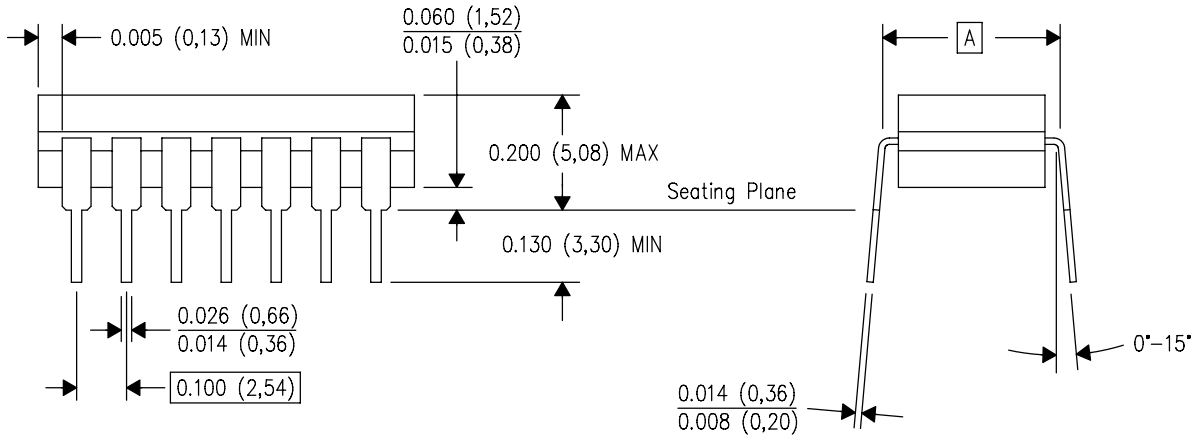
J (R–GDIP–T**)

14 LEADS SHOWN

CERAMIC DUAL IN–LINE PACKAGE



DIM \ PINS **	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.

GENERIC PACKAGE VIEW

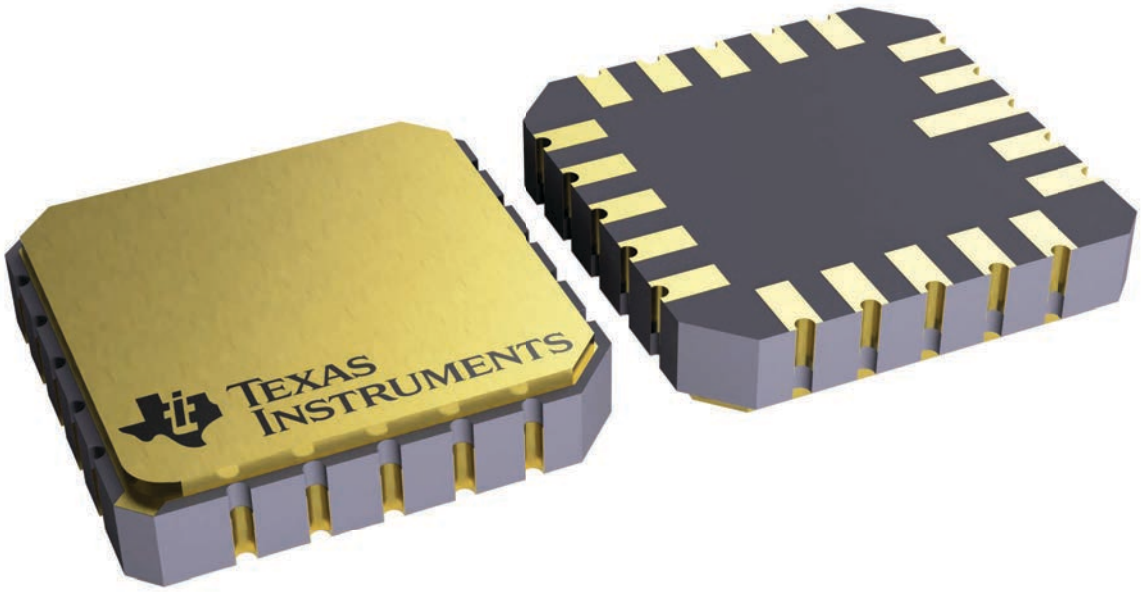
FK 20

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.

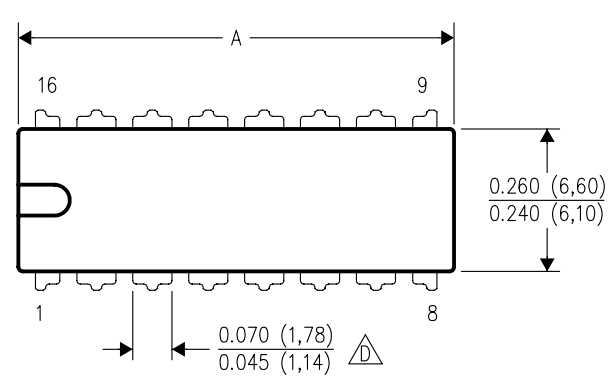


4229370VA\

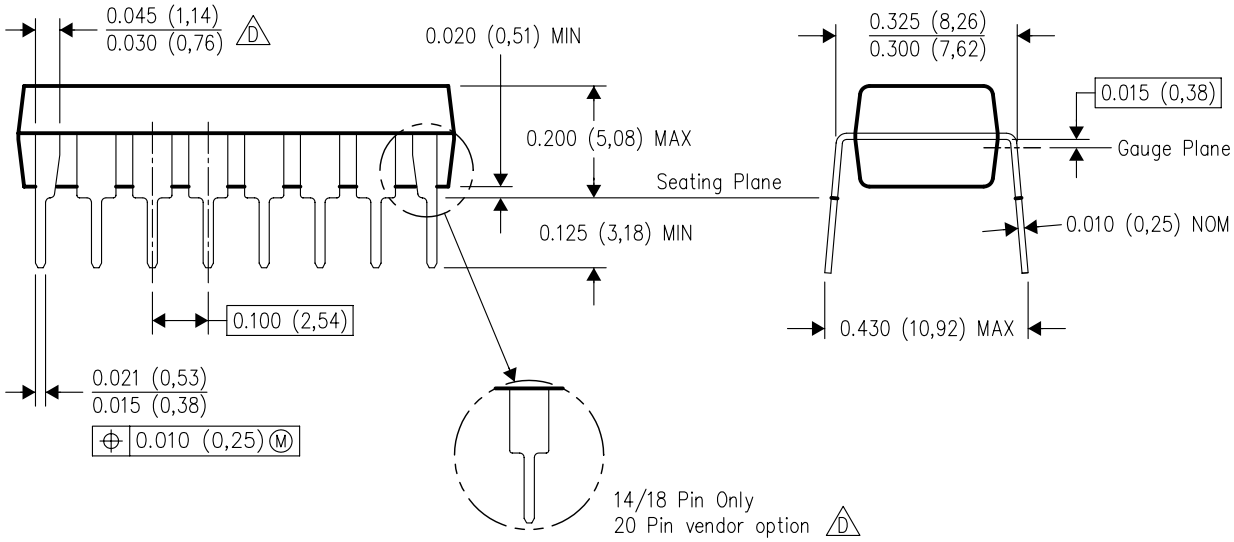
N (R–PDIP–T**)

PLASTIC DUAL–IN–LINE PACKAGE

16 PINS SHOWN

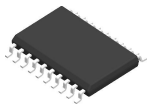


DIM \ PINS **	14	16	18	20
A MAX	0.775 (19,69)	0.775 (19,69)	0.920 (23,37)	1.060 (26,92)
A MIN	0.745 (18,92)	0.745 (18,92)	0.850 (21,59)	0.940 (23,88)
MS–001 VARIATION (C)	AA	BB	AC	AD



4040049/E 12/2002

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

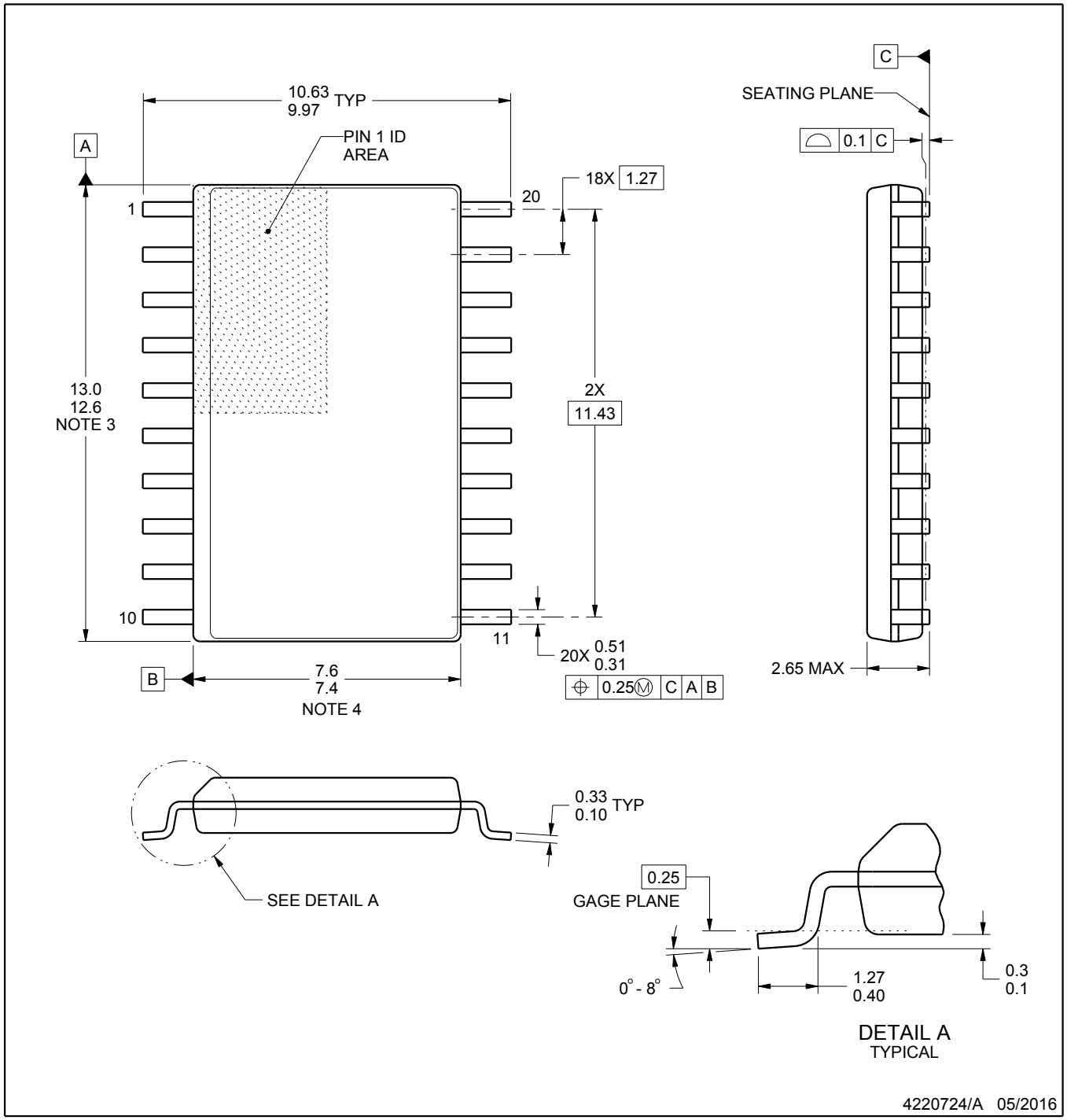


PACKAGE OUTLINE

DW0020A

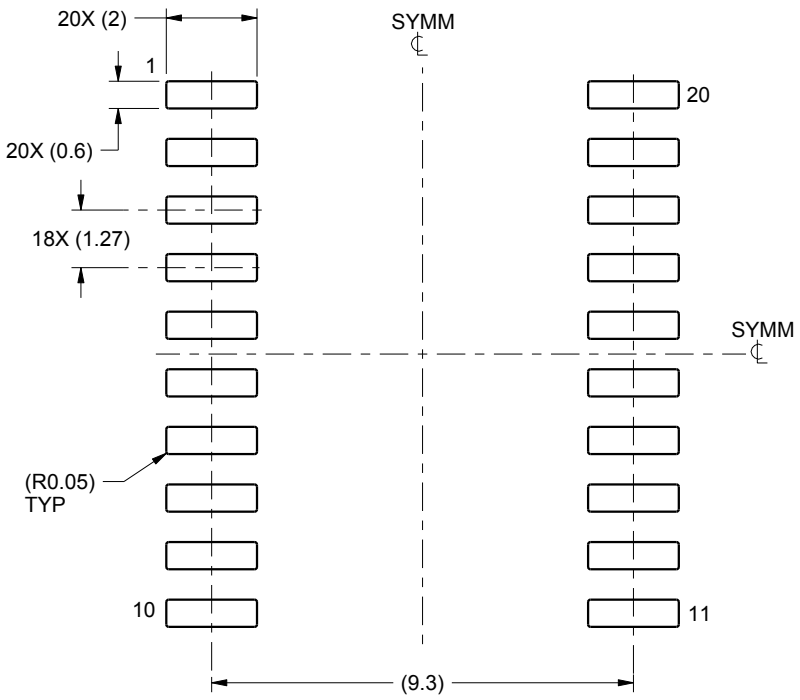
SOIC - 2.65 mm max height

SOIC

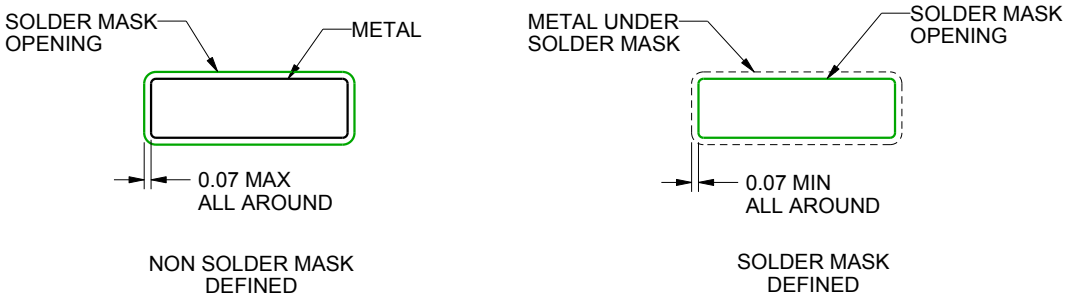


NOTES:

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 0.43 mm per side.
5. Reference JEDEC registration MS-013.



LAND PATTERN EXAMPLE
SCALE:6X

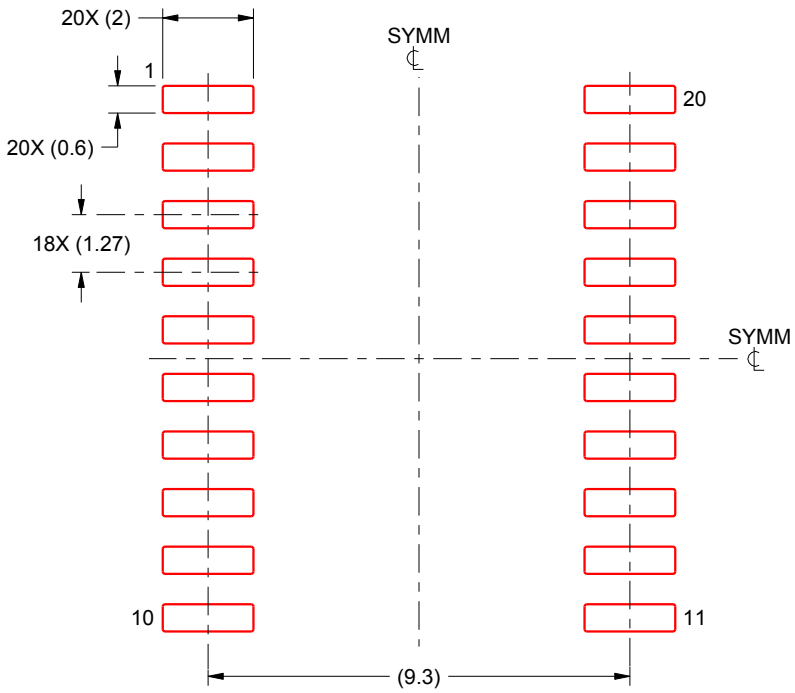


SOLDER MASK DETAILS

4220724/A 05/2016

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.



SOLDER PASTE EXAMPLE
BASED ON 0.125 mm THICK STENCIL
SCALE:6X

4220724/A 05/2016

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.

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最終更新日：2025 年 10 月