

# Low-Voltage CMOS Octal Transparent Latch Flow Through Pinout

With 5 V-Tolerant Inputs and Outputs (3-State, Non-Inverting)

## **MC74LCX573**

The MC74LCX573 is a high performance, non-inverting octal transparent latch operating from a 1.65 to 5.5 V supply. High impedance TTL compatible inputs significantly reduce current loading to input drivers while TTL compatible outputs offer improved switching noise performance. A  $V_{\rm I}$  specification of 5.5 V allows MC74LCX573 inputs to be safely driven from 5.0 V devices.

The MC74LCX573 contains 8 D-type latches with 3-state standard outputs. When the Latch Enable (LE) input is HIGH, data on the Dn inputs enters the latches. In this condition, the latches are transparent, i.e., a latch output will change state each time its D input changes. When LE is LOW, the latches store the information that was present on the D inputs a setup time preceding the HIGH-to-LOW transition of LE. The 3-state standard outputs are controlled by the Output Enable  $(\overline{OE})$  input. When  $\overline{OE}$  is LOW, the standard outputs are enabled. When  $\overline{OE}$  is HIGH, the standard outputs are in the high impedance state, but this does not interfere with new data entering into the latches. The LCX573 flow through design facilitates easy PC board layout.

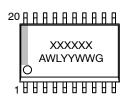
## **Features**

- Designed for 1.65 to 5.5 V V<sub>CC</sub> Operation
- 5.0 V Tolerant Interface Capability With 5.0 V TTL Logic
- Supports Live Insertion and Withdrawal
- I<sub>OFF</sub> Specification Guarantees High Impedance When  $V_{CC} = 0 \text{ V}$
- LVTTL Compatible
- LVCMOS Compatible
- 24 mA Balanced Output Sink and Source Capability at 3 V
- Near Zero Static Supply Current in All Three Logic States (10 μA) Substantially Reduces System Power Requirements
- Latchup Performance Exceeds 100 mA
- ESD Performance:
  - ♦ Human Body Model >2000 V
- -Q Suffix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q100 Qualified and PPAP Capable
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant

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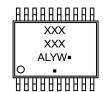


SOIC-20 WB DW SUFFIX CASE 751D





TSSOP-20 DT SUFFIX CASE 948E



A = Assembly Location

L, WL = Wafer Lot Y, YY = Year W, WW = Work Week G or = Pb-Free Package

(Note: Microdot may be in either location)

#### **ORDERING INFORMATION**

See detailed ordering and shipping information on page 8 of this data sheet.

NOTE: Some of the devices on this data sheet have been **DISCONTINUED**. Please refer to the table on page 8.

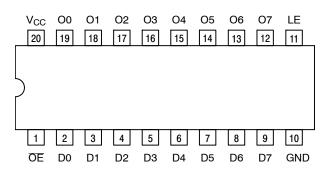


Figure 1. Pinout (Top View)

#### **PIN NAMES**

Pins	Function
ŌĒ	Output Enable Input
LE	Latch Enable Input
D0-D7	Data Inputs
00-07	3-State Latch Outputs

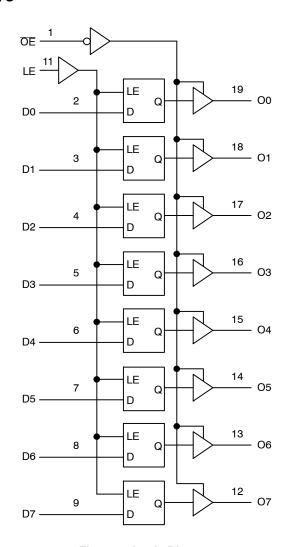


Figure 2. Logic Diagram

## **TRUTH TABLE**

	Inputs		Outputs	
ŌĒ	LE	Dn	On	Operating Mode
L L	H H	H L	H L	Transparent (Latch Disabled); Read Latch
L L	L L	h I	H L	Latched (Latch Enabled) Read Latch
L	L	Х	NC	Hold; Read Latch
Н	L	Х	Z	Hold; Disabled Outputs
H H	H	H L	Z Z	Transparent (Latch Disabled); Disabled Outputs
H H	L L	h I	Z Z	Latched (Latch Enabled); Disabled Outputs

H = High Voltage Level; h = High Voltage Level One Setup Time Prior to the Latch Enable High-to-Low Transition

L = Low Voltage Level

I = Low Voltage Level One Setup Time Prior to the Latch Enable High-to-Low Transition

NC = No Change, State Prior to the Latch Enable High-to-Low Transition
X = High or Low Voltage Level or Transitions are Acceptable
Z = High Impedance State
For I<sub>CC</sub> Reasons DO NOT FLOAT Inputs

#### **MAXIMUM RATINGS**

Symbol	Parameter		Value	Unit
$V_{CC}$	DC Supply Voltage		-0.5 to +6.5	V
VI	DC Input Voltage (Note 1)		-0.5 to +6.5	V
	DC Output Voltage (Note 1) Active-Mod	de (High or Low State)	-0.5 to V <sub>CC</sub> + 0.5	
$V_{O}$		Tri-State Mode	-0.5 to +6.5	٧
	Power-Do	own Mode (V <sub>CC</sub> = 0 V)	-0.5 to +6.5	
I <sub>IK</sub>	DC Input Diode Current	V <sub>IN</sub> < GND	-50	mA
I <sub>OK</sub>	DC Output Diode Current	V <sub>OUT</sub> < GND	-50	mA
IO	DC Output Source/Sink Current		±50	mA
I <sub>CC</sub> or I <sub>GND</sub>	DC Supply Current per Supply Pin or Ground Pin		±100	mA
T <sub>STG</sub>	Storage Temperature Range		-65 to +150	°C
TL	Lead Temperature, 1 mm from Case for 10 secs		260	°C
TJ	Junction Temperature Under Bias		+150	°C
$\theta_{\sf JA}$	Thermal Resistance (Note 2)	SOIC-20W	96	°C/W
		WQFN20	99	
		QFN20	111	
		TSSOP-20	150	
$P_{D}$	Power Dissipation in Still Air	SOIC-20W	1302	mW
		WQFN20	1256	
		QFN20	1127	
		TSSOP-20	833	1
MSL	Moisture Sensitivity	SOIC-20W All Other Packages	Level 3 Level 1	-
F <sub>R</sub>	Flammability Rating C	0xygen Index: 28 to 34	UL 94 V-0 @ 0.125 in	-
V <sub>ESD</sub>	ESD Withstand Voltage (Note 3)	Human Body Model Charged Device Model	> 2000 N/A	V

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. I<sub>O</sub> absolute maximum rating must be observed.

Measured with minimum pad spacing on an FR4 board, using 76 mm-by-114 mm, 2-ounce copper trace no air flow per JESD51-7.
 HBM tested to EIA / JESD22-A114-A. CDM tested to JESD22-C101-A. JEDEC recommends that ESD qualification to EIA/JESD22-A115A (Machine Model) be discontinued.

## **RECOMMENDED OPERATING CONDITIONS**

Symbol		Parameter	Min	Тур	Max	Unit
V <sub>CC</sub>	Supply Voltage	Operating Data Retention Only	1.65 1.5	3.3 3.3	5.5 5.5	V
VI	Digital Input Voltage		0	-	5.5	V
Vo	Output Voltage	Active Mode (High or Low State) $Tri ext{-}State Mode$ $Power Down Mode (V_{CC} = 0 V)$	0 0 0		V <sub>CC</sub> 5.5 5.5	٧
T <sub>A</sub>	Operating Free-Air Temperature		-55	_	+125	°C
t <sub>r</sub> , t <sub>f</sub>	Input Rise or Fall Rate	$V_{CC} = 1.65 \text{ V to } 1.95 \text{ V} \\ V_{CC} = 2.3 \text{ V to } 2.7 \text{ V} \\ V_{I} \text{ from } 0.8 \text{ V to } 2.0 \text{ V, } V_{CC} = 3.0 \text{ V} \\ V_{CC} = 4.5 \text{ V to } 5.5 \text{ V} \\ \end{cases}$	0 0 0 0	- - -	20 20 10 5	nS/V

Functional operation above the stresses listed in the Recommended Operating Ranges is not implied. Extended exposure to stresses beyond the Recommended Operating Ranges limits may affect device reliability.

4. Unused inputs must always be tied to an appropriate logic voltage level (e.g., either GND or V<sub>CC</sub>). Unused outputs must be left open.

## DC ELECTRICAL CHARACTERISTICS

				T <sub>A</sub> = -40 °C	C to +85 °C	T <sub>A</sub> = -55 °C	to +125 °C	
Symbol	Parameter	Conditions	V <sub>CC</sub> (V)	Min	Max	Min	Max	Unit
$V_{IH}$	High-Level Input Voltage		1.65 to 1.95	0.65 x V <sub>CC</sub>		0.65 x V <sub>CC</sub>		V
			2.3 to 2.7	1.7		1.7		
			2.7 to 3.6	2.0		2.0		
			4.5 to 5.5	0.7 x V <sub>CC</sub>		0.7 x V <sub>CC</sub>		
V <sub>IL</sub>	Low-Level Input Voltage		1.65 to 1.95		0.35 x V <sub>CC</sub>		0.35 x V <sub>CC</sub>	V
			2.3 to 2.7		0.7		0.7	
			2.7 to 3.6		0.8		0.8	
			4.5 to 5.5		0.3 x V <sub>CC</sub>		0.3 x V <sub>CC</sub>	
$V_{OH}$	High-Level	$V_I = V_{IH}$ or $V_{IL}$						V
	Output Voltage	I <sub>OH</sub> = -100 μA	1.65 to 5.5	V <sub>CC</sub> - 0.1	-	V <sub>CC</sub> – 0.1	-	
		I <sub>OH</sub> = -4 mA	1.65	1.2	-	1.2	-	
		I <sub>OH</sub> = -8 mA	2.3	1.8	-	1.8	-	
		I <sub>OH</sub> = -12 mA	2.7	2.2	-	2.2	-	
		I <sub>OH</sub> = -16 mA	3.0	2.4	-	2.4	-	
		I <sub>OH</sub> = -24 mA	3.0	2.2	-	2.2	-	
		I <sub>OH</sub> = -32 mA	4.5	3.8		3.8		
$V_{OL}$	Low-Level	$V_I = V_{IH}$ or $V_{IL}$						V
	Output Voltage	I <sub>OL</sub> = 100 μA	1.65 to 5.5	-	0.1	-	0.1	
		I <sub>OL</sub> = 4 mA	1.65	-	0.45	-	0.45	
		I <sub>OL</sub> = 8 mA	2.3	_	0.6	-	0.6	
		I <sub>OL</sub> = 12 mA	2.7	_	0.4	-	0.4	
		I <sub>OL</sub> = 16 mA	3.0	_	0.4	-	0.4	
		I <sub>OL</sub> = 24 mA	3.0	_	0.55	-	0.55	
		I <sub>OL</sub> = 32 mA	4.5		0.6		0.6	
I <sub>I</sub>	Input Leakage Current	V <sub>I</sub> = 0 to 5.5 V	3.6		±5.0	_	±5.0	μΑ

## DC ELECTRICAL CHARACTERISTICS

				T <sub>A</sub> = -40 °C to +85 °C		T <sub>A</sub> = -55 °C to +125 °C		
Symbol	Parameter	Conditions	V <sub>CC</sub> (V)	Min	Max	Min	Max	Unit
I <sub>OZ</sub>	3-State Output Leakage Current	$V_I = V_{IH}$ or $V_{IL}$ , $V_O = 0$ V to 5.5 V	3.6	-	±5.0	-	±5.0	μΑ
I <sub>OFF</sub>	Power Off Leakage Current	V <sub>I</sub> = 5.5 V or V <sub>O</sub> = 5.5 V	0	-	10	-	10	μΑ
Icc	Quiescent Supply Current	V <sub>I</sub> = 5.5 V or GND	3.6	-	10	-	10	μΑ
$\Delta I_{CC}$	Increase in I <sub>CC</sub> per Input	V <sub>IH</sub> = V <sub>CC</sub> - 0.6 V	2.3 to 3.6	-	500	-	500	μΑ

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

5. These values of V<sub>I</sub> are used to test DC electrical characteristics only.

## **AC ELECTRICAL CHARACTERISTICS**

				T <sub>A</sub> = -40 °	C to +85 °C	T <sub>A</sub> = -55 °C	to +125 °C	
Symbol	Parameter	Test Condition	V <sub>CC</sub> (V)	Min	Max	Min	Max	Unit
t <sub>PLH</sub> ,	Propagation Delay,	Waveform 1	1.65 to 1.95	_	14.0	_	14.0	ns
t <sub>PHL</sub>	Dn to On		2.3 to 2.7	_	9.6	_	9.6	
	2.7 3.0 to 3.0		2.7	-	9.0	-	9.0	
		3.0 to 3.6	-	8.0	-	8.0		
			4.5 to 5.5	-	5.5	-	5.5	
t <sub>PLH</sub> ,	Propagation Delay,	Waveform 3	1.65 to 1.95	-	15.0	-	15.0	ns
t <sub>PHL</sub>	LE to On		2.3 to 2.7	-	10.5	-	10.5	
			2.7	-	9.5	-	9.5	
	<u> </u>	3.0 to 3.6	-	8.5	-	8.5		
		4.5 to 5.5	-	6.0	-	6.0		
t <sub>PZH</sub> ,	Output Enable	Waveform 2	1.65 to 1.95	-	15.0	-	15.0	ns
$t_{PZL}$		2.3 to 2.7	-	10.5	-	10.5		
			2.7	-	9.5	-	9.5	
			3.0 to 3.6	-	8.5	-	8.5	
			4.5 to 5.5	-	6.0	-	6.0	
t <sub>PHZ</sub> ,	Output Enable	Waveform 2	1.65 to 1.95	_	10.0	_	10.0	ns
$t_{PLZ}$	Time, to On		2.3 to 2.7	-	7.8	-	7.8	
			2.7	-	7.0	-	7.0	
			3.0 to 3.6	-	6.5	-	6.5	
			4.5 to 5.5	-	4.5	-	4.5	
ts	Setup Time, HIGH	Waveform 3	1.65 to 1.95	4.0	<u> </u>	4.0	_	ns
	or LÓW Dn to LE		2.3 to 2.7	4.0	<u> </u>	4.0	_	
	2.7 3.0 to 3.6	2.7	2.5	<u> </u>	2.5	_		
		3.0 to 3.6	2.5	<u> </u>	2.5	_		
			4.5 to 5.5	2.5	_	2.5	-	

## **AC ELECTRICAL CHARACTERISTICS**

				T <sub>A</sub> = -40 °	C to +85 °C	T <sub>A</sub> = -55 °C	to +125 °C	
Symbol	Parameter	Test Condition	V <sub>CC</sub> (V)	Min	Max	Min	Max	Unit
t <sub>h</sub>	Hold Time, HIGH or	Waveform 3	1.65 to 1.95	2.0	-	2.0	-	ns
	LOW Dn to LE 2.3 to 2.7	2.3 to 2.7	2.0	-	2.0	-		
			2.7	1.5	-	1.5	-	
			3.0 to 3.6	1.5	-	1.5	-	
			4.5 to 5.5	1.5	-	1.5	-	
t <sub>W</sub>	Pulse Width, LE	Waveform 3	1.65 to 1.95	4.0	-	4.0	-	ns
	HIGH 2.3 to	2.3 to 2.7	4.0	-	4.0	-		
			2.7	3.3	-	3.3	-	
			3.0 to 3.6	3.3	-	3.3	-	
			4.5 to 5.5	3.3	-	3.3	-	
toshL,	Output to Output		1.65 to 1.95	-	-	-	-	ns
toslh	Skew		2.3 to 2.7	-	-	-	-	
		2.7 3.0 to 3.6	2.7	-	-	-	-	
			3.0 to 3.6	-	1.0	-	1.0	
			4.5 to 5.5	_	-	-	_	

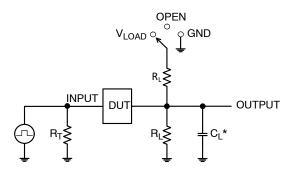
## **DYNAMIC SWITCHING CHARACTERISTICS**

			T	A = +25°C		
Symbol	Characteristic	Condition	Min	Тур	Max	Unit
V <sub>OLP</sub>	Dynamic LOW Peak Voltage (Note 6)	$\begin{array}{c} V_{CC} = 3.3 \text{ V}, \ C_L = 50 \text{ pF}, \ V_{IH} = 3.3 \text{ V}, \ V_{IL} = 0 \text{ V} \\ V_{CC} = 2.5 \text{ V}, \ C_L = 30 \text{ pF}, \ V_{IH} = 2.5 \text{ V}, \ V_{IL} = 0 \text{ V} \end{array}$		0.8 0.6		V V
V <sub>OLV</sub>	Dynamic LOW Valley Voltage (Note 6)	$V_{CC}$ = 3.3 V, $C_L$ = 50 pF, $V_{IH}$ = 3.3 V, $V_{IL}$ = 0 V $V_{CC}$ = 2.5 V, $C_L$ = 30 pF, $V_{IH}$ = 2.5 V, $V_{IL}$ = 0 V		-0.8 -0.6		V V

<sup>6.</sup> Number of outputs defined as "n". Measured with "n-1" outputs switching from HIGH-to-LOW or LOW-to-HIGH. The remaining output is measured in the LOW state.

## **CAPACITIVE CHARACTERISTICS**

Symbol	Parameter	Condition	Тур	Unit
C <sub>IN</sub>	Input Capacitance	$V_{CC}$ = 3.3 V, $V_{I}$ = 0 V or $V_{CC}$	7	pF
C <sub>I/O</sub>	Input/Output Capacitance	$V_{CC} = 3.3 \text{ V}, V_I = 0 \text{ V or } V_{CC}$	8	pF
C <sub>PD</sub>	Power Dissipation Capacitance	10 MHz, $V_{CC}$ = 3.3 V, $V_{I}$ = 0 V or $V_{CC}$	25	pF

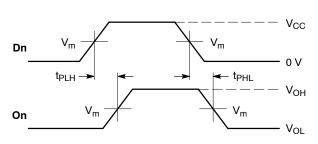


Test	Switch Position
t <sub>PLH</sub> / t <sub>PHL</sub>	Open
t <sub>PLZ</sub> / t <sub>PZL</sub>	$V_{LOAD}$
t <sub>PHZ</sub> / t <sub>PZH</sub>	GND

 $C_L$  includes probe and jig capacitance  $R_T$  is  $Z_{OUT}$  of pulse generator (typically 50  $\Omega)$  f = 1 MHz

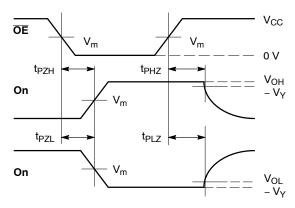
Figure 3. Test Circuit

V <sub>CC</sub> , V	$R_L,\Omega$	C <sub>L</sub> , pF	V <sub>LOAD</sub>	V <sub>m</sub> , V	V <sub>Y</sub> , V
1.65 to 1.95	500	30	2 x V <sub>CC</sub>	V <sub>CC</sub> /2	0.15
2.3 to 2.7	500	30	2 x V <sub>CC</sub>	V <sub>CC</sub> /2	0.15
2.7	500	50	6 V	1.5	0.3
3.0 to 3.6	500	50	6 V	1.5	0.3
4.5 to 4.5	500	50	2 x V <sub>CC</sub>	V <sub>CC</sub> /2	0.3



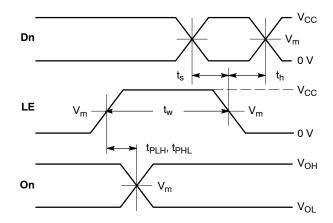
## **WAVEFORM 1 - PROPAGATION DELAYS**

 $t_R$  =  $t_F$  = 2.5 ns, 10% to 90%; f = 1 MHz;  $t_W$  = 500 ns



## **WAVEFORM 2 - OUTPUT ENABLE AND DISABLE TIMES**

 $t_R = t_F = 2.5 \text{ ns}, 10\% \text{ to } 90\%; f = 1 \text{ MHz}; t_W = 500 \text{ ns}$ 



# WAVEFORM 3 – LE to On PROPAGATION DELAYS, LE MINIMUM PULSE WIDTH, Dn to LE SETUP AND HOLD TIMES

 $t_R$  =  $t_F$  = 2.5 ns, 10% to 90%; f = 1 MHz;  $t_W$  = 500 ns except when noted

Figure 4. AC Waveforms

### ORDERING INFORMATION

Device	Marking	Package	Shipping <sup>†</sup>
MC74LCX573DWG	LCX573	SOIC-20 (Pb-Free)	38 Units / Rail
MC74LCX573DWR2G	LCX573	SOIC-20 (Pb-Free)	1000 Tape & Reel
MC74LCX573DTG	LCX 573	TSSOP-20 (Pb-Free)	75 Units / Rail
MC74LCX573DTR2G	LCX573	TSSOP-20 (Pb-Free)	2500 Tape & Reel
MC74LCX573DTR2G-Q*	LCX573	TSSOP-20 (Pb-Free)	2500 Tape & Reel

## **DISCONTINUED** (Note 7)

The state of the s		
NLV74LCX573DTR2G*	TSSOP-20	2500 Tape & Reel
	(Pb-Free)	

<sup>†</sup>For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

<sup>\*-</sup>Q Suffix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q100 Qualified and PPAP Capable.

<sup>7.</sup> **DISCONTINUED:** This device is not recommended for new design. Please contact your **onsemi** representative for information. The most current information on this device may be available on <a href="https://www.onsemi.com">www.onsemi.com</a>.

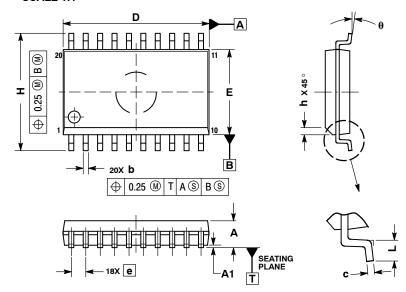




SOIC-20 WB CASE 751D-05 **ISSUE H** 

**DATE 22 APR 2015** 

## SCALE 1:1



- DIMENSIONS ARE IN MILLIMETERS.
   INTERPRET DIMENSIONS AND TOLERANCES.
- PER ASME Y14.5M, 1994.
  3. DIMENSIONS D AND E DO NOT INCLUDE MOLD PROTRUSION.
  MAXIMUM MOLD PROTRUSION 0.15 PER SIDE.
- DIMENSION B DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE PROTRUSION SHALL BE 0.13 TOTAL IN EXCESS OF B DIMENSION AT MAXIMUM MATERIAL

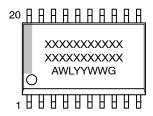
	MILLIMETERS		
DIM	MIN	MAX	
Α	2.35	2.65	
A1	0.10	0.25	
b	0.35	0.49	
С	0.23	0.32	
D	12.65	12.95	
E	7.40	7.60	
е	1.27 BSC		
Н	10.05	10.55	
h	0.25	0.75	
L	0.50	0.90	
θ	0°	7 °	

## **RECOMMENDED SOLDERING FOOTPRINT\***



DIMENSIONS: MILLIMETERS

## **GENERIC MARKING DIAGRAM\***



XXXXX = Specific Device Code = Assembly Location

WL = Wafer Lot ΥY = Year WW = Work Week = Pb-Free Package

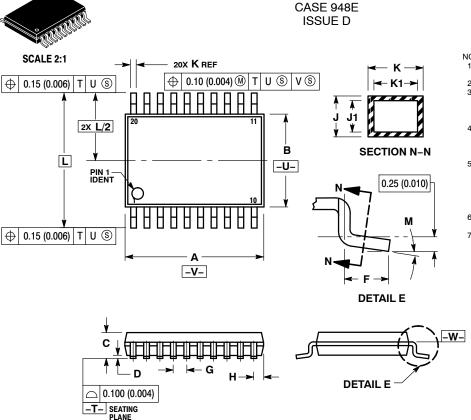
\*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "•", may or may not be present. Some products may not follow the Generic Marking.

DOCUMENT NUMBER:	98ASB42343B	Electronic versions are uncontrolled except when accessed directly from the Document Reposito Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red.		
DESCRIPTION:	SOIC-20 WB		PAGE 1 OF 1	

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<sup>\*</sup>For additional information on our Pb-Free strategy and soldering details, please download the onsemi Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.





TSSOP-20 WB

## **DATE 17 FEB 2016**

#### NOTES:

- NOTES:

  1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.

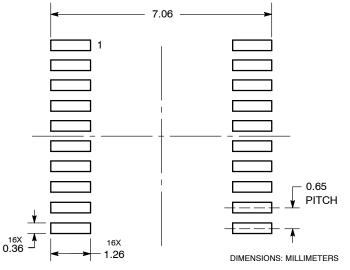
  2. CONTROLLING DIMENSION: MILLIMETER.

  3. DIMENSION A DOES NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS. MOLD FLASH, OR GATE BURRS SHALL NOT
- EXCEED 0.15 (0.006) PER SIDE.

  4. DIMENSION B DOES NOT INCLUDE INTERLEAD FLASH OR PROTRUSION.
  INTERLEAD FLASH OR PROTRUSION SHALL NOT EXCEED 0.25 (0.010) PER SIDE.
  DIMENSION K DOES NOT INCLUDE
- DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.08 (0.003) TOTAL IN EXCESS OF THE K
  DIMENSION AT MAXIMUM MATERIAL CONDITION.
  TERMINAL NUMBERS ARE SHOWN FOR
- REFERENCE ONLY.
  DIMENSION A AND B ARE TO BE
  DETERMINED AT DATUM PLANE -W-.

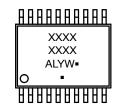
	MILLIN	IETERS	INCHES	
DIM	MIN	MAX	MIN	MAX
Α	6.40	6.60	0.252	0.260
В	4.30	4.50	0.169	0.177
С		1.20		0.047
D	0.05	0.15	0.002	0.006
F	0.50	0.75	0.020	0.030
G	0.65 BSC		0.026 BSC	
Н	0.27	0.37	0.011	0.015
J	0.09	0.20	0.004	0.008
J1	0.09	0.16	0.004	0.006
K	0.19	0.30	0.007	0.012
K1	0.19	0.25	0.007	0.010
L	6.40 BSC		0.252 BSC	
М	0°	8°	0°	8°

## **RECOMMENDED SOLDERING FOOTPRINT\***



<sup>\*</sup>For additional information on our Pb-Free strategy and soldering details, please download the onsemi Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

## **GENERIC MARKING DIAGRAM\***



= Assembly Location

= Wafer Lot

= Year

= Work Week

= Pb-Free Package

(Note: Microdot may be in either location)

\*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot " ", may or may not be present. Some products may not follow the Generic Marking.

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DESCRIPTION:	TSSOP-20 WB		PAGE 1 OF 1	

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