# SPDT, 3 $\Omega$ R<sub>ON</sub> Switch

The NLASB3157 is an advanced CMOS analog switch fabricated with silicon gate CMOS technology. It achieves very low propagation delay and RDS<sub>ON</sub> resistances while maintaining CMOS low power dissipation. Analog and digital voltages that may vary across the full power–supply range (from  $V_{\rm CC}$  to GND). This device is a drop in replacement for the NC7SB3157.

The select pin has overvoltage protection that allows voltages above  $V_{CC}$ , up to 7.0 V to be present on the pin without damage or disruption of operation of the part, regardless of the operating voltage.

#### **Features**

- High Speed:  $t_{PD} = 1.0 \text{ ns (Typ)}$  at  $V_{CC} = 5.0 \text{ V}$
- Low Power Dissipation:  $I_{CC} = 2.0 \mu A$  (Max) at  $T_A = 25^{\circ}C$
- Standard CMOS Logic Levels
- High Bandwidth, Improved Linearity
- Switches Standard NTSC/PAL Video, Audio, SPDIF and HDTV
- May be used for Clock Switching, Data Multiplexing, etc.
- $R_{ON}$  Typical = 3  $\Omega$  @  $V_{CC}$  = 4.5 V
- Break Before Make Circuitry, Prevents Inadvertent Shorts
- 2 Devices can Switch Balanced Signal Pairs, e.g. LVDS > 200 Mb/s
- Latchup Performance Exceeds 300 mA
- Pin for Pin Drop in for NC7SB3157
- Tiny SC88 and WDFN6 Packages
- ESD Performance:
  - ♦ Human Body Model; > 2000 V;
  - ♦ Machine Model; > 200 V
- NLVASB3157 Features Extended Automotive Temperature Range;
   -55°C to +125°C (See Appendix A)
- Pb-Free Packages are Available



### ON Semiconductor®

http://onsemi.com

## MARKING DIAGRAMS



SC-88 DF SUFFIX CASE 419B





WDFN6 MT SUFFIX CASE 506AS



AF, F = Specific Device Code
M = Date Code\*
= Pb-Free Package

(Note: Microdot may be in either location)
\*Date Code orientation may vary depending upon manufacturing location.

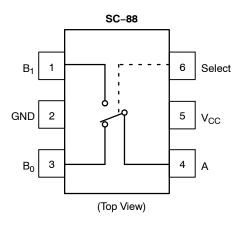
#### **FUNCTION TABLE**

Select Input	Function
L	B0 Connected to A
Н	B1 Connected to A

### **ORDERING INFORMATION**

Device	Package	Shipping <sup>†</sup>
NLASB3157DFT2	SC-88	3000 / Tape & Reel
NLASB3157DFT2G	SC-88 (Pb-Free)	3000 / Tape & Reel
NLVASB3157DFT2	SC-88	3000 / Tape & Reel
NLVASB3157DFT2G	SC-88 (Pb-Free)	3000 / Tape & Reel
NLASB3157MTR2G	WDFN6 (Pb-Free)	3000 / Tape & Reel

<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.



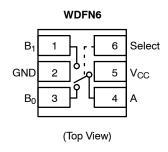


Figure 1. Pin Assignment & Logic Diagram

# **MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Supply Voltage	V <sub>CC</sub>	-0.5 to +7.0	V
DC Switch Voltage (Note 1)	V <sub>IS</sub>	-0.5 to V <sub>CC</sub> + 0.5	V
DC Input Voltage (Note 1)	V <sub>IN</sub>	-0.5 to + 7.0	V
DC Input Diode Current @ V <sub>IN</sub> < 0 V	I <sub>IK</sub>	-50	mA
DC Output Current	Гоит	128	mA
DC V <sub>CC</sub> or Ground Current	I <sub>CC</sub> /I <sub>GND</sub>	+100	mA
Storage Temperature Range	T <sub>stg</sub>	-65 to +150	°C
Junction Temperature Under Bias	TJ	150	°C
Junction Lead Temperature (Soldering, 10 Seconds)	T <sub>L</sub>	260	°C
Power Dissipation @ +85°C	P <sub>D</sub>	180	mW

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

# **RECOMMENDED OPERATING CONDITIONS** (Note 2)

Characteristic	Symbol	Min	Max	Unit
Supply Voltage Operating	V <sub>CC</sub>	1.65	5.5	V
Select Input Voltage	V <sub>IN</sub>	0	5.5	V
Switch Input Voltage	V <sub>IS</sub>	0	V <sub>CC</sub>	V
Output Voltage	V <sub>OUT</sub>	0	V <sub>CC</sub>	V
Operating Temperature	T <sub>A</sub>	-55	+125	°C
Input Rise and Fall Time Control Input V <sub>CC</sub> = 2.3 V–3.6 V Control Input V <sub>CC</sub> = 4.5 V–5.5 V	t <sub>r</sub> , t <sub>f</sub>	0	10 5.0	ns/V
Thermal Resistance	$\theta_{\sf JA}$	-	350	°C/W

<sup>2.</sup> Select input must be held HIGH or LOW, it must not float.

<sup>1.</sup> The input and output negative voltage ratings may be exceeded if the input and output diode current ratings are observed.

# DC ELECTRICAL CHARACTERISTICS - NLASB3157

			V <sub>CC</sub>		T <sub>A</sub> = +25°C	;	T <sub>A</sub> = -40°		
Symbol	Parameter	Test Conditions	(V)	Min	Тур	Max	Min	Max	Unit
V <sub>IH</sub>	HIGH Level Input Voltage		1.65-1.95 2.3-5.5				0.75 V <sub>CC</sub> 0.7 V <sub>CC</sub>		V
V <sub>IL</sub>	LOW Level Input Voltage		1.65-1.95 2.3-5.5					0.25 V <sub>CC</sub> 0.3 V <sub>CC</sub>	V
I <sub>IN</sub>	Input Leakage Current	$0 \le V_{IN} \le 5.5 V$	0–5.5		±0.05	± 0.1		±1	μΑ
l <sub>OFF</sub>	OFF State Leakage Current	$0 \le A, B \le V_{CC}$	1.65–5.5		±0.05	±0.1		±1	μΑ
R <sub>ON</sub>	Switch On Resistance (Note 3)	$V_{IN} = 0$ V, $I_O = 30$ mA $V_{IN} = 2.4$ V, $I_O = -30$ mA $V_{IN} = 4.5$ V, $I_O = -30$ mA	4.5		3.0 5.0 7.0			7.0 12 15	Ω
		$V_{IN} = 0 \text{ V}, I_O = 24 \text{ mA}$ $V_{IN} = 3 \text{ V}, I_O = -24 \text{ mA}$	3.0		4.0 10			9.0 20	Ω
		$V_{IN} = 0 \text{ V}, I_O = 8 \text{ mA}$ $V_{IN} = 2.3 \text{ V}, I_O = -8 \text{ mA}$	2.3		5.0 13			12 30	Ω
		V <sub>IN</sub> = 0 V, I <sub>O</sub> = 4 mA V <sub>IN</sub> = 1.65 V, I <sub>O</sub> = -4 mA	1.65		6.5 17			20 50	Ω
I <sub>CC</sub>	Quiescent Supply Current All Channels ON or OFF	$V_{IN} = V_{CC}$ or GND $I_{OUT} = 0$	5.5			1.0		10	μΑ
	Analog Signal Range		V <sub>CC</sub>	0		V <sub>CC</sub>	0	V <sub>CC</sub>	V
R <sub>RANGE</sub>	On Resistance Over Signal Range (Note 3) (Note 7)	$\begin{split} I_A &= -30 \text{ mA, } 0 \leq V_{Bn} \\ &\leq V_{CC} \\ I_A &= -24 \text{ mA, } 0 \leq V_{Bn} \end{split}$	4.5 3.0					25 50	Ω
			2.3					100	
		$I_A = -4 \text{ mA}, 0 \le V_{Bn}$ $\le V_{CC}$	1.65					300	
$\Delta R_{ON}$	On Resistance Match Between Channels (Note 3) (Note 4) (Note 5)	$\begin{split} I_A &= -30 \text{ mA},  V_{Bn} = 3.15 \\ I_A &= -24 \text{ mA},  V_{Bn} = 2.1 \\ I_A &= -8 \text{ mA},  V_{Bn} = 1.6 \\ I_A &= -4 \text{ mA},  V_{Bn} = 1.15 \end{split}$	4.5 3.0 2.3 1.65		0.15 0.2 0.5 0.5				Ω
R <sub>flat</sub>	On Resistance Flatness (Note 3)	$I_A = -30 \text{ mA}, 0 \le V_{Bn}$ $\le V_{CC}$	5.0		6.0				Ω
	(Note 4) (Note 6)	$I_A = -24 \text{ mA}, 0 \le V_{Bn}$ $\le V_{CC}$	3.3		12				
		$I_A = -8 \text{ mA}, 0 \le V_{Bn}$ $\le V_{CC}$	2.5		28				
		$I_A = -4 \text{ mA}, 0 \le V_{Bn}$ $\le V_{CC}$	1.8		125				

Measured by the voltage drop between A and B pins at the indicated current through the switch. On Resistance is determined by the lower of the voltages on the two (A or B Ports).
 Parameter is characterized but not tested in production.

ΔR<sub>ON</sub> = R<sub>ON</sub> max – R<sub>ON</sub> min measured at identical V<sub>CC</sub>, temperature and voltage levels.
 Flatness is defined as the difference between the maximum and minimum value of On Resistance over the specified range of conditions.

<sup>7.</sup> Guaranteed by Design.

# **AC ELECTRICAL CHARACTERISTICS - NLASB3157**

			V <sub>CC</sub>	T,	$T_A = +25^{\circ}C$		$T_A = -40^{\circ}C \text{ to } +85^{\circ}C$			Figure
Symbol	Parameter	Test Conditions	(V)	Min	Тур	Max	Min	Max	Unit	Number
t <sub>PHL</sub> t <sub>PLH</sub>	Propagation Delay Bus to Bus (Note 9)	V <sub>I</sub> = OPEN	1.65–1.95 2.3–2.7 3.0–3.6 4.5–5.5					1.2 0.8 0.3	ns	Figures 2, 3
t <sub>PZL</sub> t <sub>PZH</sub>	Output Enable Time Turn On Time (A to B <sub>n</sub> )	$V_I = 2 \times V_{CC}$ for $t_{PZL}$ $V_I = 0$ V for $t_{PZH}$	1.65–1.95 2.3–2.7 3.0–3.6 4.5–5.5			23 13 6.9 5.2	7.0 3.5 2.5 1.7	24 14 7.6 5.7	ns	Figures 2, 3
t <sub>PLZ</sub> t <sub>PHZ</sub>	Output Disable Time Turn Off Time (A Port to B Port)	$V_I = 2 \times V_{CC}$ for $t_{PLZ}$ $V_I = 0$ V for $t_{PHZ}$	1.65–1.95 2.3–2.7 3.0–3.6 4.5–5.5			12.5 7.0 5.0 3.5	3.0 2.0 1.5 0.8	13 7.5 5.3 3.8	ns	Figures 2, 3
t <sub>B-M</sub>	Break Before Make Time (Note 8)		1.65–1.95 2.3–2.7 3.0–3.6 4.5–5.5				0.5 0.5 0.5 0.5		ns	Figure 4
Q	Charge Injection (Note 8)	$C_L$ = 0.1 nF, $V_{GEN}$ = 0 V $R_{GEN}$ = 0 $\Omega$	5.0 3.3		7.0 3.0				pC	Figure 5
OIRR	Off Isolation (Note 10)	$R_L = 50 \Omega$ f = 10 MHz	1.65-5.5		-57				dB	Figure 6
Xtalk	Crosstalk	$R_L = 50 \Omega$ f = 10 MHz	1.65-5.5		-54				dB	Figure 7
BW	-3 dB Bandwidth	R <sub>L</sub> = 50 Ω	1.65-5.5		250				MHz	Figure 10
THD	Total Harmonic Distortion (Note 8)	$R_L = 600 \Omega$ 0.5 $V_{P-P}$ f = 600 Hz to 20 kHz	5.0		0.011				%	

# CAPACITANCE - NLASB3157 (Note 11)

Symbol	Parameter	Test Conditions	Тур	Max	Unit	Figure Number
C <sub>IN</sub>	Select Pin Input Capacitance	V <sub>CC</sub> = 0 V	2.3		pF	
C <sub>IO-B</sub>	B Port Off Capacitance	V <sub>CC</sub> = 5.0 V	6.5		pF	Figure 8
C <sub>IOA-ON</sub>	A Port Capacitance when Switch is Enabled	V <sub>CC</sub> = 5.0 V	18.5		pF	Figure 9

<sup>8.</sup> Guaranteed by Design.

<sup>9.</sup> This parameter is guaranteed by design but not tested. The bus switch contributes no propagation delay other than the RC delay of the On Resistance of the switch and the 50 pF load capacitance, when driven by an ideal voltage source (zero output impedance).

<sup>10.</sup> Off Isolation =  $20 \log_{10} [V_A/V_{Bn}]$ . 11.  $T_A = +25^{\circ}C$ , f = 1 MHz, Capacitance is characterized but not tested in production.

APPENDIX A

DC ELECTRICAL EXTENDED AUTOMOTIVE TEMPERATURE RANGE CHARACTERISTICS – NLVASB3157

			V <sub>CC</sub>	7	$T_A = +25^{\circ}C$		T <sub>A</sub> = -55°C	to +125°C	
Symbol	Parameter	Test Conditions	(V)	Min	Тур	Max	Min	Max	Unit
V <sub>IH</sub>	HIGH Level Input Voltage		1.65–1.95 2.3–5.5				0.75 V <sub>CC</sub> 0.7 V <sub>CC</sub>		V
V <sub>IL</sub>	LOW Level Input Voltage		1.65–1.95 2.3–5.5					0.25 V <sub>CC</sub> 0.3 V <sub>CC</sub>	V
I <sub>IN</sub>	Input Leakage Current	$0 \le V_{IN} \le 5.5 \text{ V}$	0-5.5		±0.05	±0.1		±1	μА
l <sub>OFF</sub>	OFF State Leakage Current	$0 \le A, B \le V_{CC}$	1.65-5.5		±0.05	±0.1		±1	μΑ
R <sub>ON</sub>	Switch On Resistance (Note 12)	$V_{IN} = 0 \text{ V, } I_O = 30 \text{ mA}$ $V_{IN} = 2.4 \text{ V, } I_O = -30 \text{ mA}$ $V_{IN} = 4.5 \text{ V, } I_O = -30 \text{ mA}$	4.5		3.0 5.0 7.0			8.5 13.0 15.0	Ω
		V <sub>IN</sub> = 0 V, I <sub>O</sub> = 24 mA V <sub>IN</sub> = 3 V, I <sub>O</sub> = -24 mA	3.0		4.0 10			11 20	
		$V_{IN} = 0 \text{ V, } I_O = 8 \text{ mA}$ $V_{IN} = 2.3 \text{ V, } I_O = -8 \text{ mA}$	2.3		5.0 13			12 30	
		V <sub>IN</sub> = 0 V, I <sub>O</sub> = 4 mA V <sub>IN</sub> = 1.65 V, I <sub>O</sub> = -4 mA	1.65		6.5 17			20 50	
I <sub>CC</sub>	Quiescent Supply Current All Channels ON or OFF	$V_{IN} = V_{CC}$ or GND $I_{OUT} = 0$	5.5			1.0		10	μΑ
	Analog Signal Range		V <sub>CC</sub>	0		V <sub>CC</sub>	0	V <sub>CC</sub>	V
R <sub>RANGE</sub>	On Resistance Over Signal Range	$\begin{split} I_A = -30 \text{ mA, } 0 &\leq V_{Bn} \leq V_{CC} \\ I_A = -24 \text{ mA, } 0 &\leq V_{Bn} \leq V_{CC} \end{split}$	4.5					25	Ω
	(Note 12) (Note 14)	$\begin{split} &I_A = -8 \text{ mA, } 0 \leq V_{Bn} \\ &\leq V_{CC} \\ &I_A = -4 \text{ mA, } 0 \leq V_{Bn} \end{split}$	3.0 2.3					50 100	
		≤ V <sub>CC</sub>	1.65					300	

<sup>12.</sup> Measured by the voltage drop between A and B pins at the indicated current through the switch. On Resistance is determined by the lower of the voltages on the two (A or B Ports).

<sup>13.</sup> Flatness is defined as the difference between the maximum and minimum value of On Resistance over the specified range of conditions.

<sup>14.</sup> Guaranteed by Design.

<sup>\*</sup> For  $\Delta R_{ON},\,R_{FLAT},\,Q,\,OIRR,\,Xtalk,\,BW,\,THD,\,and\,CIN\,\,see\,\,-40^{\circ}C$  to 85°C section.

APPENDIX A AC ELECTRICAL EXTENDED AUTOMOTIVE TEMPERATURE RANGE CHARACTERISTICS - NLVASB3157

			V <sub>CC</sub>	T	T <sub>A</sub> = +25°C		T <sub>A</sub> = -55°C	to +125°C		Figure
Symbol	Parameter	Test Conditions	(V)	Min	Тур	Max	Min	Max	Unit	Number
t <sub>PHL</sub> t <sub>PLH</sub>	Propagation Delay Bus to Bus (Note 16)	V <sub>I</sub> = OPEN	1.65–1.95 2.3–2.7 3.0–3.6 4.5–5.5					1.2 0.8 0.3	ns	Figures 2, 3
t <sub>PZL</sub> t <sub>PZH</sub>	Output Enable Time Turn On Time (A to B <sub>n</sub> )	$V_I = 2 \times V_{CC}$ for $t_{PZL}$ $V_I = 0$ V for $t_{PZH}$	1.65–1.95 2.3–2.7 3.0–3.6 4.5–5.5			23 13 6.9 5.2	7.0 3.5 2.5 1.7	24 14 9.0 7.0	ns	Figures 2, 3
<sup>†</sup> PLZ <sup>†</sup> PHZ	Output Disable Time Turn Off Time (A Port to B Port)	$V_I = 2 \times V_{CC}$ for $t_{PLZ}$ $V_I = 0 \text{ V for } t_{PHZ}$	1.65–1.95 2.3–2.7 3.0–3.6 4.5–5.5			12.5 7.0 5.0 3.5	3.0 2.0 1.5 0.8	13 7.5 6.5 5.0	ns	Figures 2, 3
t <sub>B-M</sub>	Break Before Make Time (Note 15)		1.65–1.95 2.3–2.7 3.0–3.6 4.5–5.5				0.5 0.5 0.5 0.5		ns	Figure 4

<sup>15.</sup> Guaranteed by Design.16. This parameter is guaranteed by design but not tested. The bus switch contributes no propagation delay other than the RC delay of the On Resistance of the switch and the 50 pF load capacitance, when driven by an ideal voltage source (zero output impedance).

<sup>\*</sup> For  $\Delta R_{ON}$ ,  $R_{FLAT}$ , Q, OIRR, Xtalk, BW, THD, and CIN see -40°C to 85°C section.

# **AC LOADING AND WAVEFORMS**

NOTE: Input driven by 50  $\Omega$  source terminated in 50  $\Omega$ 

NOTE: C<sub>L</sub> includes load and stray capacitance

NOTE: Input PRR = 1.0 MHz; t<sub>W</sub> = 500 ns

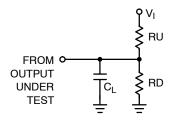
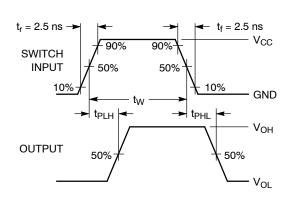


Figure 2. AC Test Circuit



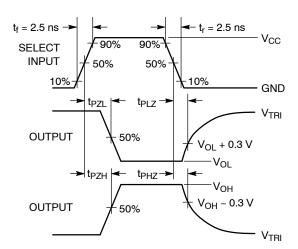
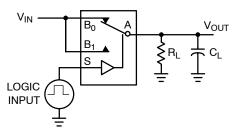


Figure 3. AC Waveforms



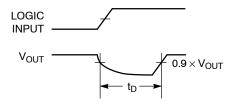


Figure 4. Break Before Make Interval Timing

# **AC LOADING AND WAVEFORMS**

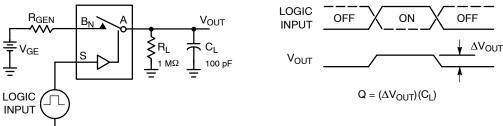


Figure 5. Charge Injection Test

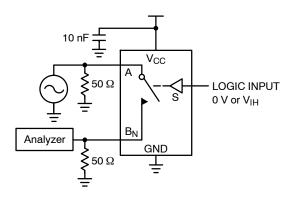


Figure 6. Off Isolation

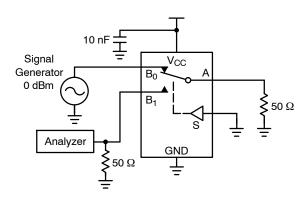


Figure 7. Crosstalk

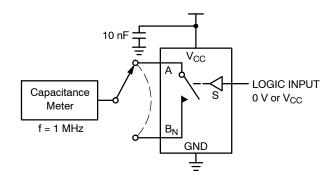


Figure 8. Channel Off Capacitance

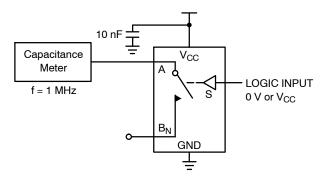


Figure 9. Channel On Capacitance

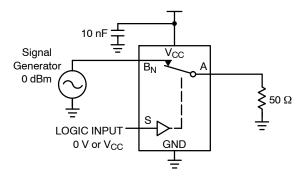
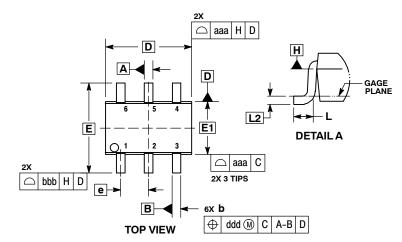


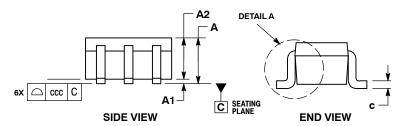
Figure 10. Bandwidth

#### PACKAGE DIMENSIONS

# SC-88/SOT-363/SC-70 **DF SUFFIX**

CASE 419B-02 **ISSUE Y** 



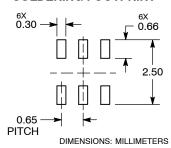


- NOTES:

  1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
  2. CONTROLLING DIMENSION: MILLIMETERS.
  3. DIMENSIONS D AND E1 DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS. MOLD FLASH, PROTRUSIONS, OR GATE BURRS SHALL NOT EXCEED 0.20 PER END.
  4. DIMENSIONS D AND E1 AT THE OUTERMOST EXTREMES OF THE PLASTIC BODY AND DATUM H.
  5. DATUMS A AND B ARE DETERMINED AT DATUM H.
  6. DIMENSIONS D AND C APPLY TO THE FLAT SECTION OF THE LEAD BETWEEN 0.08 AND 0.15 FROM THE TIP.
  7. DIMENSION DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.08 TOTAL IN EXCESS OF DIMENSION D AT MAXIMUM MATERIAL CONDITION. THE DAMBAR CANNOT BE LOCATED ON THE LOWER RADIUS OF THE FOOT. RADIUS OF THE FOOT.

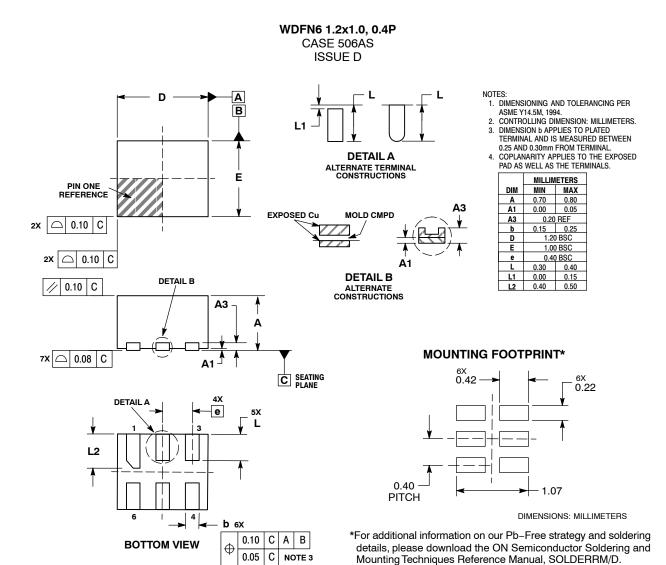
	MIL	LIMETE	ERS	INCHES					
DIM	MIN	NOM	MAX	MIN	MIN NOM				
Α			1.10			0.043			
A1	0.00		0.10	0.000		0.004			
A2	0.70	0.90	1.00	0.027	0.035	0.039			
b	0.15	0.20	0.25	0.006	0.008	0.010			
С	0.08	0.15	0.22	0.003	0.006	0.009			
D	1.80	2.00	2.20	0.070	0.078	0.086			
E	2.00	2.10	2.20	0.078	0.082	0.086			
E1	1.15	1.25	1.35	0.045	0.049	0.053			
е	0.65 BSC			0	.026 BS	С			
L	0.26	0.36	0.46	0.010	0.014	0.018			
L2	0.15 BSC			0.006 BSC					
aaa		0.15			0.006				
bbb		0.30		0.012					
ccc		0.10			0.004				
ddd		0.10			0.004				

#### **RECOMMENDED SOLDERING FOOTPRINT\***



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

#### PACKAGE DIMENSIONS



ON Semiconductor and are registered trademarks of Semiconductor Components Industries, LLC (SCILLC). SCILLC owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of SCILLC's product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SCILLC assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in SCILLC data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. SCILLC for any continuous provides are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that SCILLC was negligent regarding the design or manufacture of the part. SCILLC is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all a

#### **PUBLICATION ORDERING INFORMATION**

#### LITERATURE FULFILLMENT:

Literature Distribution Center for ON Semiconductor P.O. Box 5163, Denver, Colorado 80217 USA
Phone: 303-675-2175 or 800-344-3860 Toll Free USA/Canada
Fax: 303-675-2176 or 800-344-3867 Toll Free USA/Canada
Email: orderlit@onsemi.com

N. American Technical Support: 800-282-9855 Toll Free USA/Canada

Europe, Middle East and Africa Technical Support: Phone: 421 33 790 2910

Japan Customer Focus Center Phone: 81–3–5817–1050 ON Semiconductor Website: www.onsemi.com

Order Literature: http://www.onsemi.com/orderlit

For additional information, please contact your loca Sales Representative

# AMEYA360 Components Supply Platform

# **Authorized Distribution Brand:**

























# Website:

Welcome to visit www.ameya360.com

# Contact Us:

# > Address:

401 Building No.5, JiuGe Business Center, Lane 2301, Yishan Rd Minhang District, Shanghai , China

# > Sales:

Direct +86 (21) 6401-6692

Email amall@ameya360.com

QQ 800077892

Skype ameyasales1 ameyasales2

# Customer Service :

Email service@ameya360.com

# Partnership :

Tel +86 (21) 64016692-8333

Email mkt@ameya360.com