

HD74LS367A

Hex Bus Drivers

(non-inverted data outputs with three-state outputs)

REJ03D0480-0200

Rev.2.00

Feb.18.2005

Features

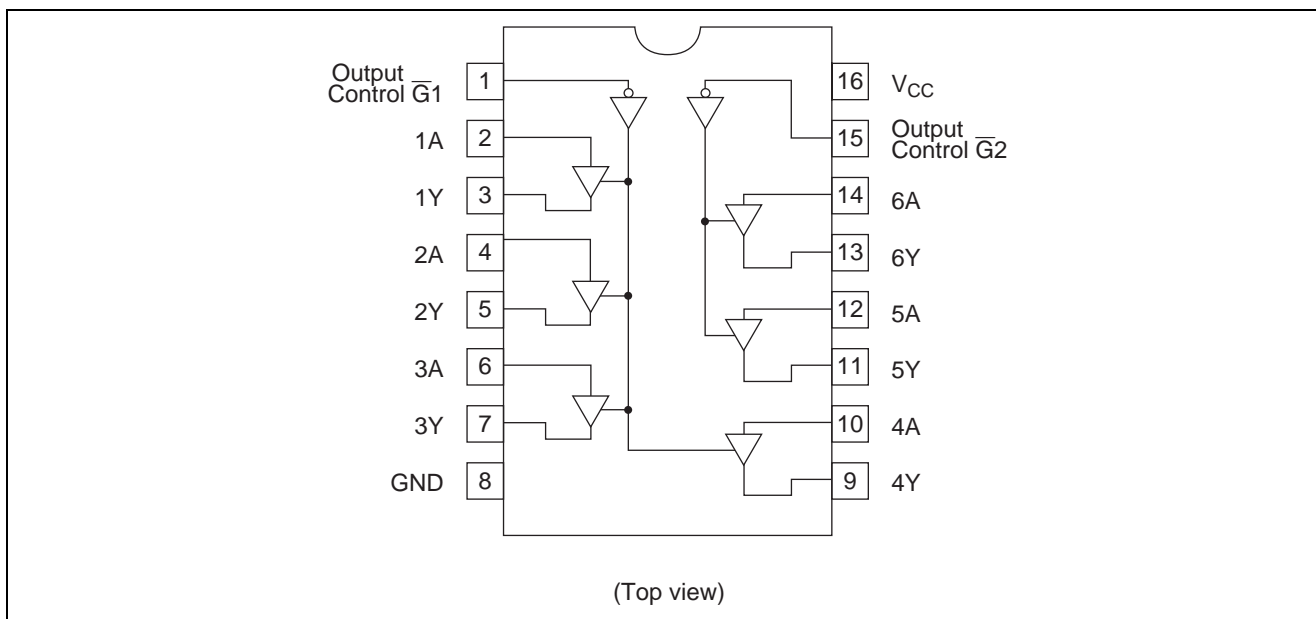
- Ordering Information

Part Name	Package Type	Package Code (Previous Code)	Package Abbreviation	Taping Abbreviation (Quantity)
HD74LS367AP	DILP-16 pin	PRDP0016AE-B (DP-16FV)	P	—
HD74LS367AFPEL	SOP-16 pin (JEITA)	PRSP0016DH-B (FP-16DAV)	FP	EL (2,000 pcs/reel)
HD74LS367ARPEL	SOP-16 pin (JEDEC)	PRSP0016DG-A (FP-16DNV)	RP	EL (2,500 pcs/reel)

Notes: 1. Please consult the sales office for the above package availability.

2. The packages with lead-free pins are distinguished from the conventional products by adding V at the end of the package code.

Pin Arrangement



Function Table

\bar{G}	A	Y
H	X	Z
L	L	L
L	H	H

Note: H; high level, L; low level, X; irrelevant, Z; off (high-impedance) state of a 3-state output

Absolute Maximum Ratings

Item	Symbol	Ratings	Unit
Supply voltage	V_{CC}	7	V
Input voltage	V_{IN}	7	V
Output voltage (off-state)	$V_{O(off)}$	5.5	V
Power dissipation	P_T	400	mW
Operating temperature	T_{opr}	-20 to +75	°C
Storage temperature	T_{stg}	-65 to +150	°C

Note: Voltage value, unless otherwise noted, are with respect to network ground terminal.

Recommended Operating Conditions

Item	Symbol	Min	Typ	Max	Unit
Supply voltage	V_{CC}	4.75	5.00	5.25	V
Output current	I_{OH}	—	—	-2.6	mA
	I_{OL}	—	—	24	mA
Operating temperature	T_{opr}	-20	25	75	°C

Electrical Characteristics

($T_a = -20$ to $+75$ °C)

Item	Symbol	min.	typ.*	max.	Unit	Condition	
Input voltage	V_{IH}	2.0	—	—	V		
	V_{IL}	—	—	0.8	V		
Output voltage	V_{OH}	2.4	—	—	V	$V_{CC} = 4.75$ V, $V_{IH} = 2$ V, $V_{IL} = 0.8$ V, $I_{OH} = -2.6$ mA	
	V_{OL}	—	—	0.5	V		$I_{OL} = 24$ mA
—		—	0.4	$V_{CC} = 4.75$ V, $V_{IH} = 2$ V, $V_{IL} = 0.8$ V			
Output current	I_{OZ}	—	—	20	μ A	$V_O = 2.4$ V	
		—	—	-20			$V_O = 0.4$ V
Input current	I_{IH}	—	—	20	μ A	A inputs $V_{CC} = 5.25$ V	
	I_{IL}	—	—	-20	μ A		$V_I = 0.5$ V, \overline{G} inputs 2 V
		—	—	-0.4	mA		$V_I = 0.4$ V, \overline{G} inputs 0.4 V
		—	—	-0.4	mA		\overline{G} inputs $V_{CC} = 5.25$ V, $V_I = 0.4$ V
I_I	—	—	0.1	mA	$V_{CC} = 5.25$ V, $V_I = 7$ V		
Short-circuit output current	I_{OS}	-40	—	-225	mA	$V_{CC} = 5.25$ V	
Supply current	I_{CC}^{**}	—	14	24	mA	$V_{CC} = 5.25$ V	
Input clamp voltage	V_{IK}	—	—	-1.5	V	$V_{CC} = 4.75$ V, $I_{IN} = -18$ mA	

Notes: * $V_{CC} = 5$ V, $T_a = 25$ °C

** I_{CC} is measured with data inputs grounded and output control inputs at 4.5 V.

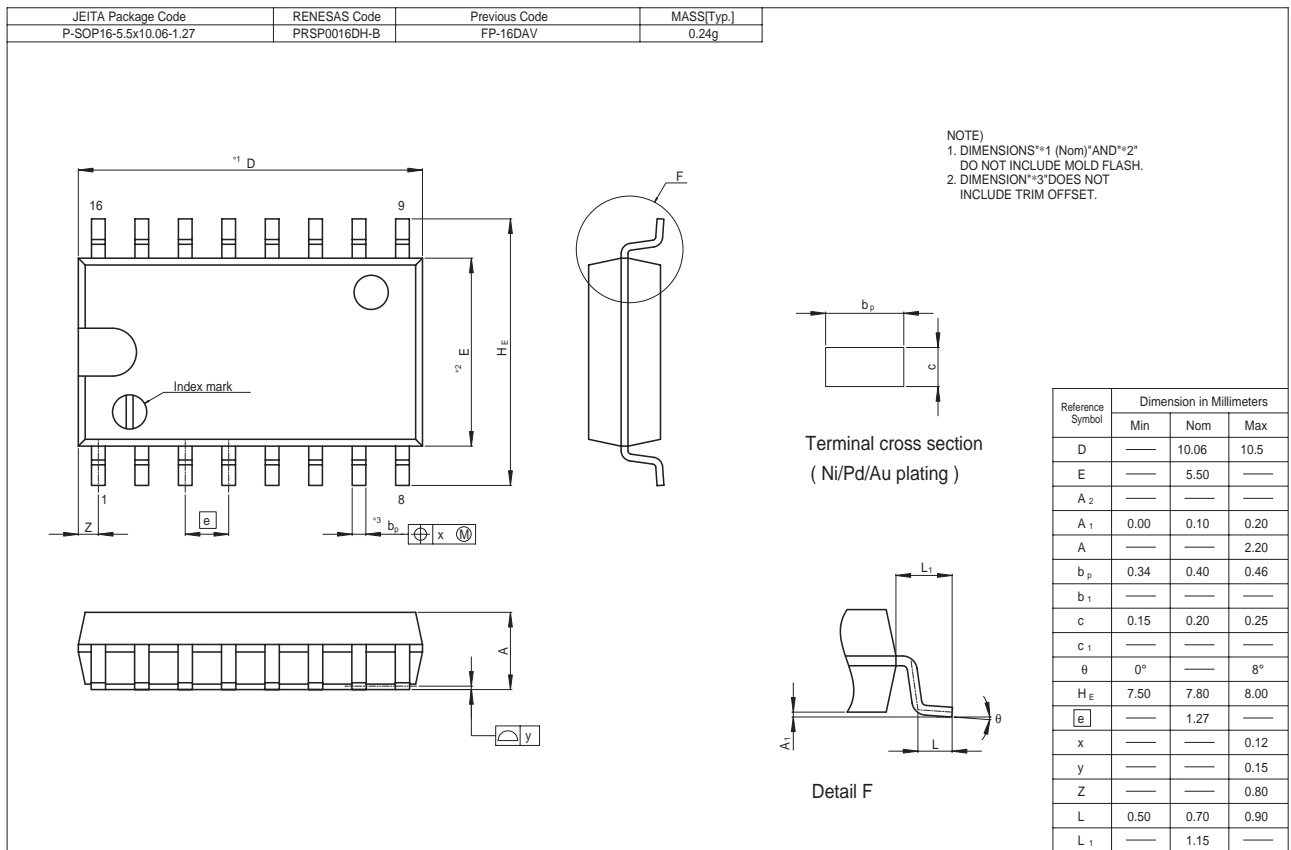
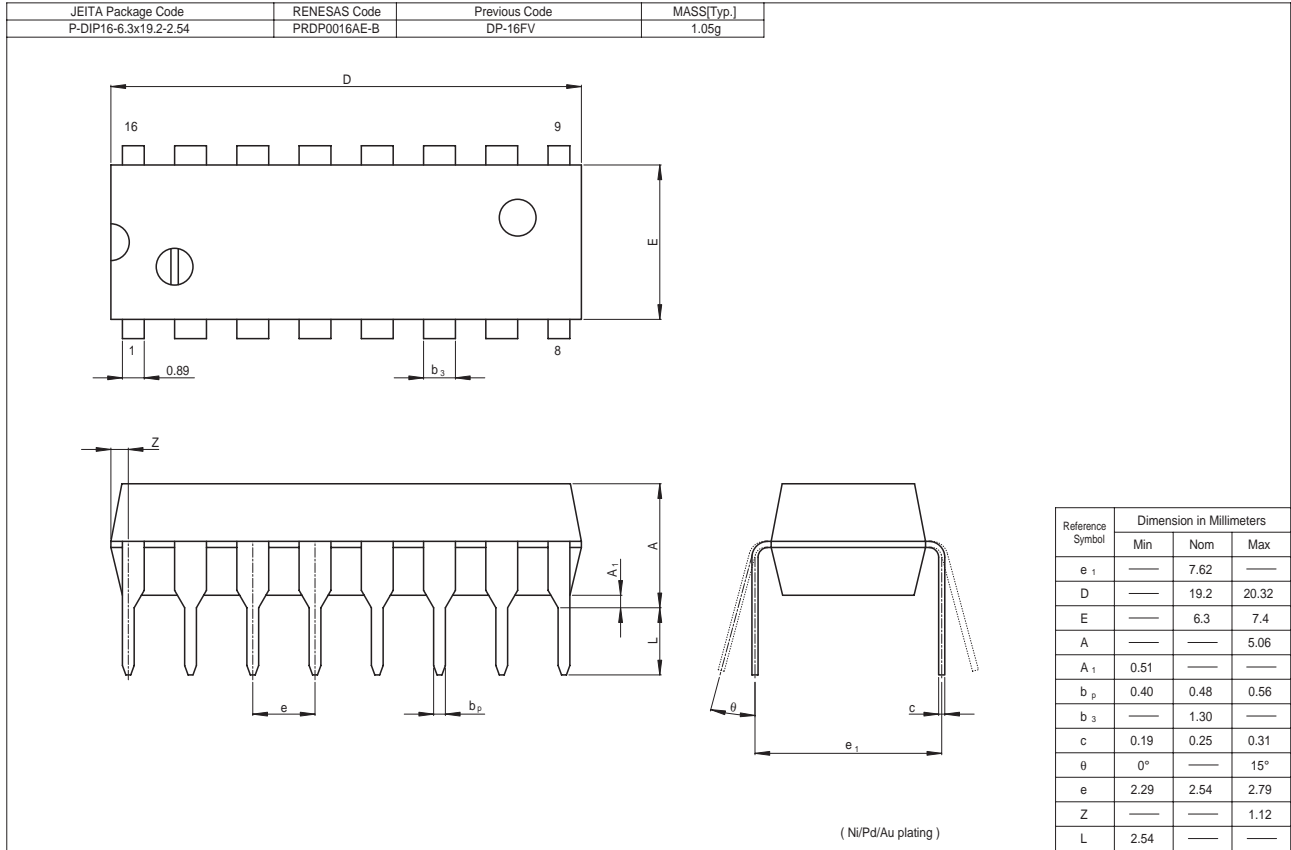
Switching Characteristics

 $(V_{CC} = 5\text{ V}, T_a = 25^\circ\text{C})$

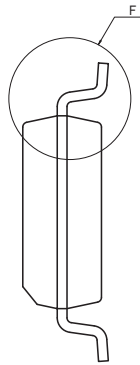
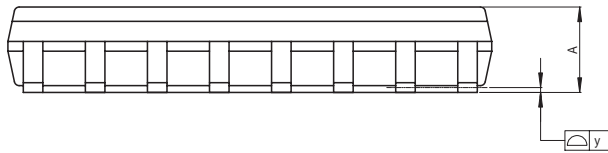
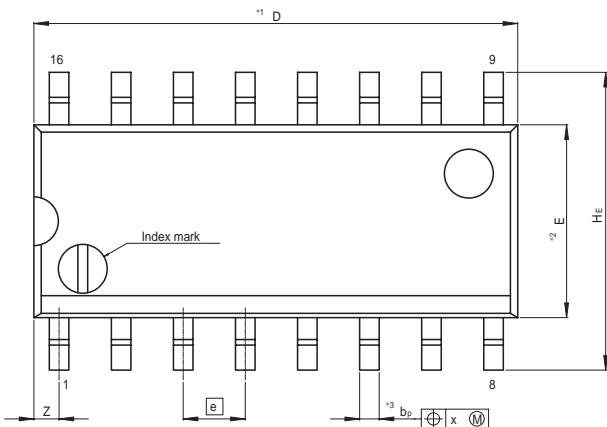
Item	Symbol	min.	typ.	max.	Unit	Condition
Propagation delay time	t_{PLH}	—	10	16	ns	$C_L = 45\text{ pF}, R_L = 667\ \Omega$
	t_{PHL}	—	9	22		
Output enable time	t_{ZH}	—	19	35	ns	
	t_{ZL}	—	24	40		
Output disable time	t_{HZ}	—	—	30	ns	$C_L = 5\text{ pF}, R_L = 667\ \Omega$
	t_{LZ}	—	—	35		

Note: Refer to Test Circuit and Waveform of the Common Item "TTL Common Matter (Document No.: REJ27D0005-0100)".

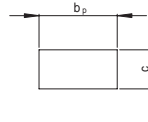
Package Dimensions



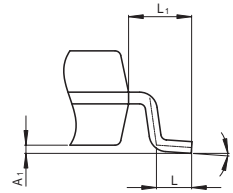
JEITA Package Code P-SOP16-3.95x9.9-1.27	RENESAS Code PRSP0016DG-A	Previous Code FP-16DNV	MASS[Typ.] 0.15g
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NOTE)
1. DIMENSIONS *1 (Nom) *2 AND *3
DO NOT INCLUDE MOLD FLASH.
2. DIMENSION *3 DOES NOT
INCLUDE TRIM OFFSET.



Terminal cross section
(Ni/Pd/Au plating)



Detail F

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
D	—	9.90	10.30
E	—	3.95	—
A ₂	—	—	—
A ₁	0.10	0.14	0.25
A	—	—	1.75
b _p	0.34	0.40	0.46
b ₁	—	—	—
c	0.15	0.20	0.25
c ₁	—	—	—
θ	0°	—	8°
H _E	5.80	6.10	6.20
e	—	1.27	—
x	—	—	0.25
y	—	—	0.15
Z	—	—	0.635
L	0.40	0.60	1.27
L ₁	—	1.08	—

Renesas Technology Corp. Sales Strategic Planning Div. Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan

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Renesas Technology America, Inc.

450 Holger Way, San Jose, CA 95134-1368, U.S.A
Tel: <1> (408) 382-7500, Fax: <1> (408) 382-7501

Renesas Technology Europe Limited

Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: <44> (1628) 585-100, Fax: <44> (1628) 585-900

Renesas Technology Hong Kong Ltd.

7th Floor, North Tower, World Finance Centre, Harbour City, 1 Canton Road, Tsimshatsui, Kowloon, Hong Kong
Tel: <852> 2265-6688, Fax: <852> 2730-6071

Renesas Technology Taiwan Co., Ltd.

10th Floor, No.99, Fushing North Road, Taipei, Taiwan
Tel: <886> (2) 2715-2888, Fax: <886> (2) 2713-2999

Renesas Technology (Shanghai) Co., Ltd.

Unit2607 Ruijing Building, No.205 Maoming Road (S), Shanghai 200020, China
Tel: <86> (21) 6472-1001, Fax: <86> (21) 6415-2952

Renesas Technology Singapore Pte. Ltd.

1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632
Tel: <65> 6213-0200, Fax: <65> 6278-8001