

查询SN74ALS756N供应商

SN54ALS756, SN54ALS757, SN54AS756, SN54AS757 SN74ALS756, SN74ALS757, SN74AS756, SN74AS757 OCTAL BUFFERS AND LINE DRIVERS WITH OPEN-COLLECTOR OUTPUTS

D2661, DECEMBER 1983—REVISED FEBRUARY 1988

- Open-Collector Outputs Drive Bus Lines or Buffer Memory Address Registers
- Eliminates the Need for 3-State Overlap Protection
- P-N-P Inputs Reduce DC Loading
- Package Options Include Plastic "Small Outline" Packages, Ceramic Chip Carriers, and Standard Plastic and Ceramic 300-mil DIPs
- Open-Collector Versions of 'ALS240A, 'ALS241A, and 'AS240, 'AS241
- Dependable Texas Instruments Quality and Reliability

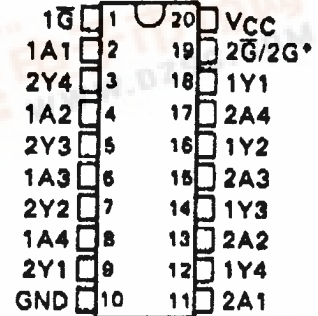
description

These octal buffers and line drivers are designed specifically to improve both the performance and density of three-state memory address drivers, clock drivers, and bus-oriented receivers and transmitters by eliminating the need for three-state overlap protection. The designer has a choice of selected combinations of inverting and noninverting outputs, symmetrical \bar{G} (active-low output control) inputs, and complementary G and \bar{G} inputs. These devices feature high fan-out and improved fan-in.

The SN54' family is characterized for operation over the full military temperature range of -55°C to 125°C . The SN74' family is characterized for operation from 0°C to 70°C .

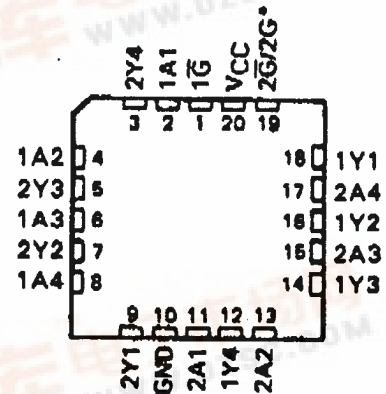
SN54AL6', SN54AS' ... J PACKAGE
SN74ALS', SN74AS' ... DW OR N PACKAGE

(TOP VIEW)



SN54ALS', SN54AS' ... FK PACKAGE

(TOP VIEW)



*2 \bar{G} for 'ALS756, 'AS756 or 2G for 'ALS757, 'AS757.

PRODUCTION DATA documents contain information 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

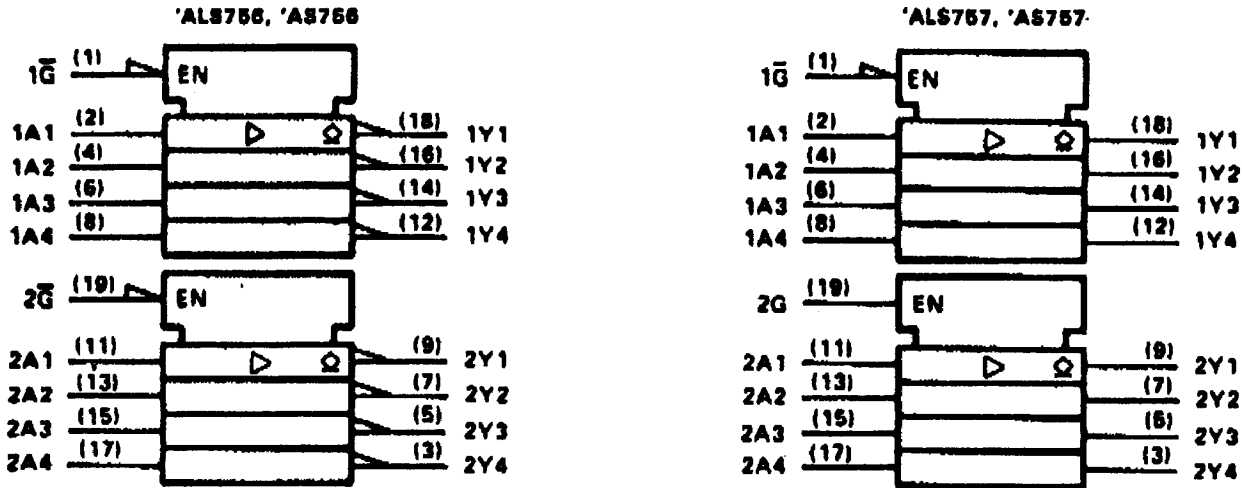
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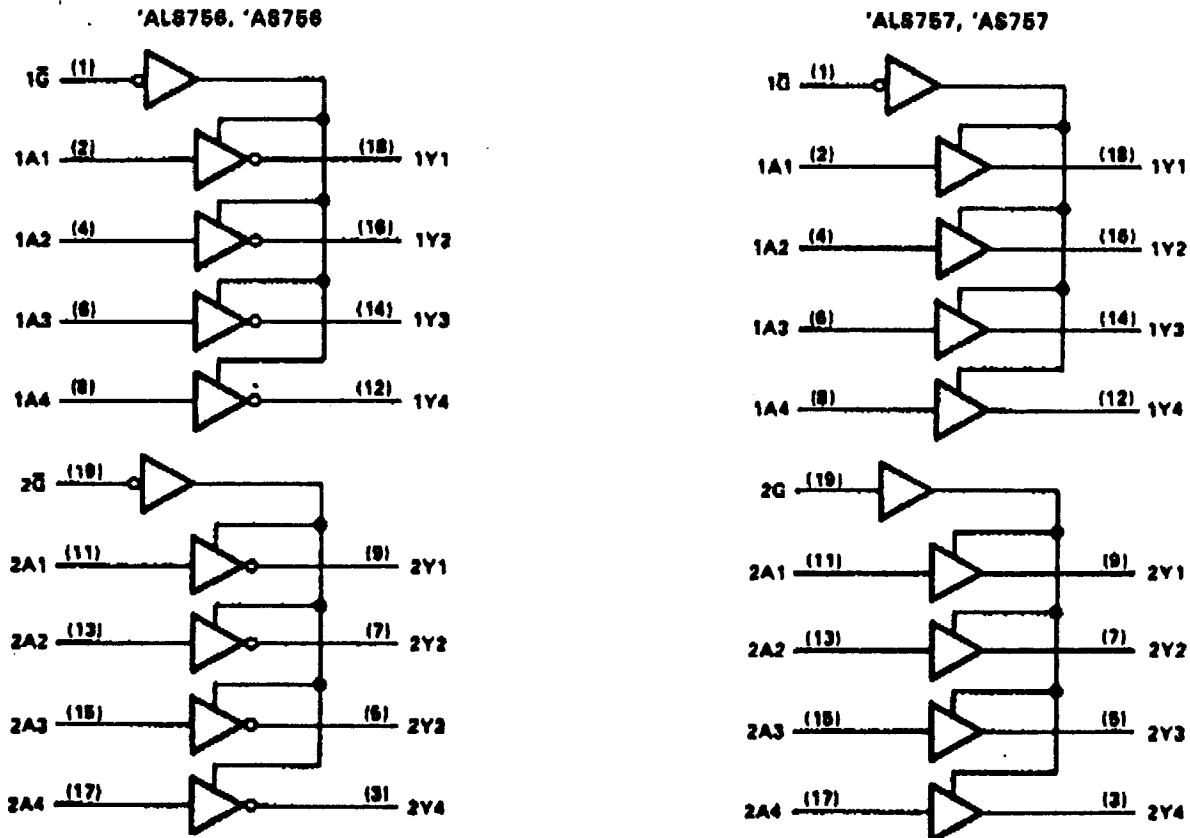
**SN54ALS756, SN54ALS757, SN54AS756, SN54AS757
SN74ALS756, SN74ALS757, SN74AS756, SN74AS757
OCTAL BUFFERS AND LINE DRIVERS WITH OPEN-COLLECTOR OUTPUTS**

logic symbols†



†These symbols are in accordance with ANSI/IEEE Std 91-1984 and IEC Publication 617-12.

logic diagrams (positive logic)



SN54ALS756, SN54ALS757, SN74ALS756, SN74ALS757 OCTAL BUFFERS AND LINE DRIVERS WITH OPEN-COLLECTOR OUTPUT

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

Supply voltage, VCC	7 V
Input voltage	7 V
Off-state output voltage	7 V
Operating free-air temperature range: SN54ALS756, SN54ALS757	-55°C to 125°C
SN74ALS756, SN74ALS757	0°C to 70°C
Storage temperature range	-65°C to 150°C

recommended operating conditions

	SN54ALS756 SN54ALS757			SN74ALS756 SN74ALS757			UNIT
	MIN	NOM	MAX	MIN	NOM	MAX	
VCC Supply voltage	4.5	5	5.5	4.5	5	5.5	V
VIH High-level input voltage	2			2			V
VIL Low-level input voltage			0.7			0.8	V
VOH High-level output voltage			5.5			5.5	V
IOL Low-level output current			12			24	mA
TA Operating free-air temperature	-55		125	0		70	°C

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

PARAMETER	TEST CONDITIONS	SN54ALS756 SN54ALS757			SN74ALS756 SN74ALS757			UNIT
		MIN	TYP†	MAX	MIN	TYP†	MAX	
VIK	VCC = 4.5 V, I _I = -18 mA			-1.5			-1.5	V
IOH	VCC = 4.5 V, VOH = 5.5 V			0.1			0.1	mA
VOL	VCC = 4.5 V, IOL = 12 mA		0.25	0.4		0.25	0.4	V
	VCC = 4.5 V, IOL = 24 mA					0.35	0.6	
I _I	VCC = 5.5 V, V _I = 7 V			0.1			0.1	mA
I _{IH}	VCC = 5.5 V, V _I = 2.7 V			20			20	μA
I _{IL}	VCC = 5.5 V, V _I = 0.4 V			-0.1			-0.1	mA
I _{CC}	'ALS756	VCC = 5.5 V	Output high	7	11	7	11	mA
			Output low	13	22	13	22	
	'ALS757	VCC = 5.5 V	Output high	11	16	11	16	mA
			Output low	14	21	14	21	

† All typical values are at VCC = 5 V, TA = 25°C.

SN54ALS756, SN54ALS757, SN74ALS756, SN74ALS757
OCTAL BUFFERS AND LINE DRIVERS WITH OPEN-COLLECTOR OUTPUTS

'ALS756 switching characteristics (see Note 1)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	V _{CC} = 5 V, C _L = 50 pF, R _L = 500 Ω, T _A = 25 °C		V _{CC} = 4.5 V to 5.5 V, C _L = 50 pF, R _L = 500 Ω, T _A = MIN to MAX		UNIT	
			'ALS756	SN54ALS756		SN74ALS756		
			TYP	MIN	MAX	MIN		MAX
t _{PLH}	A	Y	14	8	29	8	24	ns
t _{PHL}			5	2	12	2	10	
t _{PLH}	0	Y	16	8	29	8	24	ns
t _{PHL}			12	6	23	6	20	

'ALS757 switching characteristics (see Note 1)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	V _{CC} = 4.5 V to 5.5 V, C _L = 50 pF, R _L = 500 Ω, T _A = MIN to MAX				UNIT
			SN54ALS757		SN74ALS757		
			MIN	MAX	MIN	MAX	
t _{PLH}	A	Y	3	17	3	16	ns
t _{PHL}			3	17	3	12	
t _{PLH}	10	1Y	3	19	3	17	ns
t _{PHL}			3	15	3	13	
t _{PLH}	20	2Y	3	19	3	17	ns
t _{PHL}			3	19	3	17	

NOTE 1: Load circuit and voltage waveforms are shown in Section 1 of *ALS/AS Logic Data Book 1986*.

SN54AS756, SN54AS757, SN74AS756, SN74AS757
OCTAL BUFFERS AND LINE DRIVERS WITH OPEN-COLLECTOR OUTPUT

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

Supply voltage, VCC	7 V
Input voltage	7 V
Off-state output voltage	7 V
Operating free-air temperature range: SN54AS756, SN54AS757	-55°C to 125°C
SN74AS756, SN74AS757	0°C to 70°C
Storage temperature range	-65°C to 150°C

recommended operating conditions

	SN54AS756 SN54AS757			SN74AS756 SN74AS757			UNIT
	MIN	NOM	MAX	MIN	NOM	MAX	
VCC Supply voltage	4.5	5	5.5	4.5	5	5.5	V
VIH High-level input voltage	2			2			V
VIL Low-level input voltage			0.8			0.8	V
VOH High-level output voltage			5.5			5.5	V
IOL Low-level output current			48			64	mA
TA Operating free-air temperature	-55		125	0		70	°C

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

PARAMETER		TEST CONDITIONS	SN54AS756 SN54AS757			SN74AS756 SN74AS757			UNIT
			MIN	TYP†	MAX	MIN	TYP†	MAX	
VIK		VCC = 4.5 V, I _I = -18 mA			-1.2			-1.2	V
IOH		VCC = 4.5 V, VOH = 5.5 V			0.1			0.1	mA
VOL		VCC = 4.5 V, IOL = 48 mA			0.55				V
		VCC = 4.5 V, IOL = 64 mA						0.55	V
I _I		VCC = 5.5 V, V _I = 7 V			0.1			0.1	mA
I _{IH}		VCC = 5.5 V, V _I = 2.7 V			20			20	µA
I _{IL}	A inputs of 'AS757 only	VCC = 5.5 V, V _I = 0.4 V			-1			-1	mA
	All other inputs				-0.5			-0.5	mA
ICC	'AS756 'AS757	VCC = 5.5 V	Output high	9	15	9	15		mA
			Output low	51	80	51	80		
			Output high	21	33	21	33		
			Output low	61	95	61	95		

†All typical values are at VCC = 5 V, TA = 25°C.

SN54AS756, SN54AS757, SN74AS756, SN74AS757
OCTAL BUFFERS AND LINE DRIVERS WITH OPEN-COLLECTOR OUTPUTS

'AS756 switching characteristics (see Note 1)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	V _{CC} = 4.5 V to 5.5 V, C _L = 50 pF, R _L = 500 Ω, T _A = MIN to MAX				UNIT
			SN54AS756		SN74AS756		
			MIN	MAX	MIN	MAX	
t _{PLH}	A	Y	3	20	3	19	ns
t _{PHL}			1	7	1	6	
t _{PLH}	B	Y	3	22	3	19.5	ns
t _{PHL}			1	8.5	1	7.5	

'AS757 switching characteristics (see Note 1)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	V _{CC} = 4.5 V to 5.5 V, C _L = 50 pF, R _L = 500 Ω, T _A = MIN to MAX				UNIT
			SN54AS757		SN74AS757		
			MIN	MAX	MIN	MAX	
t _{PLH}	A	Y	3	19.5	3	18.5	ns
t _{PHL}			1	7	1	6	
t _{PLH}	1B	1Y	3	21	3	20	ns
t _{PHL}			1	8	1	7	
t _{PLH}	2G	2Y	3	22.5	3	21	ns
t _{PHL}			1	8.5	1	7.5	

NOTE 1: Load circuit and voltage waveforms are shown in Section 1 of *ALS/AS Logic Data Book, 1986*.