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 Schottky Circuitry for High Speed, Typical Propagation Delay Time 12 ns 	D OR N PACKAGE (TOP VIEW)
 Drivers Feature Open-Collector Outputs for Party-Line (Data Bus) Operation 	$\begin{array}{c c} \text{GND} \begin{bmatrix} 1 & 16 \\ 1 & 16 \end{bmatrix} \text{V}_{\text{CC}} \\ 1\text{B} \begin{bmatrix} 2 & 15 \end{bmatrix} 4\text{B} \end{array}$
 Driver Outputs Can Sink 100 mA at 0.8 V Maximum 	1R [3 14] 4R 1D [4 13] 4D
 pnp Inputs for Minimal Input Loading 	2D [5 12] S
 Designed to Be Interchangeable With 	2R 🛛 6 11 🗍 3D
Advanced Micro Devices AM26S10	2B 🛛 7 10 🗍 3R
description	GND [8 9] 3B

The AM26S10C is a quadruple bus transceiver utilizing Schottky-diode-clamped transistors for high speed. The drivers feature open-collector outputs capable of sinking 100 mA at 0.8 V maximum. The driver and strobe inputs use pnp transistors to reduce the input loading.

The driver of the AM26S10C is inverting and has two ground connections for improved ground current-handling capability. For proper operation, the ground pins should be tied together.

The AM26S10C is characterized for operation over the temperature range of 0°C to 70°C.

Function Tables

AM26S10C (transmitting)

INP	UTS	OUTPUTS			
S	D	В	R		
L	Н	L	Н		
L	L	н	L		

AM26S10C

(receiving)								
INPUTS			OUTPUT					
S	В	D	R					
Н	Н	Х	L					
Н	L	Х	н					

H = high level, L = low level, X = irrelevant



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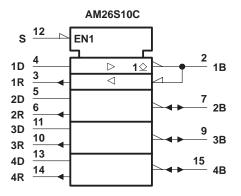
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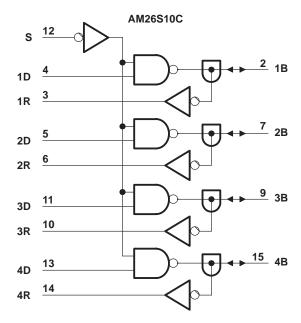
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logic symbol[†]

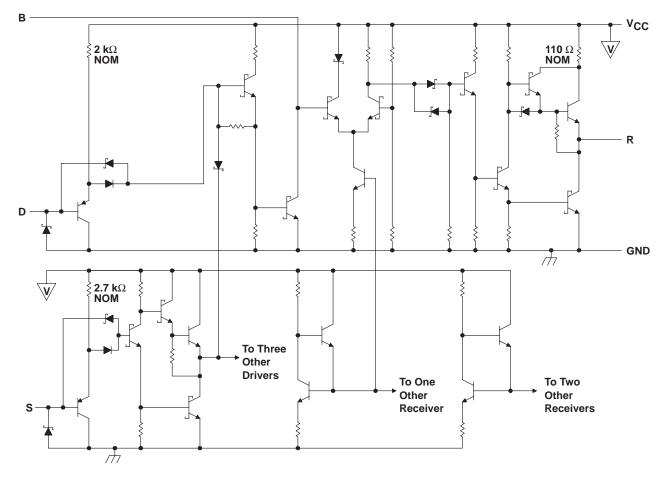


⁺ These symbols are in accordance with ANSI/IEEE Std 91-1984 and IEC Publication 617-12.

logic diagram (positive logic)



schematic (each transceiver)





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

Supply voltage, V _{CC} (see Note 1) Driver or strobe input voltage range, V _I	\ldots -0.5 V to 5.5 V
Bus voltage range, driver output off, V _O	–0.5 V to 5.25 V
Driver or strobe input current range, I	30 mA to 5 mA
Driver output current, I _O	200 mA
Receiver output current, IO	30 mA
Continuous total power dissipation	See Dissipation Rating Table
Operating free-air temperature range, T _A	0°C to 70°C
Storage temperature range, T _{stg}	–65°C to 150°C
Lead temperature 1,6 mm (1/16 inch) from case for 10 seconds	

 [†] 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.
 NOTE 1: All voltage values are with respect to network ground terminals connected together.

> **DISSIPATION RATING TABLE** $T_A = 70^{\circ}C$ $T_{{\pmb{\Delta}}} \leq {\pmb{25}}^\circ {\pmb{C}}$ **DERATING FACTOR** PACKAGE POWER RATING POWER RATING ABOVE T_A = 25°C 7.6 mW/°C D 950 mW 608 mW Ν 1150 mW 9.2 mW/°C 736 mW

recommended operating conditions

			MIN	NOM	MAX	UNIT	
Supply voltage, V _{CC}		4.75	5	5.25	V		
High-levael input voltage, VIH	D or S		2			V	
	В		2.25			V	
Low-level input voltage, VIL	D or S				0.8	V	
	В				1.75		
Receiver high-level output current, I _{OH}				-1	mA		
Low-level output current, IOL	Driver				100	mA	
	Receiver			20		mA	
perating free-air temperature, T _A 0		70	°C				



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electrical characteristics over recommended operating free-air temperature range

				-	_		-			
	PARAMETER		ТІ	EST CONDITION	S	MIN	TYP [†]	MAX	UNIT	
VIK	Input clamp voltage	D or S	V _{CC} = 4.75 V,	lj = -18 mA				-1.2	V	
VOH	High-level output voltage	R	$V_{CC} = 4.75 V,$ $I_{OH} = -1 mA$	V _{IH} = 2 V,	V _{IL} = 0.8 V,	2.7	3.4		V	
		R			I _{OL} = 20 mA			0.5		
Vari			V _{CC} = 4.75 V,	VIH = 2 V,	I _{OL} = 40 mA		0.33	0.5	v	
VOH	Low-level output voltage	В	V _{IL} = 0.8 V		I _{OL} = 70 mA		0.42	0.7		
					I _{OL} = 100 mA		0.51	0.8		
	Off-stage output current		V _{IH} = 2 V, V _{IL} = 0.8 V	V _{CC} = 5.25 V,	V _O = 0.8 V			-50	μΑ	
IO(off)		В		$V_{CC} = 5.25 V,$	V _O = 4.5 V			100		
				$V_{CC} = 0,$	V _O = 4.5 V			100		
	High-level input current	D	V _{CC} = 5.25 V,	V _I = 2.7 V			30	۸		
ін	riigii-ievei input current	S	VCC = 5.25 V,	v] = 2.7 v				μA		
lj	Input current at maximum input voltage	D or S	V _{CC} = 5.25 V,	V _I = 5.5 V				100	μΑ	
1	Low-level input current	D						-0.54	mA	
ΙIL		S	V _{CC} = 5.25 V,	V _I = 0.4 V				-0.36	mA	
los	Short-circuit output current [‡]	R	V _{CC} = 5.25 V			-18		-60	mA	
100	Supply surrent		V _{CC} = 5.25 V,	Strobe at 0 V,	No load,		45	70	mA	
ICC	Supply current		All driver outputs	low				80		

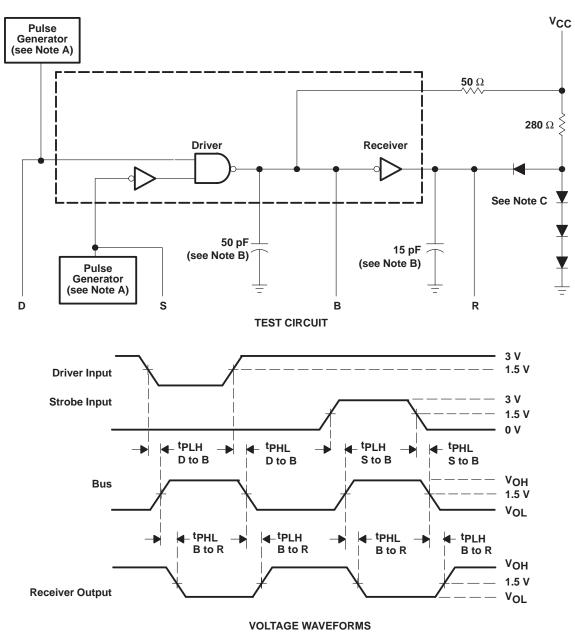
[†] All typical values are at $T_A = 25^{\circ}C$ and $V_{CC} = 5$ V. [‡] Not more than one output should be shorted to ground at a time, and duration of the short circuit should not exceed one second.

switching characteristics, V_{CC} = 5 V, T_A = 25°C

PARAMETER		FROM	то	TEST	AM26S10C			UNIT	
	FARAMEIER		(OUTPUT)	CONDITIONS	MIN	TYP	MAX	UNIT	
t _{PLH}	Propagation delay time, low-to-high-level output	D	В			10	15	ns	
t _{PHL}	Propagation delay time, high-to-low-level output	D				10	15	115	
^t PLH	Propagation delay time, low-to-high-level output	s	В			14	18	ns	
^t PHL	Propagation delay time, high-to-low-level output					13	18	115	
^t PLH	Propagation delay time, low-to-high-level output	Р	B R	See Figure 1		10	15		
^t PHL	Propagation delay time, high-to-low-level output	D		<u>j</u>		10	15	ns	
^t TLH	Transition time, low-to-high-level output				4	10		20	
^t THL	Transition time, high-to-low-level output		В		2	4		ns	



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PARAMETER MEASUREMENT INFORMATION

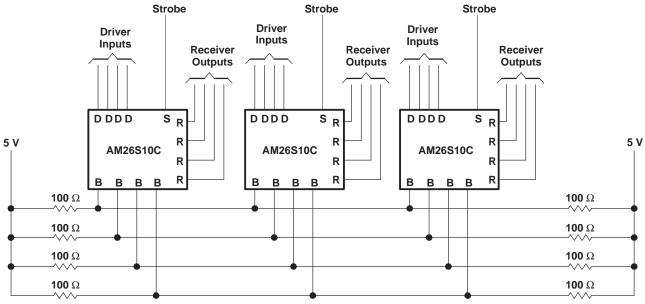
NOTES: A. The pulse generators have the following characteristics: Z_{O} = 50 Ω , t_r = 10 ± 5 ns.

- B. Includes probe and jig capacitance.
- C. All diodes are 1N916 or equivalent.

Figure 1. Test Circuit and Voltage Waveforms



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APPLICATION INFORMATION

100- Ω Transmission Line

Figure 2. Party-Line System



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