


GENNUM
CORPORATION

GENLINX™ GS9007A

Quad Serial Digital Cable Driver

DATA SHEET

FEATURES

- two output pairs (four outputs total) meeting SMPTE 259M
- nominal 550 ps rise and fall times
- accepts SMPTE and standard ECL input levels
- operates from a single +5 or -5 volt supply
- on-chip DC restoration for low jitter
- 250mW power dissipation
- Pb-free and Green

APPLICATIONS

- $4f_{SC}$, 4:2:2 and 360Mb/s Serial Digital Interfaces.

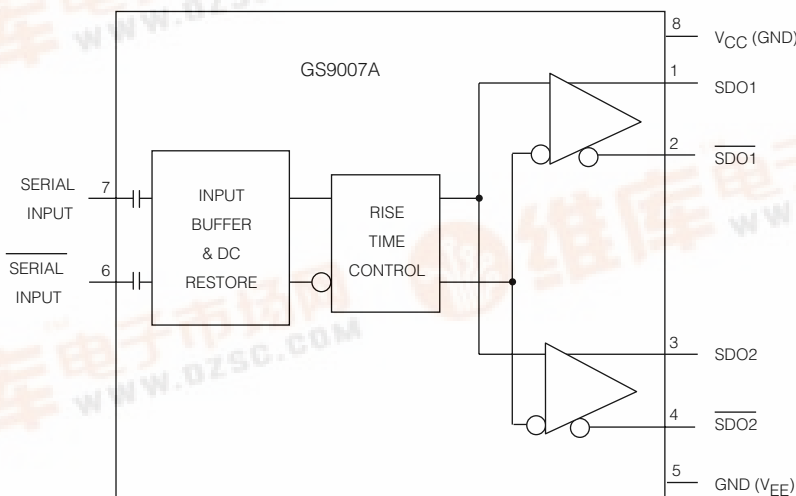
The **GENLINX**™ GS9007A is a bipolar integrated circuit designed to drive four 75Ω co-axial cables with SMPTE level serial digital video signals at data rates up to 360Mb/s. It directly interfaces with other **GENLINX**™ devices and can also be used as a general purpose high speed cable driver.

The differential inputs are AC-coupled and internally DC-restored which allows correct passage of pathological check codes associated with the serial digital standards. Even though the inputs are AC-coupled, static protection diodes at each input restrict the DC differential so that if the driving source uses the opposite polarity power supply, external DC blocking capacitors must be used.

The GS9007A is packaged in an 8 pin SOIC, and operates from a single +5 or -5 volt supply consuming typically only 250mW of power.

ORDERING INFORMATION

PART NUMBER	PACKAGE TYPE	TEMPERATURE RANGE	Pb-FREE AND GREEN
GS9007ACKA	8 Pin SOIC	0°C to 70°C	No
GS9007ACKAE3	8 Pin SOIC	0°C to 70°C	Yes



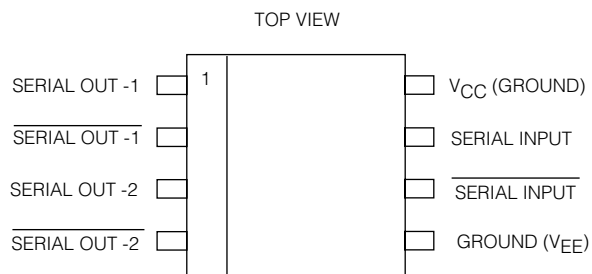
FUNCTIONAL BLOCK DIAGRAM

GS9007A

NOT RECOMMENDED FOR NEW DESIGNS



PIN CONNECTIONS



DC ELECTRICAL CHARACTERISTICS

$V_S = 5V$, $T_A = 0^\circ C$ to $70^\circ C$, $R_L = 150\Omega$ to GND and 143Ω AC coupled unless otherwise shown.

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS	NOTES
Supply Voltage	V_S	Operating Range	4.5	5.0	5.5	V	
Power Consumption	P_D	4x15W Loads DC 1% Accuracy, $T_A = 25^\circ C$	-	250	290	mW	
Supply Current	I_{S1}		-	105	110	mA	
	I_{S2}	DC No Loads, $T_A = 25^\circ C$	-	17.2	22	mA	

AC ELECTRICAL CHARACTERISTICS

$V_S = 5V$, $T_A = 0^\circ C$ to $70^\circ C$, $R_L = 150\Omega$ to GND and 143Ω AC coupled unless otherwise shown.

PARAMETER		SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS	NOTES
SERIAL DIGITAL SIGNALS	Signal Swing	V_{IN}		700	800	1000	mVp-p	
	Rise/Fall Times	t_R, t_F		-	-	750	ps	measured at 20% and 80%
SERIAL DIGITAL OUTPUTS	Rise/Fall Times	t_R, t_F		400	550	800	ps	measured at 20% and 80%
	Jitter	t_J	at 270Mb/s	-	-	± 25	ps	
	Propagation Delay	t_P		-	1	-	ns	
	Output Overshoot		$t_R = t_J = 600$ ps	-	0	-	%	see Figure 4
	Signal Swing	V_{OUT}	Across 75Ω Load	720	800	880	mVp-p	

ABSOLUTE MAXIMUM RATINGS

PARAMETER	VALUES/UNITS
Supply Voltage (V_S)	5.5V
Input Voltage Range (any input)	$V_S - 0.5V$
Power Dissipation	300mW
Operating Temperature Range	$0^{\circ}C \leq T_A \leq 70^{\circ}C$
Storage Temperature Range	$-65^{\circ}C \leq T_S \leq 150^{\circ}C$
Lead Temperature (Soldering, 10.sec)	260°C

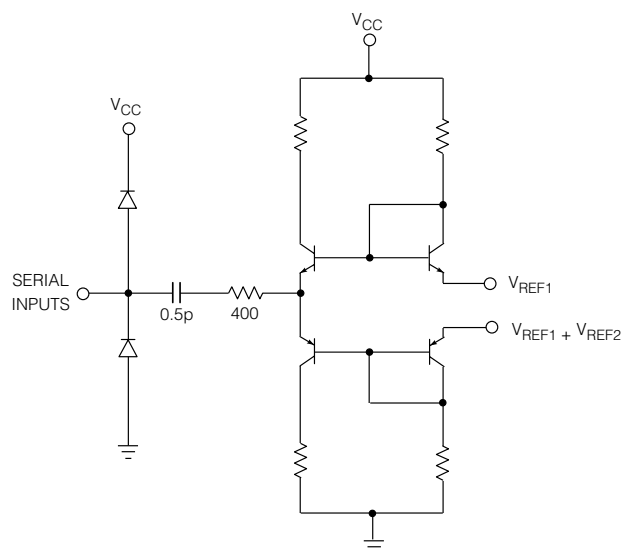
INPUT / OUTPUT CIRCUITS

Fig. 1 Input Circuit (Pins 6 and 7)

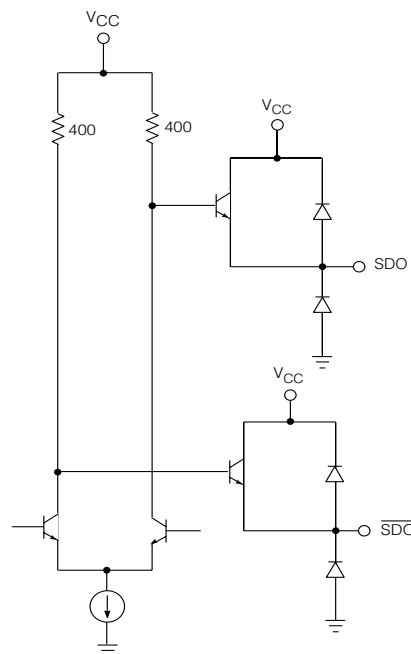


Fig. 2 Output Circuit (Pins 1, 2 and 3, 4)

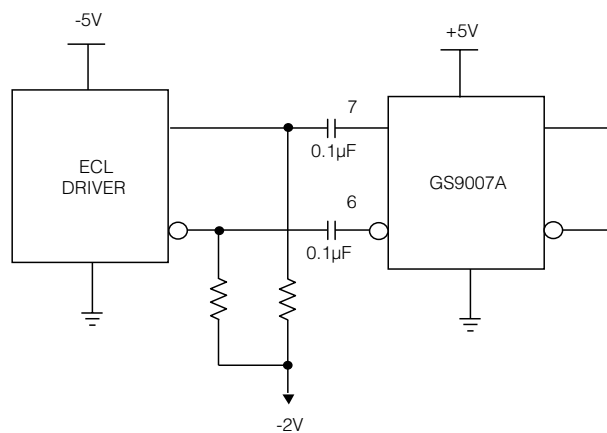


Fig. 3 Split Supply Interfacing

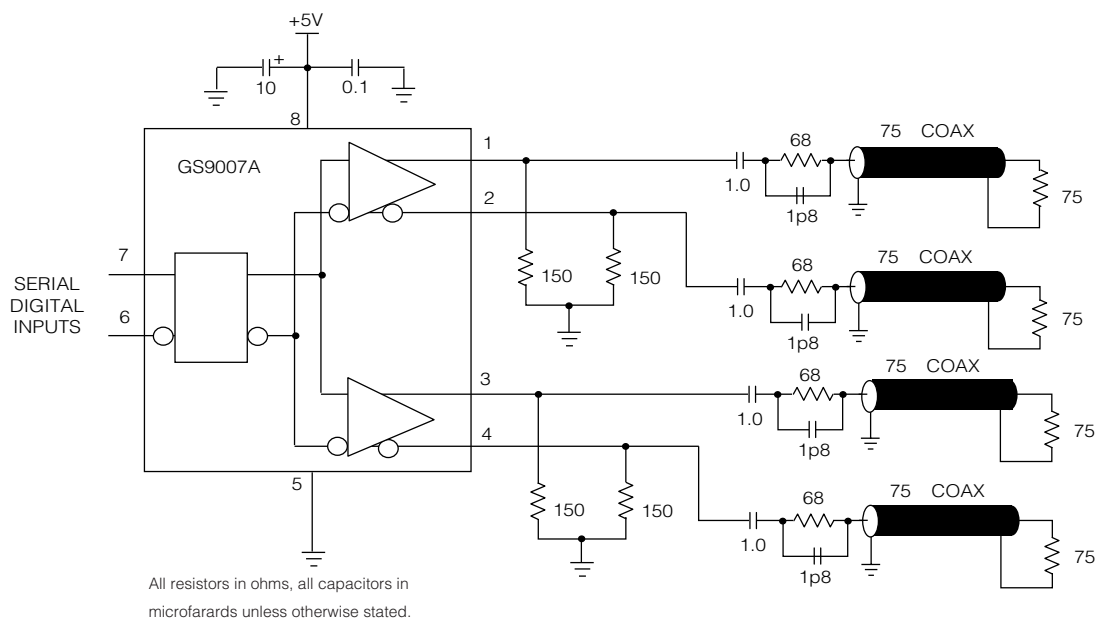


Fig. 4 Typical Application Circuit

CAUTIONELECTROSTATIC
SENSITIVE DEVICESDO NOT OPEN PACKAGES OR HANDLE
EXCEPT AT A STATIC-FREE WORKSTATION**DOCUMENT IDENTIFICATION****DATA SHEET**

The product is in production. Gennum reserves the right to make changes at any time to improve reliability, function or design, in order to provide the best product possible.

REVISION NOTES:

Version 1 - Adding lead-free and green information.

Version 2 - Adding minimum Rise / Fall time.

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