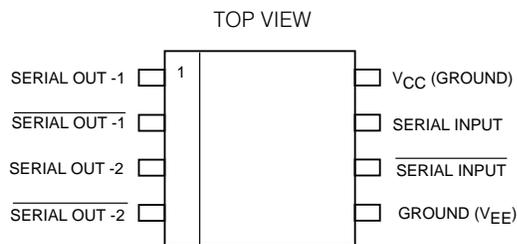


FEATURES

- 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
- 250 mW power dissipation
- interfaces with **GENLINX™ GS9002, GS9004A, GS9005A and GS9015A**

PIN CONNECTIONS



DEVICE DESCRIPTION

The **GENLINX™ GS9007** is a bipolar integrated circuit designed to drive four 75 Ω co-axial cables with SMPTE level serial digital video signals at data rates exceeding 400 Mb/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.

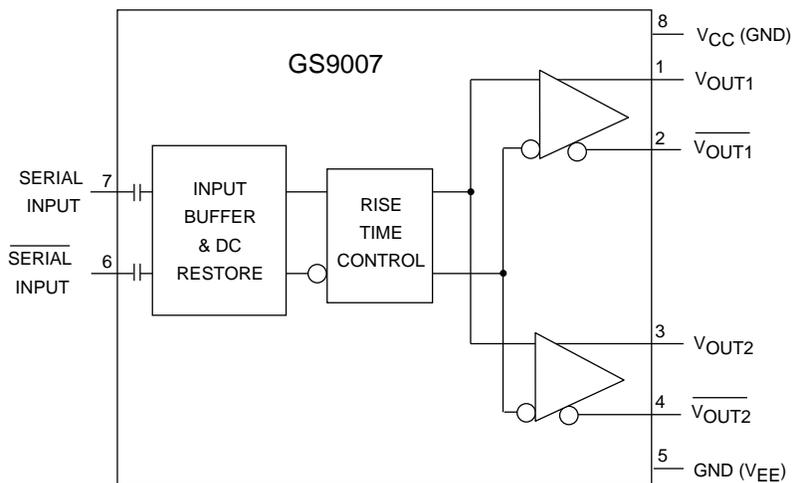
The GS9007 is packaged in an 8 pin SOIC, and operates from a single +5 or -5 volt supply consuming typically only 250 mW of power.

APPLICATIONS

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

ORDERING INFORMATION

Part Number	Package Type	Temperature Range
GS9007 - CKA	8 Pin SOIC	0° to 70°C



Patent No. 5,426,389.

FUNCTIONAL BLOCK DIAGRAM

GS9007 CABLE DRIVER - DC ELECTRICAL CHARACTERISTICS

$V_S = 5\text{ V}$, $T_A = 0\text{ to }70^\circ\text{C}$, $R_L = 150\Omega$ 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	4x150Ω Loads DC	-	250	290	mW	
Supply Current	I_{S1}	1% Accuracy, $T_A = 25^\circ\text{C}$	-	105	110	mA	
	I_{S2}	DC No Loads, $T_A = 25^\circ\text{C}$	-	17.2	22	mA	

GS9007 CABLE DRIVER - AC ELECTRICAL CHARACTERISTICS

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

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS	NOTES	
SERIAL DIGITAL INPUTS	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	-	-	± 25	ps	at 270 Mb/s	
	Propagation Delay	t_P	-	1	-	ns		
	Output Overshoot		$t_R = t_F = 600\text{ ps}$	-	0	-	%	see Figure 4
	Signal Swing	V_{OUT}	Across 75Ω Load	720	800	880	mVp-p	

INPUT / OUTPUT CIRCUITS

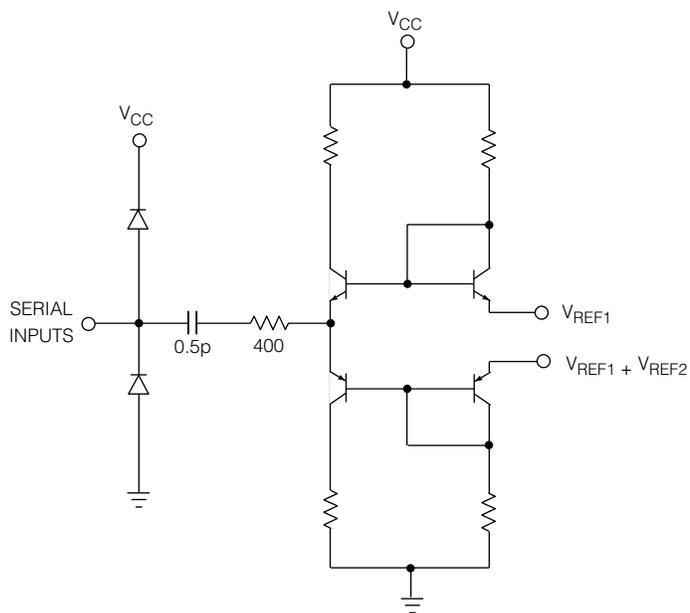


Fig. 1 Input Circuit (Pins 6 and 7)

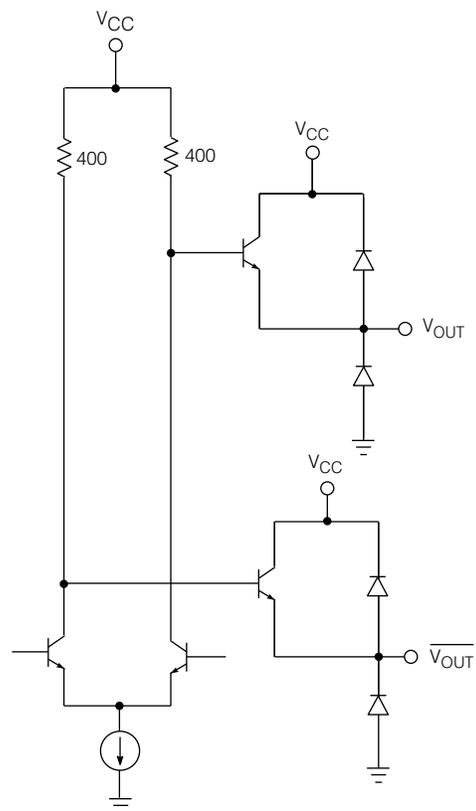


Fig. 2 Output Circuit (Pins 1, 2 and 3, 4)

ABSOLUTE MAXIMUM RATINGS

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

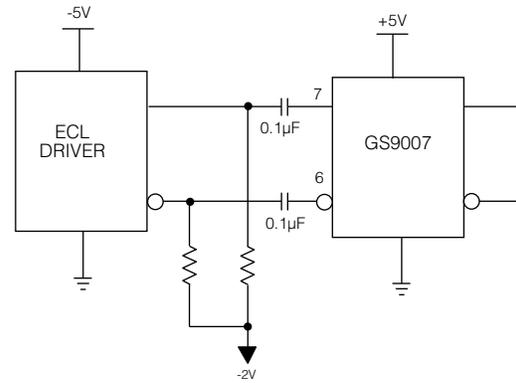


Fig. 3 Split Supply Interfacing

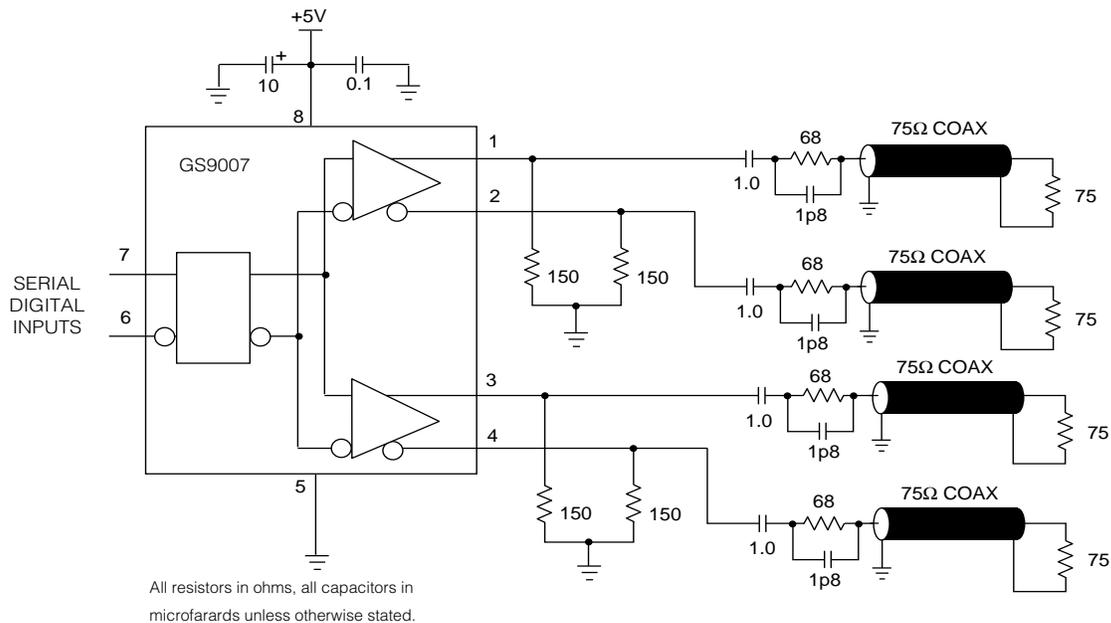


Fig. 4 Typical Termination Configuration

REVISION NOTES

Changes to Electrical Characteristics.

CAUTION

ELECTROSTATIC
SENSITIVE DEVICES
DO NOT OPEN PACKAGES OR HANDLE
EXCEPT AT A STATIC-FREE WORKSTATION



DOCUMENT IDENTIFICATION

PRODUCT PROPOSAL

This data has been compiled for market investigation purposes only, and does not constitute an offer for sale.

ADVANCE INFORMATION NOTE

This product is in development phase and specifications are subject to change without notice. Gennum reserves the right to remove the product at any time. Listing the product does not constitute an offer for sale.

PRELIMINARY DATA SHEET

The product is in a preproduction phase and specifications are subject to change without notice.

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.