



GS1679 Cable Driver with HD/SD Capability

The GS1679 is a high-speed BiCMOS integrated circuit designed to drive one to four 75Ω coaxial cables. The GS1679 can drive data rates up to 1.485Gb/s, and provides two selectable slew rates in order to achieve compliance to SMPTE 292M, SMPTE 259M and SMPTE 344M.

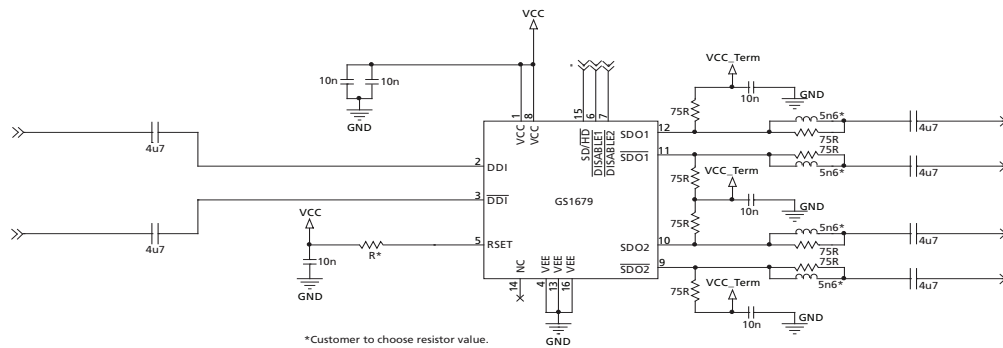
The GS1679 accepts industry-standard differential input levels, including LVPECL and CML. The $\overline{\text{DISABLE1}}$ and $\overline{\text{DISABLE2}}$ pins power-down the first and second output drivers respectively, leaving the serial data output in a high-impedance state. The GS1679 features an adjustable output swing using an external bias resistor. The single-ended output swing is adjustable from 600mV_{pp} to 1200mV_{pp}. The GS1679 can be powered from either a 3.3V or a 2.5V supply. Power consumption is typically 110mW using a 2.5V power supply.

The GS1679 is forward footprint-compatible with Gennum's 3G GS2989, allowing for an easier migration of HD designs to 3G.

Key Features

- SMPTE 292M, SMPTE 259M and SMPTE 344M compliant
- Supports data rates from 270Mb/s to 1.485Gb/s
- Supports DVB-ASI at 270Mb/s
- Dual differential coaxial-cable-driving outputs
 - ◆ selectable slew rates
 - ◆ adjustable output swing from 600mV_{pp} to 1200mV_{pp}
 - ◆ DISABLE control
- Wide common-mode range input buffer
 - ◆ 100mV sensitivity
 - ◆ Supports DC-coupling to industry-standard differential logic
 - ◆ on-chip 100Ω differential data input termination
- Excellent output eye quality
- Power supply operation at 3.3V or 2.5V
- 110mW power consumption (2.5V supply)
- Operating temperature range: -40°C to +85°C
- Small footprint QFN package (4mm x 4mm)
- Pb-free and RoHS compliant
- Forward pin-compatible with Gennum's 3G GS2989

Typical Application Circuit



NOTE: All resistors in Ohms, capacitors in Farads, and inductors in Henrys, unless otherwise stated.

* Typical value: varies with layout, and represents a trade-off between good eye shape and output return loss.
 5n6 is the optimum value for an 800mV output swing and 3.3V operation.
 4n7 is the optimum value for an 800mV output swing and 2.5V operation.
 6n8 is the optimum value for an 1800mV output swing.

DOCUMENT IDENTIFICATION
PRODUCT BRIEF

The product is in a 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.

CAUTION

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



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