

查询"LA73079CL"供应商



SANYO Semiconductors

DATA SHEET

LA73079CL — Monolithic Linear IC

Video Driver for DSC

Overview

The LA73079CL is a low voltage drive (2.7V to 3.6V) video driver developed for portable appliances including digital still cameras and cell phones. It incorporates a minus-voltage generator that allows the LA73079CL to generate its output with the pedestal voltage set to 0V, so that no output coupling capacitor is required. This enables substantial reduction in mounting space without concerned about V-sag.

Features

- Output coupling capacity not required
- Low-voltage drive ($V_{CC} = 2.7V$ to $3.6V$)
- No V-sag
- Sextic LPF incorporated ($f_c = 9MHz$)
- Current drain of $0\mu A$ in the standby mode
- Amplifier gain selectable from three options (6, 12, and 16dB) (Pin control (GND/Open/ V_{CC}))
- Output drive capable of covering maximum 75Ω output, one channel

Specifications

Maximum Ratings at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC} max		4.0	V
Allowable power dissipation	P_d max	$T_a \leq 80^\circ C$, *Mounted on a specified board	160	mW
Operating temperature	T_{opr}		-20 to +85	°C
Storage temperature	T_{stg}		-55 to +150	°C

*: Mounted on a specified board: 10mm×20mm×0.8mm, Paper phenol

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Recommended Operating Conditions at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings		Unit
Recommended Operating supply voltage	$V_{CC\text{STD}}$		3.1		V
Operating supply voltage range	$V_{CC\text{RANGE}}$		2.7 to 3.6		V

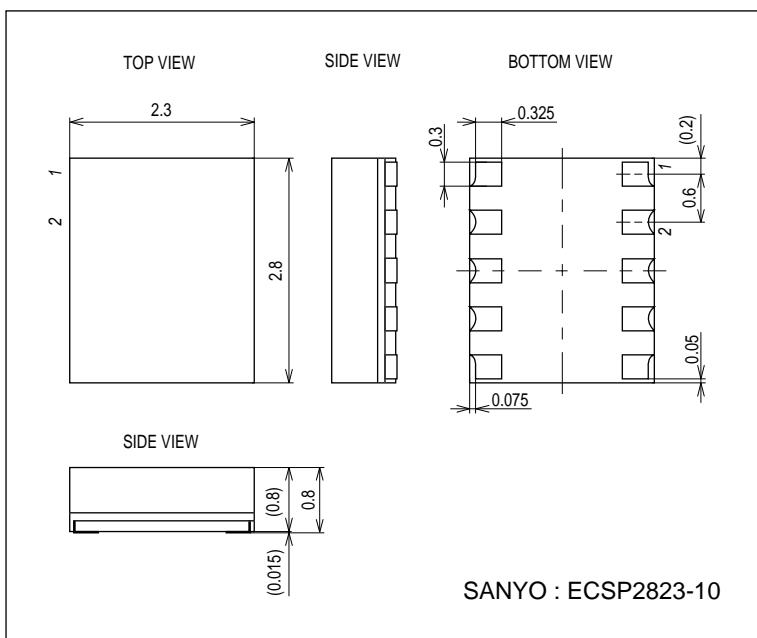
Electrical Characteristics at $T_a = 25^\circ\text{C}$, $V_{CC} = 3.1\text{V}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Current Drain Block						
Current dissipation 1 ($V_{IN} = \text{White50\%}$)	I_{CC}	4pin = Low Input = White50%	14	22	30	mA
Current dissipation 2 (Non-signal mode)	I_{CC^2}	4pin = Low Input = No signal	7	11.5	15	mA
Current dissipation 3 (Standby mode)	$I_{CC\text{-STBY}}$	4pin = Open (High)		0	5	μA
Video Block						
Voltage gain V6	$V_{G\text{-L}}$	$V_{IN} = 1\text{Vp-p}$ 100% white 2pin = Low (GND)	5.7	6.2	6.7	dB
Voltage gain V12	$V_{G\text{-M}}$	$V_{IN} = 0.5\text{Vp-p}$ 100% white 2pin = MID (Open)	11.7	12.2	12.7	dB
Voltage gain V16	$V_{G\text{-H}}$	$V_{IN} = 317\text{mVp-p}$ 100% white 2pin = High (V_{CC})	15.7	16.2	16.7	dB
Freq. Characteristics	V_f	$f = 100\text{kHz}/5\text{MHz}$	-1.5	-0.5	+0.5	dB
Differential Gain	D_G	$V_{OUT} = 2\text{Vp-p}$ (Modulated Ramp)	-2.0	0	-2.0	%
Differential Phase	D_P	$V_{OUT} = 2\text{Vp-p}$ (Modulated Ramp)	-2.0	0	-2.0	deg
Output leak current at standby 1	I_{OUT^H}	Current when 3V is applied to pin 9, with pin 4 at H (Standby Mode) and pin 9 (V_{OUT})	-5.0	0	+5.0	μA
Output leak current at standby 2	I_{OUT^L}	Current when 0.1V is applied to pin 9, with pin 4 at H (Standby Mode) and pin 9 (V_{OUT})	-5.0	0	+5.0	μA
Control Terminal Block						
Stand-by control pin H voltage (SET = STANDBY MODE)	$V_{TH\text{-STBY-H}}$	Pin 4 pin voltage range at which $I_{CC} \leq 5\mu\text{A}$	$V_{CC\text{-}0.5}$		3.6	V
Stand-by control pin L voltage (SET = ACTIVE MODE)	$V_{TH\text{-STBY-L}}$	Pin 4 pin voltage range at which the operation mode is effective.	GND		0.3	V
Gain selection control pin H voltage (SET = 16dB)	$V_{TH\text{-G-H}}$	Pin 2 pin voltage range at which Amp Gain becomes 16dB.	$V_{CC\text{-}0.3}$		V_{CC}	V
Gain selection control pin M voltage (SET = 12dB)	$V_{TH\text{-G-M}}$	Pin 2 pin voltage range at which Amp Gain becomes 12dB.	1.0	1.2 (OPEN)	1.4	V
Gain selection control pin L voltage (SET = 6dB)	$V_{TH\text{-G-L}}$	Pin 2 pin voltage range at which Amp Gain becomes 6dB.	GND		0.3	V

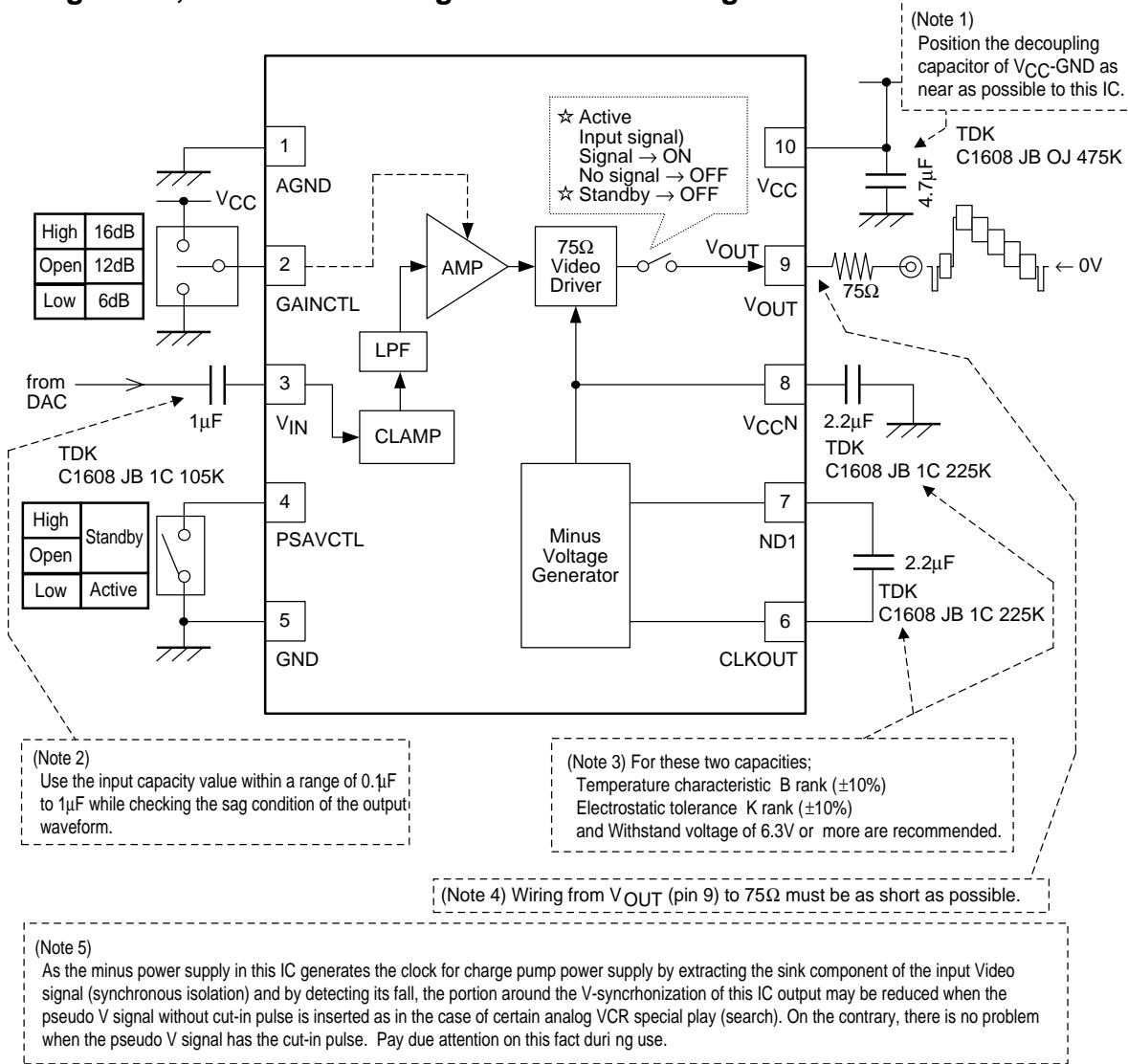
Package Dimensions

unit : mm (typ)

3334



Pin Assignment, Pin Function Diagram and Block Diagram



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Pin No	Symbol	Voltage	Description	Equivalent Circuit
1	AGND	0V	Analog GND	
2	GAINCTL	1.2V	Gain select pin Control of Pin2 GAIN H(V _{CC}) => 16dB M(OPEN) => 12dB L(GND) => 6dB	
3	V _{IN}	1.1V	Video input terminal (Sync-chip clamp (input High-impedance)) GAIN SET: 6dB => 1.0Vp-p GAIN SET: 12dB => 500mVp-p GAIN SET: 16dB => 317mVp-p 	
4	PSAVCTL	V _{CC} or 0V	Power save mode select pin Control of Pin4 MODE H(V _{CC}) OPEN or V _{CC} ±0.5V => STANDBY L(GND) 0V to 0.3V => ACTIVE	
5	GND	0V		

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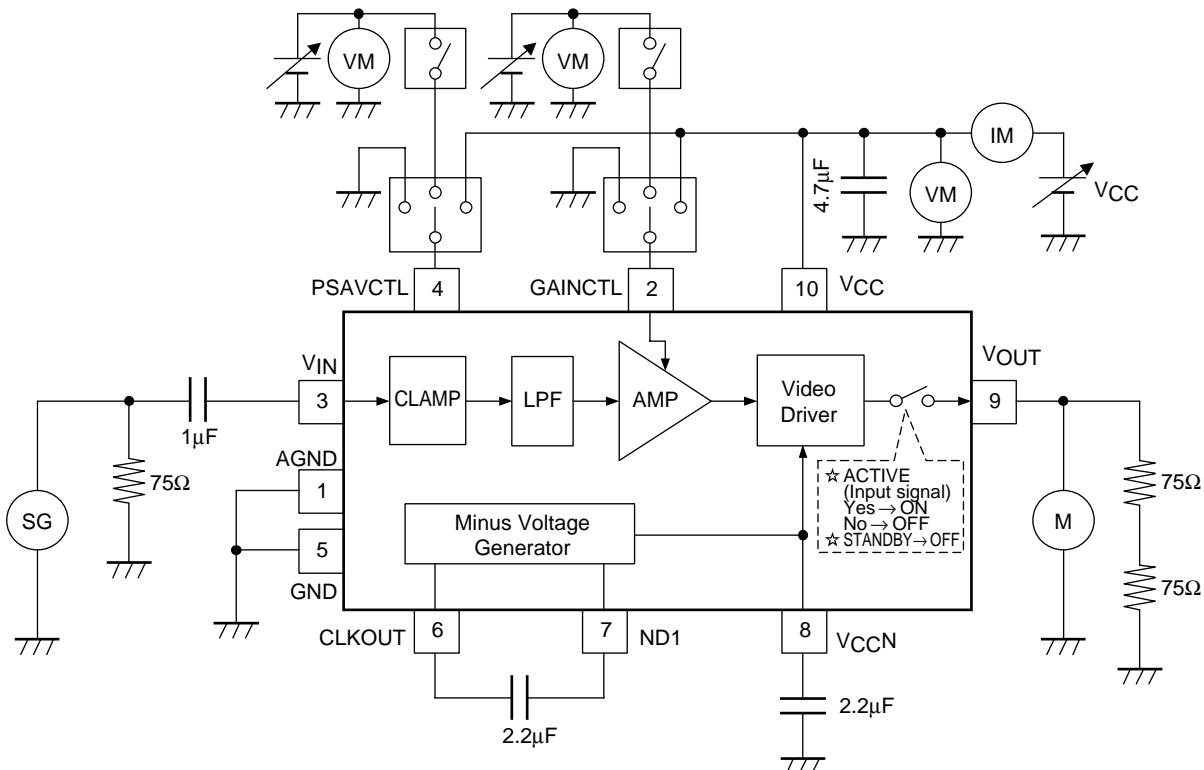
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Pin No	Symbol	Voltage	Description	Equivalent Circuit
6	CLKOUT	+3.0V ↑↓ 0V	Pin6 : Clock output terminal 	
7	ND1	+0.5V ↑↓ -2.6V (-VCC)	Pin7 : The terminal which transmits an electric charge	
8	VCCN	0V ↑↓ -2.5V (-VCC)	Pin8 : Negative VCC	
9	V _{OUT}	0V	Video output terminal (Push-pull output Low-impedance) 	
10	V _{CC}	2.7V to 3.6V		

[查詢 Circuit Diagram 商](#)



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