Ordering number : EN ———

CMOS IC

LC99057-LA8

Front-End IC for 1/5-Inch Color CCDs

Preliminary

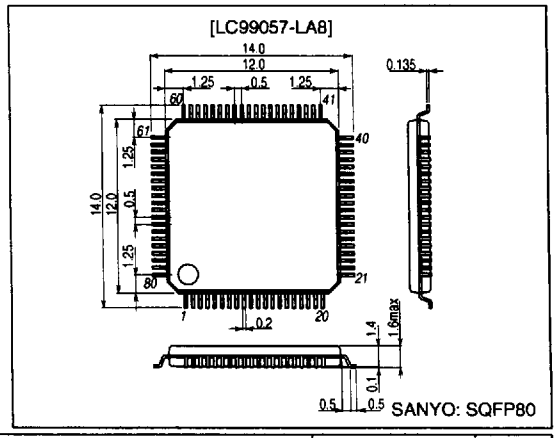
Functions and Applications

Control IC for image sensor.

Package Dimensions

unit: mm

3220-SQFP80



Specifications

Absolute Maximum Ratings at V_{SS} = 0 V

Parameter		Symbol	Conditions	Ratings	Unit
Supply voltage		V_{DD} max		−0.3 to +7.0	V
Input/output voltage		V_I, Vo		−0.3 to V_{DD} +0.3	V
Allowable power dissipation		Pdmax	Ta = 60°C	500 *1	mW
Operating temperature		Topr		−15 to +60	°C
Storage temperature		Tstg		−55 to +125	°C
Soldering temperature	Manual soldering	—	3 s	350	°C
	Reflow	—	10 s	235	°C
Input/output current		I_I, Io		±20 *2	mA

Note: *1 The allowable power dissipation is guaranteed for the IC on a standalone basis.
For further details, please contact the Quality Assurance Department.
*2 Value for 1 input/output reference cell.

Allowable Operating Ranges at Ta = −15 to +60°C, V_{SS} = 0 V

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Supply voltage	V_{DD}		4.75	5.0	5.25	V
Input voltage range	V_{IN}		0	—	V_{DD}	V

Electrical Characteristics

DC Characteristics at Ta = –15 to +60°C, V_{SS} = 0 V, V_{DD} = 4.75 to 5.25 V

Parameter	Symbol	Conditions	Ratings			Unit	Applicable pins *
			min	typ	max		
High-level input voltage	V_{IH}	CMOS levels	0.7 V_{DD}	—	—	V	(1)
Low-level input voltage	V_{IL}		—	—	0.3 V_{DD}	V	
High-level input voltage	V_{IH}	TTL levels Schmitt	2.5	—	—	V	(2)
Low-level input voltage	V_{IL}		—	—	0.6	V	
High-level output voltage	V_{OH}	I_{OH} = –4 mA	V_{DD} – 2.1	—	—	V	(3), (4)
Low-level output voltage	V_{OL}	I_{OL} = 4 mA	—	—	0.4	V	
High-level output voltage	V_{OH}	I_{OH} = –8 mA	V_{DD} – 2.1	—	—	V	(5)
Low-level output voltage	V_{OL}	I_{OL} = 8 mA	—	—	0.4	V	
High-level output voltage	V_{OH}	I_{OH} = –25 mA	V_{DD} – 2.1	—	—	V	(6)
Low-level output voltage	V_{OL}	I_{OL} = 25 mA	—	—	0.4	V	
High-level output voltage	V_{OH}	I_{OH} = –8 mA	V_{DD} – 2.1	—	—	V	(7)
Low-level output voltage	V_{OL}	I_{OL} = 4 mA	—	—	0.4	V	
Input leak current	I_L	VI = VSS, VDD	–10	—	+10	µA	(1), (2)
Output leak current	I_{OZ}	During high-impedance output	–10	—	+10	µA	(4)

Note: * The applicable pin sets are as follows.

INPUT
(1) RESB, FSCKSEL, EGSTCON, EGFTCON, EGHCON, BIN, HVSBKCN, CLPCON, STDBYGC, STDBYAD, CLP1IN, OEB, TV, MCKI, FLD, CLK3CON, TEST
(2) REGRESB, SCLK, SDATA, STTRG, FTTRG, HVSTRG, HTTRG

OUTPUT
(3) NSUB, VI1 to 4, VS1 to 4, CHECK, HFLG, CLP, HTCLK, MCK, CLK300K
(4) DOUT0 to 7
(5) HTR
(6) HT1 to 2
(7) MCKO

Note: Pins GIN, CCDIN, CAP1, CAPA2, YOUT, YIN, CAPB2, MONITOR, REFHIN, REFLIN, REFH, REFM, and REFL are not included in DC characteristics.

Block Diagram