Application Report
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TPS767095 Schematic Checklist

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ABSTRACT

This application note for the TPS657095, a power companion device for embedded camera modules or other portable low-power consumer end equipment (see the device data sheet) lists the connection details for each pin. The ball details include a brief explanation of the function of each pin or signal and whether the signal is analog or digital. Use this information to check the connectivity for each ball on a system schematic.

In addition to this list, customers are advised to use the information in the data sheet, *TPS657095 PMU for Embedded Camera Module* (SLVSCW2) and user's guide, *TPS657095 Evaluation Module User's Guide* (SLVUAI4).

Contents

1 Recommended Operating Conditions

Table 1 lists the recommended operating conditions for the TPS767095 devices.

Table 1. Recommended Operating Conditions

		MIN	NOM	MAX	UNIT
VCC / AVCC	Input voltage range	3.7		6	V
C_{VCC}	Input capacitor at VCC	1			µF
C_{AVCC}	Input capacitor at AVCC	1			µF
V_{LDOx}	Output voltage range for LDO1 and LDO2	0.8		3.3	V
I_{LDO}	Output current at LDO1 or LDO2			75	mA
$C_{OUTLDO1/2}$	Output capacitance at V_{LDO1}, V_{LDO2}	2.2		6.8	µF
LED_EN	Voltage range	1.3		6	V
GPIO	Voltage range (configured as an input)	1.3		3.3	V
T_A	Operating ambient temperature	–40		85	°C
T_J	Operating junction temperature	–40		125	°C

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Name	Pin	Type	I/O	Description	Recommended Connection	Not Used Features
VCC	C1, D3	Power	I	Supply Input	Connect a 1-µF capacitor close to the C1 pin. Connect C1 and D3 pins together externally.	N/A
GND	B1	Power	I	Ground Connection	Main device ground - connect to ground plane on PCB	N/A
AVCC	D4	Analog	I	Analog Supply Input	Connect a 1-µF capacitor close to pin. The D4 pin must be connected externally to the D3 and C1 pins.	N/A
AGND	C4	Analog	I	Analog Ground connection	Device quiet ground - connect to ground plane on PCB	N/A
VLDO1	D1	Power	O	Output Voltage from LDO1	Connect 2.2-µF capacitor close to D1 pin	Float
VLDO2	A1	Power	O	Output Voltage from LDO1	Connect 2.2-µF capacitor close to A1 pin	Float
ISINK	A2	Analog	O	Open Drain Current Sink	Connect to cathode of LED. Anode of LED can be connected to VCC.	Float
GPO	D2	Analog	O	General Purpose Output	Connect with 10-kΩ pullup resistor to VLDO1	Float
LED_EN	C2	Digital	I	LED Enable pin	Connect to 10-kΩ pullup resistor to VCC (0 = disabled, 1 = enabled).	Float
GPIO	B2	Analog	I	General Purpose Input/Output	Connect to 10-kΩ pullup resistor to VLDO1. As an input it is used to enable LDO2.	Float
SCL	B3	Digital	I	Clock Input for I2C compatible interface	Connect to 4.99-kΩ pullup resistor to VCC	Float
SDA	C3	Digital	I/O	Data input for I2C compatible interface	Connect to 4.99-kΩ pullup resistor to VCC	Float
XO	B4	Analog	I	Connection for external crystal to clock generator	Connect directly to external crystal - input of amplifier	Float
XI	A4	Analog	I	Connection for external crystal to clock generator	Connect directly to external crystal - output of amplifier	Float
CLKOUT	A3	Digital	O	Clock output	Float	Float

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