Application Note

AM62Ax Maximum Current Ratings

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The table summarizes the maximum current ratings at the AM62Ax power terminals. The data in this table serves as a guide for designing power supplies. The current ratings in the table are worst-case estimates for each power supply group, and actual power supply currents for specific applications are typically lower. For further details, please refer to the AM62Ax Power Estimation Tool.

Table 1-1. Maximum Current Ratings at Power Terminals

POWER SUPPLY GROUP	SUPPLY NAME	CONDITION					MAX	UNIT
		VDD_CORE Voltage	Operating Junction Temperature Range	Cortex -A53 # of cores and Performance	C7x256 Performance	Wave521CL Performance		
CORE	VDD_CORE VDDA_CORE_CSIRX0 VDDA_CORE_USB VDDA_DDR_PLL0 VDDA_CORE_DSI_CLK	0.85 V	Automotive	Quad, 1400 MHz	1000 MHz	240Mbps, 400 MHz	8000	mA
		0.75 V	Automotive	Quad, 1250 MHz	850 MHz	240Mbps, 400 MHz	6500	mA
		0.85 V	Automotive	Dual, 1400 MHz	500 MHz	60Mbps, 100 MHz	6000	mA
		0.75 V	Automotive	Dual, 1250 MHz	500 MHz	60Mbps, 100 MHz	5000	mA
		0.85 V	Extended Industrial	Quad, 1400 MHz	1000 MHz	240Mbps, 400 MHz	6900	mA
		0.75 V	Extended Industrial	Quad, 1250 MHz	850 MHz	240Mbps, 400 MHz	5500	mA
		0.85 V	Extended Industrial	Dual, 1400 MHz	500 MHz	60Mbps, 100 MHz	5000	mA
		0.75 V	Extended Industrial	Dual, 1250 MHz	500 MHz	60Mbps, 100 MHz	4100	mA
CANUART CORE	VDD_CANUART(1)						10	mA
0.85V RAM	VDDR_CORE(2)	Extended Industrial 105°C					200	mA
		Automotive 125°C					300	mA
DDR	VDDS_DDR VDDS_DDR_C						400	mA
1.8V Digital Supply	VDDS_OSC0						5	mA

Table 1-1. Maximum Current Ratings at Power Terminals (continued)

POWER SUPPLY GROUP	SUPPLY NAME	CONDITION					MAX	UNIT
		VDD_CORE Voltage	Operating Junction Temperature Range	Cortex -A53 # of cores and Performance	C7x256 Performance	Wave521CL Performance		
1.8V Analog Supply	VDDA_PLL0 VDDA_PLL1 VDDA_PLL3 VDDA_PLL4 VDDA_1P8_CSI_DSI VDDA_1P8_USB VDDA_TEMP0 VDDA_TEMP1 VDDA_TEMP2						150	mA
3.3V Supply	VDDA_3P3_USB						50	mA
IO Supply	VDDSHV0 VDDSHV1 VDDSHV2 VDDSHV3 VDDSHV4 VDDSHV6						150	mA
SD Interface IO Supply	VDDSHV5(3)						30	mA
MCU 1.8V Analog Supply	VDDA_MCU(4)						30	mA
MCU IO Supply	VDDSHV_MCU(4)						30	mA
CANUART IO Power Supply	VDDSHV_CANUART(1)						10	mA
VPP	VPP						400	mA

(1) VDD_CANUART shall be combined with the VDD_CORE power supply group and VDDSHV_CANUART shall be combined with the I/O Power Supply group when not using Partial IO low power mode.
(2) VDDR_CORE shall be combined with VDD_CORE power supply group when VDD_CORE is used in 0.85 V.
(3) VDDSHV5 shall be combined with the I/O Power Supply group when a separate power supply is not required for voltage scaling for a high-speed SD card.
(4) VDDA_MCU shall be combined with the same power supply group with the 1.8-V Analog Power Supply and VDDSHV_MCU shall be combined with the I/O Power Supply Group when not isolating MCU channel IO from other IO groups.

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Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265