ON Semiconductor®

Product Bulletin

Document #:PB23286Z
Issue Date:28 Oct 2020

Title of Change:	AR0220AT Datasheet Typo Correction and Consistency Improvement
Effective date:	28 Oct 2020
Contact information:	Contact your local ON Semiconductor Sales Office or Philip.Lenox@onsemi.com
Type of notification:	This Product Bulletin is for notification purposes only. ON Semiconductor will proceed with implementation of this change upon publication of this Product Bulletin.
Change Category:	Datasheet/Product Doc change
Change Sub-Category(s):	Datasheet/Product Doc change

Sites Affected:

ON Semiconductor Sites	**External Foundry/Subcon Sites**
None	None

Description and Purpose:

In the AR0220 Datasheet, Table 9 through Table 12 specify the current draw for key sensor operating modes. In the description of the test conditions used to obtain these power numbers, a load capacitor (C_LOAD) was specified which was not used, and is not anticipated to be used in customer systems. This load capacitance is not referenced elsewhere in the documentation.

An example is show in Table 9 below for reference. Identical omissions will be made for Table 10, 11 and 12.

Table 9. OPERATING CURRENTS IN 4−LANE MIPI OUTPUT AND LINEAR MODE

Definition	Condition	Symbol	Min	Typ	Max	Unit
Digital operating current	Streaming, 1820 x 940, 60 fps	I_{DD}	−	100	165	mA
I/O digital operating current	Streaming, 1820 x 940, 60 fps	I_{DD_IO}	−	0.4	4	mA
Analog operating current	Streaming, 1820 x 940, 60 fps	I_{AA}	−	38	55	mA
Pixel supply current	Streaming, 1820 x 940, 60 fps	I_{AA_PIX}	−	5	10	mA
PHY supply current	Streaming, 1820 x 940, 60 fps	I_{DD_PHY}	−	13	20	mA
IO_PHY supply current	Streaming, 1820 x 940, 60 fps	$I_{DD\_IO\_PHY}$	−	0.1	4	mA
SLVS supply current	Streaming, 1820 x 940, 60 fps	I_{DD_SLVS}	−	9	14	mA

13. Operating currents are measured at the following conditions:
V_{AA} = V_{AA_PIX} = V_{DD_IO} = $V_{DD\_IO\_PHY}$ = 2.8 V
V_{DD} = V_{DD_PHY} = V_{DD_SVLS} = 1.2 V
PLL Enabled and PIXCLK = 84 MHz
T_A = 55°C
~~C_{LOAD} = 20 pF~~
Measured in dark

The first page nominal power consumption value has been reduced from 424 mW to 415 mW to reflect 25C junction operating condition to be consistent with other datasheets in the portfolio. This change does not reflect any change in sensor operation or the nominal power consumption

AEC-Q100 has been added to feature list, as this was previously omitted. This does not reflect a change in the qualification status of the sensor, updating documentation to be consistent across sensors.

Wording was clarified in the power-up sequence settings to allow customer using previously recommended power-up sequence to continue to do so.

OPN description was updated to reflect correct terminology for package drawing, specifically replacing the term “tiny iBGA” with “iBGA”.

The change will not impact form, fit, or function of product(s)

List of Affected Standard Parts:

***Note**: Only the standard (off the shelf) part numbers are listed in the parts list. Any custom parts affected by this PCN are shown in the customer specific PCN addendum in the PCN email notification, or on the **PCN Customized Portal**.*

AR0220AT4R00XUEA2-DPBR	AR0220AT4R00XUEA2-DRBR	AR0220AT4R00XUEA2-TRBR
AR0220AT4B00XUEA2-DPBR	AR0220AT4B00XUEA2-DRBR	AR0220AT4B00XUEA2-TPBR
AR0220AT4B00XUEA2-TRBR	AR0220AT4R00XUEA1-DPBM	AR0220AT4R00XUEA1-DRBM
AR0220AT4R00XUEA1-VL-TPBM	AR0220AT4R00XUEA1-TPBM	AR0220AT4R00XUEA1-TRBM
AR0220AT4R00XUEA2-VL-TPBR	AR0220AT4R00XUEA2-TPBR	