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June 18, 2022

Richardson RFPD, Inc.
1950 S. Batavia Ave, Suite 100
Geneva, Illinois 60134

ATTN: Quality/Purchasing Manager

Subject: Product Datasheet Change Notification: NPA1003QA, NPA1003QA-TR0500
PCN #: PCN-01547

Dear Valued Customer:

The goal of MACOM Technology Solutions is to continually deliver high quality products and services that meet our customers' needs. We strive to offer products that are industry leading in terms of performance, delivery, safety and value. Towards that end, MACOM continually reviews product performance and process capabilities over time. After a thorough analysis, MACOM is proposing minor changes to the NPA1003QA datasheet. Details are stated below.

You are receiving this notification because you have purchased this part number during the past two years.

There are two minor changes to the NPA1003QA datasheet that are being implemented:

- a) Change in the gate threshold parameter from -2.5V min / -1.5V typ / -0.5V max to -2.9V min / -2.0V typ / -0.9V max.
- b) Change in the gate quiescent voltage from -2.1V min / -1.2V typ / -0.3 max to -2.5V min / -1.6V typ / -0.7V max.

These minor changes more precisely align the datasheet typical for these two parameters to present device performance and capability. There are no changes to device form, fit or function and no related semiconductor process changes. Please note that we are implementing this datasheet immediately from issuance of this PCN. The MACOM external corporate website presently has the updated datasheet posted.

Please contact your local sales representative or MACOM sales manager if you have any questions or require additional information.

Sincerely,

Scott Murphy
Director, Business Sales
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Old NPA1003QA datasheet v2

GaN on Silicon Power Amplifier
20 - 1500 MHz, 28 V, 5 W

Rev. V2

DC Electrical Specifications: $T_C = +25^\circ\text{C}$

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Units
Drain-Source Leakage Current	$V_{GS} = -8\text{ V}, V_{DS} = 100\text{ V}$	I_{DLK}	—	—	2	mA
Gate-Source Leakage Current	$V_{GS} = -8\text{ V}, V_{DS} = 0\text{ V}$	I_{GLK}	—	—	1	mA
Gate Threshold Voltage	$V_{DS} = 28\text{ V}, I_D = 2\text{ mA}$	V_T	-2.5	-1.5	-0.5	V
Gate Quiescent Voltage	$V_{DS} = 28\text{ V}, I_D = 88\text{ mA}$	V_{GSQ}	-2.1	-1.2	-0.3	V
On Resistance	$V_{DS} = 2\text{ V}, I_D = 15\text{ mA}$	R_{ON}	—	1.6	—	Ω
Maximum Drain Current	$V_{DS} = 7\text{ V}$ pulsed, pulse width 300 μs	$I_{D, MAX.}$	—	1.5	—	A

New NPA1003QA datasheet v3

GaN Amplifier 28 V, 5 W
20 - 1500 MHz



NPA1003QA

Rev. V3

DC Electrical Specifications: $T_C = +25^\circ\text{C}$

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Units
Drain-Source Leakage Current	$V_{GS} = -8\text{ V}, V_{DS} = 100\text{ V}$	I_{DLK}	—	—	2	mA
Gate-Source Leakage Current	$V_{GS} = -8\text{ V}, V_{DS} = 0\text{ V}$	I_{GLK}	—	—	1	mA
Gate Threshold Voltage	$V_{DS} = 28\text{ V}, I_D = 2\text{ mA}$	V_T	-2.9	-2.0	-0.9	V
Gate Quiescent Voltage	$V_{DS} = 28\text{ V}, I_D = 88\text{ mA}$	V_{GSQ}	-2.5	-1.6	-0.7	V
On Resistance	$V_{DS} = 2\text{ V}, I_D = 15\text{ mA}$	R_{ON}	—	1.6	—	Ω
Maximum Drain Current	$V_{DS} = 7\text{ V}$ pulsed, pulse width 300 μs	$I_{D, MAX.}$	—	1.5	—	A

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