AMPLEON

DISCONTINUATION NOTIFICATION	PCN: PCN_ART2K0FE_S_G

Issue Date: 10/03/2023

Effective Date: 17/03/2023

Management Summary

ART2K0FE(S)(G) Datasheet is updated to reflect Rth values based on infrared and Zth values based on scaled T3ster.

Change Category

[ ] Wafer Fab process	[ ] Assembly Process	[ ] Product Marking	[ ] Design
[ ] Wafer Fab materials	[ ] Assembly Materials	[X] Electrical spec./Test coverage	[ ] Mechanical Specification
[ ] Wafer Fab location	[ ] Assembly Location	[ ] Test Location	[ ] Packing/Shipping/Labeling

Datasheet Update ART2K0FE(S)(G)

Information Notification

Due to recent availability of T3ster measurement equipment, it enables to measure the transient cooling curve, derive the structure function and automatic generation of the transient impedance curves. In the current datasheet, the curves are derived from thermal modelling. The proposed change is to replace the current thermal modelled curves by the measurement extracted curves.

For more information see the attached changes below.

WHY DO WE ISSUE THIS INFORMATION NOTIFICATION

To inform the customer on the changes in the datasheet.

IDENTIFICATION OF AFFECTED PRODUCTS

Product identification does not change

IMPACT

Data Sheet Revision: A new datasheet will be issued.

Disposition of Old Products: N/A

REMARKS

The updated datasheet also contains an additional packing method, see last line item table 3 of the datasheet. Current packing methods remain unchanged.

CONTACT AND SUPPORT

For all inquiries regarding the ePCN tool application or access issues, please contact Ampleon "Quality Support Team".

For all Quality Notification content inquiries, please contact your local Ampleon Sales Support team.

At Ampleon we are dedicated to creating optimal value for our customers.

Ampleon Quality Management Team.

March 2023

ART2K0FE(S)(G)
# Datasheet Update

Background:

- Update ART2K0FE(S)(G) Datasheet to reflect Rth based on IR and Zth based on scaled T3ster

- Due to recent availability of T3ster measurement equipment, it enables to measure the transient cooling curve, derive the structure function and automatic generation of the transient impedance curves. In the current datasheet, the curves are derived from thermal modelling. The proposed change is to replace the current thermal modelled curves by the measurement extracted curves.

- To inform customers about the measurement method, an application note has been made and published on the Ampleon website.

Changes

Table 5. Thermal characteristics

Symbol	Parameter	Conditions		Typ	Unit
$R_{th(j-c)}$	thermal resistance from junction to case	T_j = 95 °C	[1][2]	0.077	K/W
$Z_{th(j-c)}$	transient thermal impedance from junction to case	T_j = 95 °C; t_p = 100 μs; δ = 10 %	[3]	0.018	K/W

[1] T_j is the junction temperature.

[2] $R_{th(j-c)}$ is measured under RF conditions.

[3] See Figure 1.


amp01730
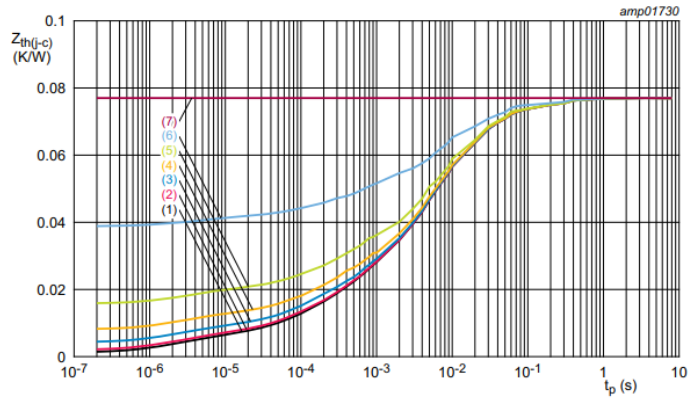
(1) δ = 1 %
(2) δ = 2 %
(3) δ = 5 %
(4) δ = 10 %
(5) δ = 20 %
(6) δ = 50 %
(7) δ = 100 % (DC)

Fig 1. Transient thermal impedance from junction to case as a function of pulse duration

Table 5. Thermal characteristics
According to standard MIL-STD-883E.

Symbol	Parameter	Conditions		Typ	Unit
$R_{th(j-c)}$	thermal resistance from junction to case	T_j = 95 °C, measured under RF condition	[1][2]	0.077	K/W

[1] Refer to application note AN221014 on the Ampleon website.

[2] See Figure 1.

amp01847
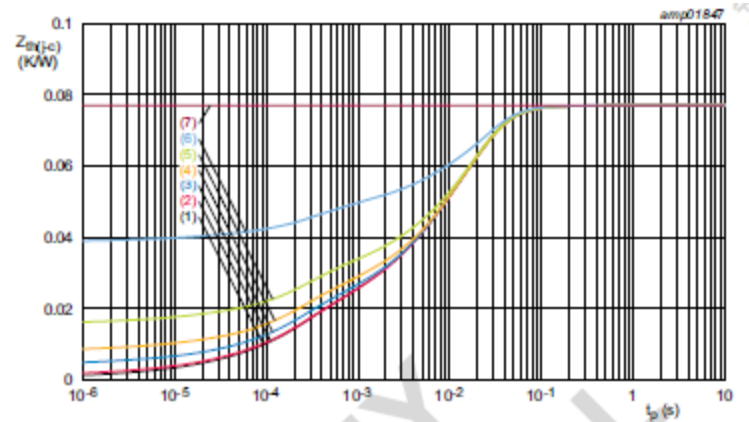
(1) δ = 0.1 % (single pulse)
(2) δ = 1 %
(3) δ = 5 %
(4) δ = 10 %
(5) δ = 20 %
(6) δ = 50 %
(7) δ = 100 % (steady state)

Document Updated:

Deliverables	Remarks	Document
Datasheet	Update of Thermal Characteristics 5.0 ## 5. Thermal characteristics **Table 5. Thermal characteristics** *According to standard MIL-STD-883E.* | Symbol	Parameter	Conditions		Typ	Unit
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$R_{th(j-c)}$	thermal resistance from junction to case	T_j = 95 °C, measured under RF condition	[1][2]	0.077	K/W | [1] Refer to application note *AN221014* on the Ampleon website. [2] See Figure 1. (1) δ = 0.1 % (single pulse) (2) δ = 1 % (3) δ = 5 % (4) δ = 10 % (5) δ = 20 % (6) δ = 50 % (7) δ = 100 % (steady state) **Fig 1. Transient thermal impedance from junction to case as a function of pulse duration**	 ART2K0FE_2K0FES _2K0FEG