

> Product Change Notification (PCN)

Product group: SEMIPACK

Rev.: 0

No.: PN22-004

Adjustments of R_{th} and Z_{th} for SEMIPACK 1 6th generation modules

14 Feb 2022

Dear valued partner,

Thank you for using SEMIKRON products. Within our continuous improvement activities we are working to enhance performance, quality and reliability of our products. This notification is to inform you of a relevant change.

We would like to express our sincere appreciation for your cooperation regarding the following changes and want to assure you that SEMIKRON will work closely with you to support your requirements during this transition.

Please respond to this notification by indicating your decision on the below approval form, sign it and return it to your SEMIKRON sales partner before 17 Mar 2022.

Subject of change: Datasheet adjustments

SEMIKRON

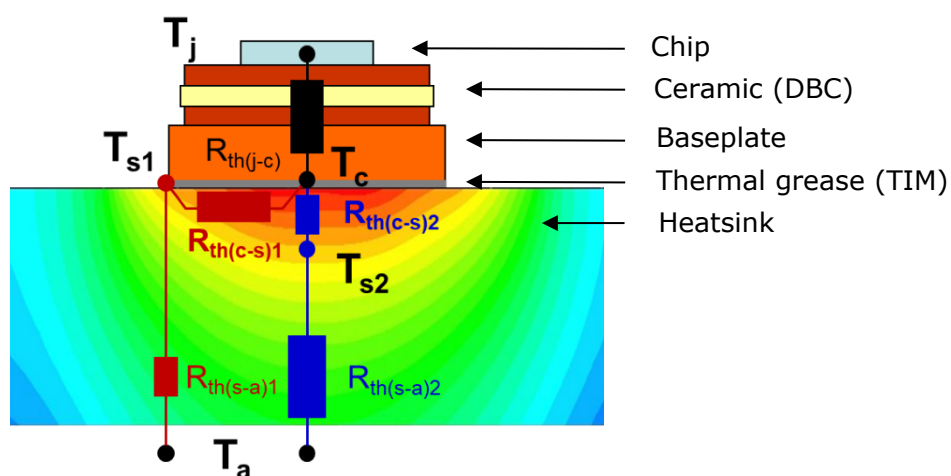
SEMIPACK 1 6th generation modules

product type:

see list of affected modules at the end of this notification

Description of change:

1) Change of the reference point for determination of case-sink thermal resistance from T_{s1} to T_{s2} and, herewith associated, reduction of typical values of $R_{th(c-s)}$ from 0.22 K/W to 0.09K/W for single chip, and from 0.11 K/W to 0.05 K/W for module.

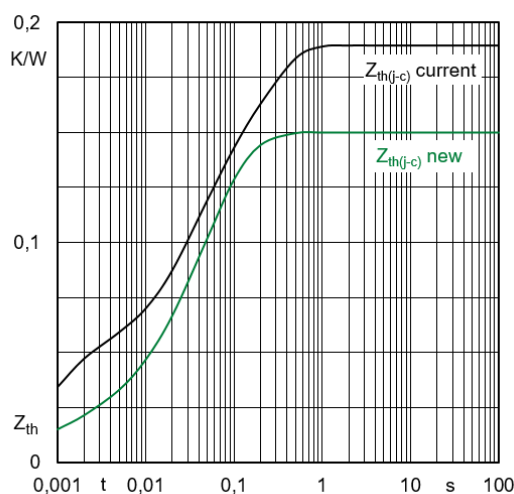


2) Adjustments of $Z_{th}(t)$ curves along with new steady state values of $R_{th(j-c)}$ for continuous operation. There is no change of the thermal resistance for current waveforms $\sin 180^\circ$ and $\text{rec} 120^\circ$. The module ratings I_{TAV} , I_{FAV} remain unchanged.

Overview of new thermal resistance steady state values:

Module type	Parameter	Current value	New Value
SKKT 107/16 E SKKT 107B16 E SKKH 107/16 E SKKD 101/16	$R_{th(j-c)}$ cont. per chip, max.	0.19 K/W	0.15 K/W
	$R_{th(j-c)}$ cont. per module, max.	0.095 K/W	0.075 K/W
	$R_{th(c-s)}$ per chip, typ.	0.22 K/W	0.09 K/W
	$R_{th(c-s)}$ per module, typ.	0.11 K/W	0.05 K/W
SKKT 58/16 E SKKT 58B16 E SKKH 58/16 E	$R_{th(j-c)}$ cont. per chip, max.	0.47 K/W	0.42 K/W
	$R_{th(j-c)}$ cont. per module, max.	0.235 K/W	0.21 K/W
	$R_{th(c-s)}$ per chip, typ.	0.22 K/W	0.09 K/W
	$R_{th(c-s)}$ per module, typ.	0.11 K/W	0.05 K/W

Example of updated $Z_{th(j-c)}(t)$ curve for SKKT 107/16 E:



For new $Z_{th}(t)$ curves, updated coefficients of the Foster model are listed in separate document.

Reason for change:

- 1) Adjustment of case-sink thermal resistance definition to IGBT modules, for reference see SEMIKRON application note AN1404
- 2) Update of $Z_{th}(t)$ curves

Impact of change:

- Data sheet revision / data sheet issue date
- No change of the product
- No impact on the module rating (I_{TAV} , I_{FAV})

Identification of change:	Datasheet release date 2022
Time schedule for change:	Publishing of updated datasheets in 05/2022
Last time order date:	-
Last time delivery date:	-
Qualification:	n/a
Supporting documentation:	Summary of current and new Foster model coefficients for $Z_{th}(t)$ curves

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- **Please respond to this notification by returning the attached customer approval form to your local sales partner.**
- **According to the standard J-STD-046 no response to this notification within 30 days after receipt constitutes acceptance of the change.**

Products Affected:

The following table shows the affected products and the last transactions (orders, frame orders or quotations), where available with customer part number, order or quote request reference, product quantity and date of transaction.

Part No.	Variant	Article Description	Successor Part No.	Transaction Type	Customer Reference	Document Date	Quantity	Customer Part No.
07891182		SKKD 101/16 SPa 1.6 by SKSK		Order	10A- 0000733722	05/14/2019	96	

Customer Approval Form for PN22-004 Rev. 0

Please check the appropriate box below:

- ☐ We agree with this proposed change and its schedule.
- ☐ We have objections:

Billing address:

Company:	Richardson RFPD	Name:	
Address:	1950 S. Batavia Avenue Suite 100 - 60134 Geneva United States		
Signature:		Date:	
Customer No.:	SKD32336	Supplier No. :	-

Signature/approval authority different from billing address?

Yes

☐

Company:	Name:
Address:	

Signature:	Date:
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Please return to your local SEMIKRON sales contact:

Name:	Falk, Robert	Phone:	-
E-mail:	Robert.Falk@semikron.com	Fax:	-