

Prepared (Subject resp) Nick Cao		No. 3/109 47-BMR672 Uen		
Approved (Document resp) David Xie	Checked	Date 2022-11-8	Rev A	Reference

For your Information

Receiver

"Sales and FAEs"

"All of Customers"

Product Change Notification (Major)-PKB4216C

1 Products affected

Product	Input V_i [V]	Output V_o [V]	Output I_o [A]	R-status	New R-status
PKB4216C*	36-75	30	6.7	R1B	R2A

*This change affects all related product options in PKB4216C series productions, including:

-Mounting option: PI (through hole), SI (surface mount);

-Remote control logic: P (positive logic), blank (default negative logic);

-Mechanical option: HS (baseplate), HV (baseplate with wings), HVG (baseplate with wings and GND-pin);

-Lead length: LA (3.69mm), LB(4.57mm), LC(2.79mm), blank (default 5.33mm);

For more information about PKB4216C, see:

[PKB-C • Power Modules • Flex \(flexpowermodules.com\)](https://www.flexpowermodules.com)

2 PCN classification

Major, the digit in the R-state (release state or version) is stepped which equals to one-way interchangeability meaning that the new version of the product can replace all earlier versions but the earlier versions can not always replace the new version.

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3 Reason for the change

To improve the capability of the module starting up into the maximum quoted output capacitance.

4 Change explanation

4.1 Capacitive Load Performance

Derating of the output capacitance must be taken into consideration when the R1B module starts-up into a resistive load.

New revision R2A improves the capacitive load performance. The module can now start-up normally across the full range of output capacitance with a resistive load as defined in the datasheet.

Revision	R1B	R2A
Start-up current vs Capacitive load	<p>Maximum start-up current vs. Output capacitance</p> <p>Maximum start-up current with resistive load at $V_O = 30\text{ V}$, $T_{PI} = +25^\circ\text{C}$</p>	<p>Maximum start-up current vs. Output capacitance</p> <p>Maximum start-up current with resistive load at $V_O = 30\text{ V}$, $T_{PI} = +25^\circ\text{C}$</p>

The improvements outlined above also indirectly improve the efficiency of the device, as well as extending the start-up and ramp-up times.

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Characteristics	Conditions	R1B		R2A		unit
		Typ.	max	Typ.	max	
Efficiency	50% of max lo	94.8		95.6		%
	max lo	95.1		95.7		
	50% of max lo, Vi=53V	94.2		95.2		
	max lo, Vin=53V	94.8		95.6		
Ramp-up time (from 10%~90% of Voi)	10~100% of max lo	8	12	80	90	ms
Start-up time (from Vi connection to 90% of Voi)		11	15	90	100	
RC start-up time	max lo	11		90		

5 Product verification

Electrical, mechanical and production verification tests have been performed according to Flex Power Modules' product approval process.

6 Test Results

Approved.

7 Safety approvals

Approved.

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8 Date for product change

Product	Planned availability of samples	Planned availability of new revision	Orders accepted of existing revisions until
PKB4216C*	Nov 8 th , 2022	Dec 30 th , 2022	Feb 8 th , 2023

9 Addendum

No response within 90 days will be taken as acceptance of this PCN. If acknowledgement is given, but no additional response within 90 days, it will be taken as acceptance.

If you have any questions, please do not hesitate to contact the undersigned.

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