

POWEREX[®] Product Change Notification

LDR1__66 To Be Offered as Replacement for LD41__60 POW-R-BLOK™ # : 2017-022 Rev.: 00



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Subject of Change:

Introduction of new part type LDR1__66 to be offered as a direct replacement for Powerex LD41__60 dual diode modules. They are drop in replacements both mechanically and electrically with minor differences noted below.

Description of Change:

Resulting from the transfer of the manufacturing operations for the LD41 module from the former Powerex facility located in Morocco to the Powerex manufacturing partner facility located in Poland to provide increased options in supply, Powerex will be offering a new product LDR1__66 for consideration as a replacement for the LD41__60 module. There will be differences in the mechanical and electrical characteristics. Please review the product data sheet and make determination as to whether this product will be a suitable replacement for use in their application. It is an equivalent replacement.

These differences include, but are not limited, to the following:

- Slightly less overall length dimension (149 mm) for the LDR1 as compared to the 150 mm overall length of the LD41.
- Slightly wider terminals (26 mm on terminals 2 & 3) for the LDR1 as compared to the terminal widths for the LD41 (25.4 mm on terminals 2 & 3)
- A slightly smaller screw depth under the terminals of 17 mm for the LDR1 as compared to the 17.5 mm depth for the LD41

This module is being developed with a manufacturing partner with a country of origin of Russia that has a quality management system that is in compliance with ISO 9001. This product is RoHS and REACH compliant. UL Recognition for this product is pending.

Reason for Change:

A new product is being introduced to assist with customer demand after unforeseen issues and difficulties with the transition of the LD41__60 dual diode modules from the former Powerex manufacturing facility located in Morocco which was to be transferred to the former Westinghouse site and manufacturing partner facility located in Poland earlier this year.

Identification of Change:

This new product will be identified by a new part number LDR1__66 and will be labeled with PRX RU. This module package has slightly different physical characteristics that differentiate it from the original LD41__60 modules.

Time Schedule for Change:

Delivery Begins: Third Quarter of 2017

Supporting Documentation:

Attachment – LDR1__66 Data Sheet

Quality Management system:

The Powerex partner manufacturing facility has a quality system that is in compliance with ISO 9001. Parts will be qualified at the Powerex Youngwood, PA facility which has a quality system that is in compliance with ISO 9001 and AS9100.

Continued on following page

POWEREX[®] Product Change Notification

Customer Approval for: PCN # 2017-022

- Please check the appropriate box and return this form to Powerex or our manufacturing representative within 30 days.
- According to JEDEC Standard JESD46, a lack of response to this product change notification within 30 days constitutes the customer's acceptance of the change.

We agree with this change and its schedule.

We have objection(s) as noted here:

We request additional information:

Customer:

Signature:

POWEREX[®] Product Change Notification

PCN 2017-022

Recommended Replacements for LD41__60 Dual Diode Modules

LD41 Part	Recommended Replacement
LD410860	LDR10866
LD411060	LDR11066
LD411260	LDR11266
LD411460	LDR11466
LD411660	LDR11666
LD411860	LDR11866

POWEREX[®] Product Change Notification

PCN 2017-022

Differences between the LD41__60 modules and LDR1__66 modules include, but are not limited to, the following:

Ratings and Electrical Characteristics:

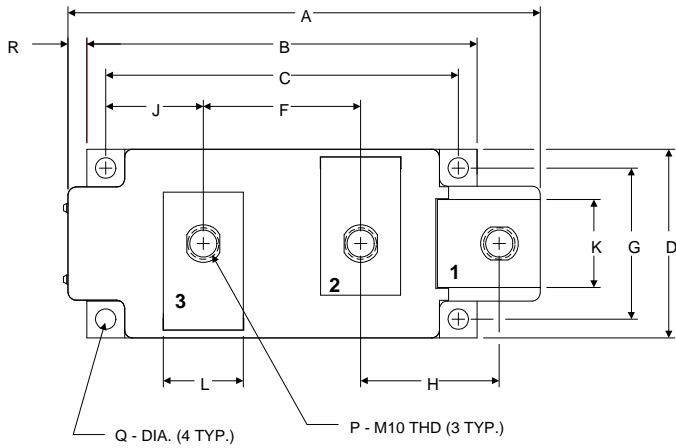
Characteristic	Symbol	LD41__60 Limit	LD41__60 Test Conditions	LDR1__66 Limit	LDR1__66 Test Conditions
Repetitive Peak Reverse Blocking Voltage	V_{RRM}	Up to 2600V		Up to 1800V	
Average Forward Current	$I_{T(AV)}$	600 A	180° Conduction, $T_C=106^{\circ}C$	660 A	180° Conduction, $T_C=100^{\circ}C$
		660 A	180° Conduction, $T_C=100^{\circ}C$		
RMS Forward Current	$I_{T(RMS)}$	950 A	180° Conduction, $T_C=106^{\circ}C$	1036 A	180° Conduction, $T_C=100^{\circ}C$
		1036 A	180° Conduction, $T_C=100^{\circ}C$		
Peak One Cycle Surge Current, Non-Repetitive	I_{TSM}	21,000 A	60 Hz, 100% V_{RRM} reapplied, $T_j=125^{\circ}C$	20,000 A	60 Hz, 0V reapplied, $T_j= T_{jMAX}$
	I_{TSM}	19,000 A	50 Hz, 100% V_{RRM} reapplied, $T_j=125^{\circ}C$	19,000 A	50 Hz, 0V reapplied, $T_j= T_{jMAX}$
I ² t for Fusing for One Cycle	I^2t	1,840,000 A ² sec	60 Hz, 100% V_{RRM} reapplied, $T_j=125^{\circ}C$	1,660,000 A ² sec	60 Hz, 0V reapplied, $T_j= T_{jMAX}$
	I^2t	1,810,000 A ² sec	50 Hz, 100% V_{RRM} reapplied, $T_j=125^{\circ}C$	1,805,000 A ² sec	50 Hz, 0V reapplied, $T_j= T_{jMAX}$
Storage Temperature	T_{stg}	-40 to +150 °C		-40 to +125 °C	
Repetitive Peak Reverse Leakage Current	I_{RRM}	40 mA max	$V=V_{RRM}$, $T_j=150^{\circ}C$	50 mA max	$V=V_{RRM}$, $T_j=150^{\circ}C$
Peak On-State Voltage	V_{TM}	1.18 V max	$T_j=25^{\circ}C$, $I_{TM}=1500$ A	1.40 V max	$T_j=25^{\circ}C$, $I_{TM}=1978$ A

POWEREX[®] Product Change Notification

PCN 2017-022

Mechanical differences between the LD41__60 modules and LDR1__66 modules include, but are not limited to, the following:

OUTLINE DRAWING



Dimension	LD43 (mm)	LDR3 (mm)
A	150	149
L	25.4	26
M	17.5	17
R	6	5

