



DATE: 2 May, 2017

PCN #: 2277

PCN Title: Qualification of an Additional Die and Datasheet Change for PDR5KF-13

Dear Customer:

This is an announcement of change(s) to products that are currently being offered by Diodes Incorporated.

We request that you acknowledge receipt of this notification within 30 days of the date of this PCN. If you require samples for evaluation purposes, please make a request within 30 days as well. Otherwise, samples may not be built prior to this change. Please refer to the implementation date of this change as it is stated in the attached PCN form. Please contact your local Diodes sales representative to acknowledge receipt of this PCN and for any sample requests.

The changes announced in this PCN will not be implemented earlier than 90 days from the notification date stated in the attached PCN form.

Previously agreed upon customer specific change process requirements or device specific requirements will be addressed separately.

For questions or clarification regarding this PCN, please contact your local Diodes sales representative.

Sincerely,

Diodes Incorporated PCN Team



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**PRODUCT CHANGE NOTICE****PCN-2277 REV 00**

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Notification Date:	Implementation Date:	Product Family:	Change Type:	PCN #:
2 May, 2017	2 August, 2017	Discrete	Qualification of Additional Die and Datasheet Change	<b>2277</b>
<b>TITLE</b>				
Qualification of an Additional Die and Datasheet Change for PDR5KF-13				
<b>DESCRIPTION OF CHANGE</b>				
<p>This PCN is being issued to notify customers that in order to improve product manufacturability, Diodes Incorporated has qualified an additional die for PDR5KF-13. Additionally, the datasheet has been updated to change the max <math>I_{FSM}</math> value and to change the typical values for <math>V_f</math>, <math>I_R</math> and <math>t_{RR}</math>.</p> <p>Full electrical characterization and reliability testing have been completed to ensure that no changes in device functionality exist.</p> <p>Please contact your local Diodes representatives for any questions or additional information.</p>				
<b>IMPACT</b>				
<p>Figure 1: Current Max Ratings Figure 2: Proposed Max Ratings Figure 3: Current Electrical Characteristics Figure 4: Proposed Electrical Characteristics</p> <p>There will be no change to the Form or Fit of affected product.</p>				
<b>PRODUCTS AFFECTED</b>				
PDR5KF-13				
<b>WEB LINKS</b>				
<b>Manufacturer's Notice:</b>	<a href="http://www.diodes.com/pcns">http://www.diodes.com/pcns</a>			
<b>For More Information Contact:</b>	<a href="http://www.diodes.com/contacts.html">http://www.diodes.com/contacts.html</a>			
<b>Data Sheet:</b>	<a href="http://www.diodes.com/catalog">http://www.diodes.com/catalog</a>			
<b>DISCLAIMER</b>				
<b>Unless a Diodes Incorporated Sales representative is contacted in writing within 30 days of the posting of this notice, all changes described in this announcement are considered approved.</b>				

Figure 1: Current Maximum Ratings

**Maximum Ratings** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitance load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	800	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
Average Rectified Output Current	I <sub>O</sub>	5	A
Peak Repetitive Reverse Surge Voltage (Note 5)	V <sub>RSM</sub>	1,050	V
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	250	A

Figure 2: Proposed Maximum Ratings

**Maximum Ratings** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	800	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
Average Rectified Output Current @T <sub>A</sub> = +60°C	I <sub>O</sub>	5	A
Peak Repetitive Reverse Surge Voltage (Note 5)	V <sub>RSM</sub>	1,050	V
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	200	A

Figure 3: Current Electrical Characteristics

**Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 8)	V <sub>(BR)R</sub>	800	—	—	V	I <sub>R</sub> = 10μA
Forward Voltage	V <sub>F</sub>	—	0.95	1.2	V	I <sub>F</sub> = 5A, T <sub>S</sub> = +25°C
Reverse Leakage Current (Note 8)	I <sub>R</sub>	—	0.06 0.006	10 0.3	μA mA	V <sub>R</sub> = 800V, T <sub>J</sub> = +25°C V <sub>R</sub> = 800V, T <sub>J</sub> = +125°C
Reverse Recovery Time	t <sub>rr</sub>	—	300	500	nS	I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1.0A, I <sub>rr</sub> = 0.25A

Figure 4: Proposed Electrical Characteristics

**Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 8)	V <sub>(BR)R</sub>	800	—	—	V	I <sub>R</sub> = 10μA
Forward Voltage	V <sub>F</sub>	—	0.96	1.2	V	I <sub>F</sub> = 5A, T <sub>S</sub> = +25°C
Reverse Leakage Current (Note 8)	I <sub>R</sub>	—	0.04 0.006	10 0.3	μA mA	V <sub>R</sub> = 800V, T <sub>J</sub> = +25°C V <sub>R</sub> = 800V, T <sub>J</sub> = +125°C
Reverse Recovery Time	t <sub>RR</sub>	—	318	500	ns	I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1.0A, I <sub>RR</sub> = 0.25A
Total Capacitance	C <sub>T</sub>	—	30	—	pF	V <sub>R</sub> = 4.0V <sub>DC</sub> , f = 1MHz