



DATE: 6 December, 2017

PCN #: 2297

PCN Title: Amendment of AL5809Q InOut Current Accuracy Over Temperature (Tj of -40C to 150C).

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.

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



**PRODUCT CHANGE NOTICE**

**PCN-2297 REV 1**

Notification Date:	Implementation Date:	Product Family:	Change Type:	PCN #:
6 December, 2017	Immediate	Analog	Datasheet Change	<b>2297</b>
TITLE				
Amendment of AL5809Q InOut Current Accuracy Over Temperature (Tj of -40C to 150C)				
DESCRIPTION OF CHANGE				
<p>This PCN is being issued to notify customers that there will be changes to the datasheet as described in the Figures below.</p> <p>Please contact your local Diodes representatives for any questions or additional information.</p>				
IMPACT				
<p>Figure 1: Current Datasheet – Electrical Characteristics for AL5809-XXQP1-7 InOut specification.            Figure 2: Updated Datasheet - Electrical Characteristics for AL5809-XXQP1-7 InOut specification to better reflect Current Accuracy Over Junction Temperature (Tj) between 25C and -40C to 150C conditions.</p> <p>There is no change to silicon electrical performance however, these changes applied to the data sheet will more accurately represent the expected electrical performance across temperature.</p>				
PRODUCTS AFFECTED				
See Table 1 Below				
WEB LINKS				
<b>Manufacturer's Notice:</b>	<a href="https://www.diodes.com/quality/product-change-notices/diodes-product-change-notices/">https://www.diodes.com/quality/product-change-notices/diodes-product-change-notices/</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>			
DISCLAIMER				
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.				

Table 1 - Devices Impacted with New Datasheet InOut Current Accuracy Min and Max Specification Change (Tj = -40 to 150C)					
AL5809-15QP1-7	AL5809-20QP1-7	AL5809-25QP1-7	AL5809-30QP1-7	AL5809-40QP1-7	AL5809-50QP1-7
AL5809-60QP1-7	AL5809-90QP1-7	AL5809-100QP1-7	AL5809-120QP1-7	AL5809-150QP1-7	

Figure 1: Current Datasheet – Electrical Characteristics for AL5809-XXQP1-7

Electrical Characteristics (V <sub>INOUT</sub> = 3.5V) (@T <sub>A</sub> = +25°C, unless otherwise specified.) (Note 9)							
Symbol	Parameter	Conditions		Min	Typ	Max	Unit
V <sub>INOUT</sub>	In-Out Supply Voltage	—	T <sub>J</sub> = -40°C to +150°C	2.5	—	60	V
I <sub>INOUT</sub>	I <sub>INOUT</sub> Current Accuracy (±5% for Overtemperature)	AL5809-15QP1-7	T <sub>J</sub> = -40°C to +150°C	14.25	15	15.75	mA
		AL5809-20QP1-7	T <sub>J</sub> = -40°C to +150°C	19	20	21	
		AL5809-25QP1-7	T <sub>J</sub> = -40°C to +150°C	23.75	25	26.25	
		AL5809-30QP1-7	T <sub>J</sub> = -40°C to +150°C	28.5	30	31.5	
		AL5809-40QP1-7	T <sub>J</sub> = -40°C to +150°C	38	40	42	
		AL5809-50QP1-7	T <sub>J</sub> = -40°C to +150°C	47.5	50	52.5	
		AL5809-60QP1-7	T <sub>J</sub> = -40°C to +150°C	57	60	63	
		AL5809-90QP1-7	T <sub>J</sub> = -40°C to +150°C	85.5	90	94.5	
		AL5809-100QP1-7	T <sub>J</sub> = -40°C to +150°C	95	100	105	
		AL5809-120QP1-7	T <sub>J</sub> = -40°C to +150°C	114	120	126	
		AL5809-150QP1-7	T <sub>J</sub> = -40°C to +150°C	142.5	150	157.5	

Figure 2: Updated Datasheet - Electrical Characteristics for AL5809-XXQP1-7

Electrical Characteristics (V <sub>INOUT</sub> = 3.5V) (@T <sub>A</sub> = +25°C, unless otherwise specified.) (Note 8)							
Symbol	Parameter	Conditions		Min	Typ	Max	Unit
V <sub>INOUT</sub>	In-Out Supply Voltage	(Notes 7 and 8)	T <sub>J</sub> = -40°C to +150°C	2.5	—	60	V
I <sub>INOUT</sub>	I <sub>INOUT</sub> Current Accuracy	AL5809-15QP1-7	T <sub>J</sub> = 25°C	14.25	15	15.75	mA
			T <sub>J</sub> = -40°C to +150°C	13.75		16.25	
		AL5809-20QP1-7	T <sub>J</sub> = 25°C	19	20	21	
			T <sub>J</sub> = -40°C to +150°C	11		23	
		AL5809-25QP1-7	T <sub>J</sub> = 25°C	23.75	25	26.25	
			T <sub>J</sub> = -40°C to +150°C	21.45		28.55	
		AL5809-30QP1-7	T <sub>J</sub> = 25°C	28.5	30	31.5	
			T <sub>J</sub> = -40°C to +150°C	25.8		34.2	
		AL5809-40QP1-7	T <sub>J</sub> = 25°C	38	40	42	
			T <sub>J</sub> = -40°C to +150°C	34.6		45.4	
		AL5809-50QP1-7	T <sub>J</sub> = 25°C	47.5	50	52.5	
			T <sub>J</sub> = -40°C to +150°C	44		56	
		AL5809-60QP1-7	T <sub>J</sub> = 25°C	57	60	63	
			T <sub>J</sub> = -40°C to +150°C	54		66	
		AL5809-90QP1-7	T <sub>J</sub> = 25°C	85.5	90	94.5	
			T <sub>J</sub> = -40°C to +150°C	81		99	
		AL5809-100QP1-7	T <sub>J</sub> = 25°C	95	100	105	
			T <sub>J</sub> = -40°C to +150°C	90		110	
		AL5809-120QP1-7	T <sub>J</sub> = 25°C	114	120	126	
			T <sub>J</sub> = -40°C to +150°C	108		132	
		AL5809-150QP1-7	T <sub>J</sub> = 25°C	142.5	150	157.5	
			T <sub>J</sub> = -40°C to +150°C	135		165	