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Unterpremstaetten, May 24, 2016

**Subject: Product Change Notification PCN 11-2016  
Redesign AS3701x-BWLx**

Dear valued customer,

To our regret we detected a weakness in the design of the product AS3701-BWLx. In order to avoid problems in your application we will resolve the issue immediately by redesigning the circuit.

**Reason for redesign:**

The XRES input high level detection is depended on the VSUP level. A valid high level must be at least 60% of the VSUP level, hence a correct working of AS3701 with a 1.8V MCU, where the external pull-up of the XRES is tied to the 1.8V supply of the MCU is not possible.

**Root cause:**

The internal structure of the XRES high and low level detection depends on the VSUP level. It only allows a correct detection if the low level is less than 20% of VSUP and the high level is higher than 60% of VSUP. This means, with a 5V VSUP supply, a correct high level will be detected by AS3701 at least at 3V. If the external pull-up resistors of the XRES signal are tied to the 1.8V supply of the MCU and the XRES signal is also connected to the MCU, this high level will not be detected by AS3701 as a valid high level and AS3701 will stay in reset condition!

Possible HW workaround would be:

Connecting the external pull-up resistor to a higher voltage level, which leads to a valid high level for AS3701, e.g. VSUP. In this case, the XRES connection to the MCU must be opened, as the MCU is maybe not specified for XRES high levels higher than its 1.8V supply. In this case the Reset communication from AS3701 to the MCU cannot be executed via the XRES signal, which results in a severe drawback in some applications.



**Corrective action:**

The VSUP dependency of the internal XRES level detection is getting modified, to detect a voltage level of at least 1.55V always as a valid high level and a voltage level of even 0.3V as a valid low level in worst case conditions.

The valid conditions include the VSUP range from 3V to 5.5V and a temperature range from -40°C to +125°C.

**Verification / Qualification of the redesign:**

- Lab verification
- ATE verification (prior and during mass production)

**Affected ordering codes:**

Please refer to page 2

**Timing of change:**

Q3 / 2016

If you do have further questions please do not hesitate to contact us.

Please be advised that unless we receive your written refusal concerning this PCN within 30 days, the PCN shall be deemed accepted.

Best regards,

A handwritten signature in blue ink that reads 'Helmut Pessl'.

ams AG  
H. Pessl  
Director of Operations  
Wireless Connectivity & Powermanagement



**Affected ordering codes:**

AS3701A-BWLM-50
AS3701A-BWLM-51
AS3701A-BWLM-ES
AS3701A-BWLT-50
AS3701A-BWLT-51
AS3701A-BWLT-ES
AS3701B_BWLM-05
AS3701B_BWLT-05
AS3701B-BWLM-00
AS3701B-BWLM-02
AS3701B-BWLM-03
AS3701B-BWLM-04
AS3701B-BWLM-06
AS3701B-BWLM-68
AS3701B-BWLM-ES
AS3701B-BWLT-00
AS3701B-BWLT-02
AS3701B-BWLT-03
AS3701B-BWLT-04
AS3701B-BWLT-06
AS3701B-BWLT-68
AS3701B-BWLT-ES