ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20076

Generic Copy

Issue Date: 14-May-2013

TITLE: Datasheet change for 0W635-002-XTP

PROPOSED FIRST SHIP DATE: 14-Aug-2013

AFFECTED CHANGE CATEGORY(S): Specification/datasheet Change

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact your local ON Semiconductor Sales Office or <christophe.waelchli @onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or <christophe.waelchli @onsemi.com>

NOTIFICATION TYPE:

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 90 days prior to implementation of the change.

ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact <quality@onsemi.com>.

DESCRIPTION AND PURPOSE:

For the Input Referred Noise (IRN) and the Input Dynamic Range (IDR) values (datasheet of 0W635-002-XTP, table 7: Electrical Performance Specifications), the following changes should be applied:

- We are currently testing the IRN with 30dB of preamplifier gain. We propose to change this test by a test at 18dB of preamplifier gain because hearing aid manufactures are using mostly 18dB of preamplifier gain since this amplification is required by hearing aid microphones.

  ⇒ The “screened” check note for the IRN test should be added to the 18dB line.
  ⇒ The IDR values are calculated from the IRN values. In the new datasheet, the IDR values should be shown for 18dB of amplification (vs 12dB on current datasheet), and the “screened” check note should be added. Typical and minimum values should be updated.

- We have observed a slight process deviation on the on the Ezairo DSP production. As such, the following changes are applied in the datasheet:

  ⇒ The datasheet maximum limit for the IRN test at 18dB should be slightly relaxed.

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⇒ The datasheet maximum limits for the IRN test at 30dB, 27dB, 24dB and 21dB should be relaxed: since we are no longer testing at 30dB, we cannot ensure that older maximum limit for 30dB, 27dB, 24dB and 21dB are fulfilled. For these preamplifier gains, the new limits are set-up such as we are sure, by statistical analysis and design, that no parts with higher IRN noise are shipped.

Correction to the 0W635-002-XTP (shown in red):

Description	Symbol	Conditions	Min	Typ	Max	Units	Screened
Input referred noise	INIRN	Unweighted, 20Hz to 8kHz BW Preamplifier setting: 0dB 12dB 15dB 18dB 21dB 24dB 27dB 30dB	 - - - - - - - -	 46 12 8.8 6.8 5.4 4.2 3.6 3.1	 53 15 11 ~~7.4~~8.6 ~~5.7~~7.4 ~~4.8~~6.3 ~~4.1~~5.7 ~~3.4~~5.7	µVrms	√
Input dynamic range	INDR	1kHz, 20Hz to 8kHz BW, ~~12~~18 dB PAG	~~79~~ 83.5	~~87~~85.5	-	dB	√

RELIABILITY DATA SUMMARY:

Reliability Test Results:

Test	Conditions	Results
Hybrid level test production	No changes on conditions	Spec change results in higher yield

ELECTRICAL CHARACTERISTIC SUMMARY:

Nothing has changed

CHANGED PART IDENTIFICATION:

None

List of affected General Parts:

0W635-002-XTP