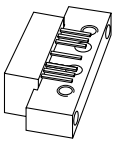


# BGD704

## 750 MHz, 20 dB gain power doubler amplifier

Rev. 8 — 28 September 2010 Product data sheet

## 1. Product profile

### 1.1 General description

Hybrid amplifier module in a SOT115J package operating with a voltage supply of 24 V (DC).

**CAUTION**

This device is sensitive to ElectroStatic Discharge (ESD). Therefore care should be taken during transport and handling.

### 1.2 Features and benefits

- Excellent linearity
- Extremely low noise
- Silicon nitride passivation
- Rugged construction
- Gold metallization ensures excellent reliability

### 1.3 Applications

- CATV systems in the frequency range of 40 MHz to 750 MHz

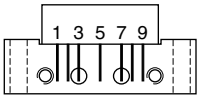
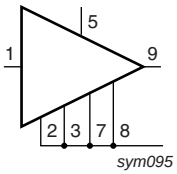
### 1.4 Quick reference data

**Table 1. Quick reference data**

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| $G_p$ | power gain | f = 50 MHz | 19.5 | 20 | 20.5 | dB |
| | | f = 750 MHz | 20 | 21 | - | dB |
| $I_{tot}$ | total current consumption (DC) | $V_B$ = 24 V | - | 425 | 435 | mA |

## 2. Pinning information

**Table 2. Pinning**

| Pin | Description | Simplified outline | Graphic symbol |
|---|---|---|---|
| 1 | input |  |  |
| 2 | common | | |
| 3 | common | | |
| 5 | $+V_B$ | | |
| 7 | common | | |
| 8 | common | | |
| 9 | output | | |



## 3. Ordering information

**Table 3. Ordering information**

| Type number | Package | | |
|---|---|---|---|
| | Name | Description | Version |
| BGD704 | - | rectangular single-ended package; aluminium flange; 2 vertical mounting holes; 2 × 6-32 UNC and 2 extra horizontal mounting holes; 7 gold-plated in-line leads | SOT115J |

## 4. Limiting values

**Table 4. Limiting values**

*In accordance with the Absolute Maximum Rating System (IEC 60134).*

| Symbol | Parameter | Conditions | Min | Max | Unit |
|---|---|---|---|---|---|
| $V_i$ | RF input voltage | | - | 65 | dBmV |
| $T_{stg}$ | storage temperature | | –40 | +100 | °C |
| $T_{mb}$ | mounting base operating temperature | | –20 | +100 | °C |

## 5. Characteristics

**Table 5. Characteristics**

*Bandwidth 40 MHz to 750 MHz; $V_B$ = 24 V; $T_{mb}$ = 35 °C; $Z_S = Z_L$ = 75 Ω.*

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| $G_p$ | power gain | f = 50 MHz | 19.5 | 20 | 20.5 | dB |
| | | f = 750 MHz | 20 | 21 | - | dB |
| SL | slope cable equivalent | f = 40 MHz to 750 MHz | 0 | 1 | 2 | dB |
| FL | flatness of frequency response | f = 40 MHz to 750 MHz | - | ±0.2 | ±0.5 | dB |
| $s_{11}$ | input return losses | f = 40 MHz to 80 MHz | 20 | 31 | - | dB |
| | | f = 80 MHz to 160 MHz | 19 | 29 | - | dB |
| | | f = 160 MHz to 320 MHz | 18 | 25 | - | dB |
| | | f = 320 MHz to 640 MHz | 17 | 21 | - | dB |
| | | f = 640 MHz to 750 MHz | 16 | 21 | - | dB |

**Table 5. Characteristics** *...continued*

*Bandwidth 40 MHz to 750 MHz; $V_B$ = 24 V; $T_{mb}$ = 35 °C; $Z_S$ = $Z_L$ = 75 Ω.*

| Symbol | Parameter | Conditions | | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|---|
| $s_{22}$ | output return losses | f = 40 MHz to 80 MHz | | 20 | 26 | - | dB |
| | | f = 80 MHz to 160 MHz | | 19 | 27 | - | dB |
| | | f = 160 MHz to 320 MHz | | 18 | 26 | - | dB |
| | | f = 320 MHz to 640 MHz | | 17 | 24 | - | dB |
| | | f = 640 MHz to 750 MHz | | 16 | 23 | - | dB |
| $s_{21}$ | phase response | f = 50 MHz | | –45 | - | +45 | deg |
| CTB | composite triple beat | 110 channels flat; $V_o$ = 44 dBmV; measured at 745.25 MHz | | - | –58 | –57 | dB |
| $X_{mod}$ | cross modulation | 110 channels flat; $V_o$ = 44 dBmV; measured at 55.25 MHz | | - | –63 | –61 | dB |
| CSO | composite second order distortion | 110 channels flat; $V_o$ = 44 dBmV; measured at 746.5 MHz | | - | –61 | –56 | dB |
| $d_2$ | second order distortion | | [1] | - | –75 | –66 | dB |
| $V_o$ | output voltage | $d_{im}$ = –60 dB | [2] | 60.5 | 63.5 | - | dBmV |
| F | noise figure | f = 50 MHz | | - | 4.5 | 5 | dB |
| | | f = 450 MHz | | - | - | 6.5 | dB |
| | | f = 550 MHz | | - | - | 7 | dB |
| | | f = 600 MHz | | - | - | 7 | dB |
| | | f = 750 MHz | | - | 6.5 | 8.5 | dB |
| $I_{tot}$ | total current consumption (DC) | | [3] | - | 425 | 435 | mA |

[1] $f_p$ = 55.25 MHz; $V_p$ = 44 dBmV; $f_q$ = 691.25 MHz; $V_q$ = 44 dBmV; measured at $f_p + f_q$ = 746.5 MHz.

[2] Measure according to DIN45004B; $f_p$ = 740.25 MHz; $V_p = V_o$; $f_q$ = 747.25 MHz; $V_q = V_o$ – 6 dB; $f_r$ = 749.25 MHz; $V_r = V_o$ – 6 dB; measured at $f_p + f_q - f_r$ = 738.25 MHz.

[3] The module normally operates at $V_B$ = 24 V, but is able to withstand supply transients up to 30 V.

**Table 6. Characteristics**

*Bandwidth 40 MHz to 600 MHz; $V_B$ = 24 V; $T_{mb}$ = 35 °C; $Z_S$ = $Z_L$ = 75 Ω.*

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| $G_p$ | power gain | f = 50 MHz | 19.5 | 20 | 20.5 | dB |
| | | f = 600 MHz | 20 | 20.7 | - | dB |
| SL | slope cable equivalent | f = 40 MHz to 600 MHz | 0 | - | 2 | dB |
| FL | flatness of frequency response | f = 40 MHz to 600 MHz | - | - | ±0.3 | dB |
| $s_{11}$ | input return losses | f = 40 MHz to 80 MHz | 20 | 31 | - | dB |
| | | f = 80 MHz to 160 MHz | 19 | 29 | - | dB |
| | | f = 160 MHz to 320 MHz | 18 | 25 | - | dB |
| | | f = 320 MHz to 600 MHz | 17 | 21 | - | dB |
| $s_{22}$ | output return losses | f = 40 MHz to 80 MHz | 20 | 26 | - | dB |
| | | f = 80 MHz to 160 MHz | 19 | 27 | - | dB |
| | | f = 160 MHz to 320 MHz | 18 | 26 | - | dB |
| | | f = 320 MHz to 600 MHz | 17 | 24 | - | dB |
| $s_{21}$ | phase response | f = 50 MHz | –45 | - | +45 | deg |

**Table 6. Characteristics** *...continued*

*Bandwidth 40 MHz to 600 MHz; $V_B$ = 24 V; $T_{mb}$ = 35 °C; $Z_S = Z_L$ = 75 Ω.*

| Symbol | Parameter | Conditions | | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|---|
| CTB | composite triple beat | 85 channels flat; $V_o$ = 44 dBmV; measured at 595.25 MHz | | - | –65 | –64 | dB |
| $X_{mod}$ | cross modulation | 85 channels flat; $V_o$ = 44 dBmV; measured at 55.25 MHz | | - | –65 | –64 | dB |
| CSO | composite second order distortion | 85 channels flat; $V_o$ = 44 dBmV; measured at 596.5 MHz | | - | –66 | –58 | dB |
| $d_2$ | second order distortion | | [1] | - | - | –68 | dB |
| $V_o$ | output voltage | $d_{im}$ = –60 dB | [2] | 63 | - | - | dBmV |
| F | noise figure | see Table 5 | | - | - | - | dBmV |
| $I_{tot}$ | total current consumption (DC) | | [3] | - | 425 | 435 | mA |

[1] $f_p$ = 55.25 MHz; $V_p$ = 44 dBmV; $f_q$ = 541.25 MHz; $V_q$ = 44 dBmV; measured at $f_p + f_q$ = 596.5 MHz.

[2] Measured according to DIN45004B; $f_p$ = 590.25 MHz; $V_p = V_o$; $f_q$ = 597.25 MHz; $V_q = V_o$ – 6 dB; $f_r$ = 599.25 MHz; $V_r = V_o$ – 6 dB; measured at $f_p + f_q - f_r$ = 588.25 MHz.

[3] The module normally operates at $V_B$ = 24 V, but is able to withstand supply transients up to 30 V.

**Table 7. Characteristics**

*Bandwidth 40 MHz to 550 MHz; $V_B$ = 24 V; $T_{mb}$ = 35 °C; $Z_S = Z_L$ = 75 Ω.*

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| $G_p$ | power gain | f = 50 MHz | 19.5 | 20 | 20.5 | dB |
| | | f = 550 MHz | 20 | 20.6 | - | dB |
| SL | slope cable equivalent | f = 40 MHz to 550 MHz | 0 | - | 2 | dB |
| FL | flatness of frequency response | f = 40 MHz to 550 MHz | - | - | ±0.3 | dB |
| $s_{11}$ | input return losses | f = 40 MHz to 80 MHz | 20 | 31 | - | dB |
| | | f = 80 MHz to 160 MHz | 19 | 29 | - | dB |
| | | f = 160 MHz to 320 MHz | 18 | 25 | - | dB |
| | | f = 320 MHz to 550 MHz | 17 | 21 | - | dB |
| $s_{22}$ | output return losses | f = 40 MHz to 80 MHz | 20 | 26 | - | dB |
| | | f = 80 MHz to 160 MHz | 19 | 27 | - | dB |
| | | f = 160 MHz to 320 MHz | 18 | 26 | - | dB |
| | | f = 320 MHz to 550 MHz | 17 | 24 | - | dB |
| $s_{21}$ | phase response | f = 50 MHz | –45 | - | +45 | deg |
| CTB | composite triple beat | 77 channels flat; $V_o$ = 44 dBmV; measured at 547.25 MHz | - | –67 | –66 | dB |
| $X_{mod}$ | cross modulation | 77 channels flat; $V_o$ = 44 dBmV; measured at 55.25 MHz | - | –67 | –66 | dB |
| CSO | composite second order distortion | 77 channels flat; $V_o$ = 44 dBmV; measured at 548.5 MHz | - | –67 | –60 | dB |
| $d_2$ | second order distortion | | [1] - | - | –70 | dB |
| $V_o$ | output voltage | $d_{im}$ = –60 dB | [2] 63.5 | - | - | dBmV |
| F | noise figure | see Table 5 | - | - | - | dB |
| $I_{tot}$ | total current consumption (DC) | | [3] - | 425 | 435 | mA |

[1] $f_p$ = 55.25 MHz; $V_p$ = 44 dBmV; $f_q$ = 493.25 MHz; $V_q$ = 44 dBmV; measured at $f_p + f_q$ = 548.5 MHz.

[2] Measure according to DIN45004B; $f_p$ = 540.25 MHz; $V_p = V_o$; $f_q$ = 547.25 MHz; $V_q = V_o - 6$ dB; $f_r$ = 549.25 MHz; $V_r = V_o - 6$ dB; measured at $f_p + f_q - f_r$ = 538.25 MHz.

[3] The module normally operates at $V_B$ = 24 V, but is able to withstand supply transients up to 30 V.

**Table 8. Characteristics**

*Bandwidth 40 MHz to 450 MHz; $V_B$ = 24 V; $T_{mb}$ = 35 °C; $Z_S = Z_L$ = 75 Ω.*

| Symbol | Parameter | Conditions | | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|---|
| $G_p$ | power gain | f = 50 MHz | | 19.5 | 20 | 20.5 | dB |
| | | f = 450 MHz | | 20 | 20.6 | - | dB |
| SL | slope cable equivalent | f = 40 MHz to 450 MHz | | 0 | - | 2 | dB |
| FL | flatness of frequency response | f = 40 MHz to 450 MHz | | - | - | ±0.3 | dB |
| $s_{11}$ | input return losses | f = 40 MHz to 80 MHz | | 20 | 31 | - | dB |
| | | f = 80 MHz to 160 MHz | | 19 | 29 | - | dB |
| | | f = 160 MHz to 320 MHz | | 18 | 25 | - | dB |
| | | f = 320 MHz to 450 MHz | | 17 | 21 | - | dB |
| $s_{22}$ | output return losses | f = 40 MHz to 80 MHz | | 20 | 26 | - | dB |
| | | f = 80 MHz to 160 MHz | | 19 | 27 | - | dB |
| | | f = 160 MHz to 320 MHz | | 18 | 26 | - | dB |
| | | f = 320 MHz to 450 MHz | | 17 | 24 | - | dB |
| $s_{21}$ | phase response | f = 50 MHz | | –45 | - | +45 | deg |
| CTB | composite triple beat | 60 channels flat; $V_o$ = 46 dBmV; measured at 445.25 MHz | | - | - | –67 | dB |
| $X_{mod}$ | cross modulation | 60 channels flat; $V_o$ = 46 dBmV; measured at 55.25 MHz | | - | - | –64 | dB |
| CSO | composite second order distortion | 60 channels flat; $V_o$ = 46 dBmV; measured at 446.5 MHz | | - | - | –63 | dB |
| $d_2$ | second order distortion | | [1] | - | - | –73 | dB |
| $V_o$ | output voltage | $d_{im}$ = –60 dB | [2] | 66 | - | - | dBmV |
| F | noise figure | see Table 5 | | - | - | - | dB |
| $I_{tot}$ | total current consumption (DC) | | [3] | - | 425 | 435 | mA |

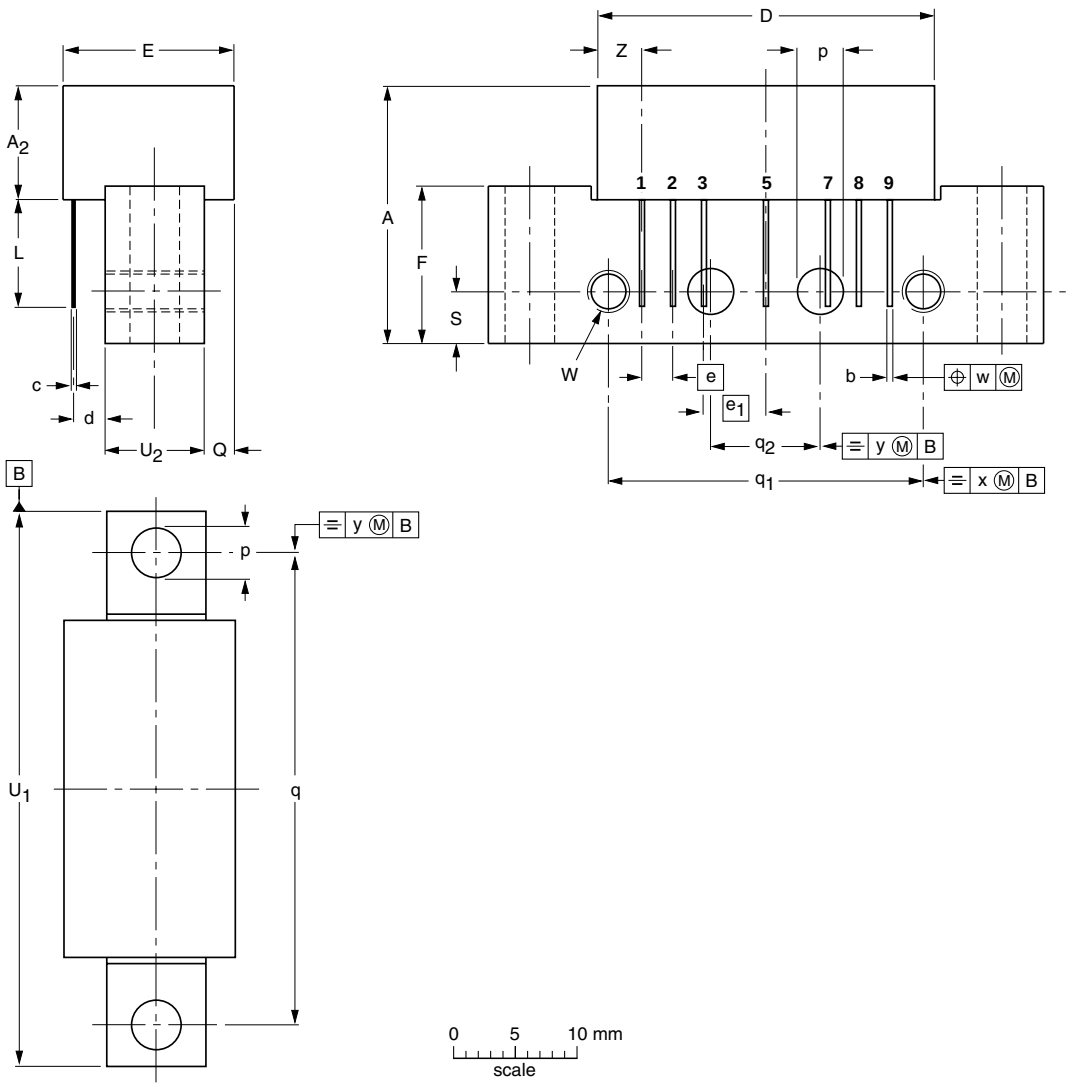
[1] $f_p$ = 55.25 MHz; $V_p$ = 44 dBmV; $f_q$ = 391.25 MHz; $V_q$ = 46 dBmV; measured at $f_p + f_q$ = 446.5 MHz.

[2] Measured according to DIN45004B; $f_p$ = 440.25 MHz; $V_p = V_o$; $f_q$ = 447.25 MHz; $V_q = V_o - 6$ dB; $f_r$ = 449.25 MHz; $V_r = V_o - 6$ dB; measured at $f_p + f_q - f_r$ = 438.25 MHz.

[3] The module normally operates at $V_B$ = 24 V, but is able to withstand supply transients up to 30 V.

## 6. Package outline

**Rectangular single-ended package; aluminium flange; 2 vertical mounting holes; 2 x 6-32 UNC and 2 extra horizontal mounting holes; 7 gold-plated in-line leads** **SOT115J**




**DIMENSIONS (mm are the original dimensions)**

| UNIT | A max. | $A_2$ max. | b | c | D max. | d | E max. | e | $e_1$ | F | L min. | p | Q max. | q | $q_1$ | $q_2$ | S | $U_1$ | $U_2$ | W | w | x | y | Z max. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | 20.8 | 9.5 | 0.51<br>0.38 | 0.25 | 27.2 | 2.04<br>2.54 | 13.75 | 2.54 | 5.08 | 12.7 | 8.8 | 4.15<br>3.85 | 2.4 | 38.1 | 25.4 | 10.2 | 4.2 | 44.75<br>44.25 | 8.2<br>7.8 | 6-32<br>UNC | 0.25 | 0.7 | 0.1 | 3.8 |

| OUTLINE VERSION | REFERENCES | | | | EUROPEAN PROJECTION | ISSUE DATE |
|---|---|---|---|---|---|---|
| | IEC | JEDEC | JEITA | | | |
| SOT115J | | | | | | ~~04-02-04~~<br>10-06-18 |

**Fig 1. Package outline SOT115J**

# 7. Revision history

**Table 9. Revision history**

| Document ID | Release date | Data sheet status | Change notice | Supersedes |
|---|---|---|---|---|
| BGD704 v.8 | 20100928 | Product data sheet | - | BGD704 v.7 |
| Modifications: | • The format of this data sheet has been redesigned to comply with the new identity guidelines of NXP Semiconductors.<br>• Legal texts have been adapted to the new company name where appropriate.<br>• Package outline drawings have been updated to the latest version. | | | |
| BGD704 v.7 (9397 750 14776) | 20050401 | Product data sheet | - | BGD704 v.6 |
| BGD704 v.6 (9397 750 09027) | 20011102 | Product specification | - | BGD704 v.5 |
| BGD704 v.5 (9397 750 08846) | 20011029 | Product specification | - | BGD704 v.4 |
| BGD704 v.4 (9397 750 05295) | 19990322 | Product specification | - | BGD704 v.3 |
| BGD704 v.3 (9397 750 01971) | 19970402 | Product specification | - | BGD704 v.2 |
| BGD704 v.2 (9397 750 01392) | 19961220 | Product specification | - | - |

# 8. Legal information

## 8.1 Data sheet status

| Document status[1][2] | Product status[3] | Definition |
|---|---|---|
| Objective [short] data sheet | Development | This document contains data from the objective specification for product development. |
| Preliminary [short] data sheet | Qualification | This document contains data from the preliminary specification. |
| Product [short] data sheet | Production | This document contains the product specification. |

[1] Please consult the most recently issued document before initiating or completing a design.

[2] The term 'short data sheet' is explained in section "Definitions".

[3] The product status of device(s) described in this document may have changed since this document was published and may differ in case of multiple devices. The latest product status information is available on the Internet at URL http://www.nxp.com.

## 8.2 Definitions

**Draft —** The document is a draft version only. The content is still under internal review and subject to formal approval, which may result in modifications or additions. NXP Semiconductors does not give any representations or warranties as to the accuracy or completeness of information included herein and shall have no liability for the consequences of use of such information.

**Short data sheet —** A short data sheet is an extract from a full data sheet with the same product type number(s) and title. A short data sheet is intended for quick reference only and should not be relied upon to contain detailed and full information. For detailed and full information see the relevant full data sheet, which is available on request via the local NXP Semiconductors sales office. In case of any inconsistency or conflict with the short data sheet, the full data sheet shall prevail.

**Product specification —** The information and data provided in a Product data sheet shall define the specification of the product as agreed between NXP Semiconductors and its customer, unless NXP Semiconductors and customer have explicitly agreed otherwise in writing. In no event however, shall an agreement be valid in which the NXP Semiconductors product is deemed to offer functions and qualities beyond those described in the Product data sheet.

## 8.3 Disclaimers

**Limited warranty and liability —** Information in this document is believed to be accurate and reliable. However, NXP Semiconductors does not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information.

In no event shall NXP Semiconductors be liable for any indirect, incidental, punitive, special or consequential damages (including - without limitation - lost profits, lost savings, business interruption, costs related to the removal or replacement of any products or rework charges) whether or not such damages are based on tort (including negligence), warranty, breach of contract or any other legal theory.

Notwithstanding any damages that customer might incur for any reason whatsoever, NXP Semiconductors' aggregate and cumulative liability towards customer for the products described herein shall be limited in accordance with the *Terms and conditions of commercial sale* of NXP Semiconductors.

**Right to make changes —** NXP Semiconductors reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.

**Suitability for use —** NXP Semiconductors products are not designed, authorized or warranted to be suitable for use in life support, life-critical or safety-critical systems or equipment, nor in applications where failure or malfunction of an NXP Semiconductors product can reasonably be expected to result in personal injury, death or severe property or environmental damage. NXP Semiconductors accepts no liability for inclusion and/or use of NXP Semiconductors products in such equipment or applications and therefore such inclusion and/or use is at the customer's own risk.

**Applications —** Applications that are described herein for any of these products are for illustrative purposes only. NXP Semiconductors makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.

Customers are responsible for the design and operation of their applications and products using NXP Semiconductors products, and NXP Semiconductors accepts no liability for any assistance with applications or customer product design. It is customer's sole responsibility to determine whether the NXP Semiconductors product is suitable and fit for the customer's applications and products planned, as well as for the planned application and use of customer's third party customer(s). Customers should provide appropriate design and operating safeguards to minimize the risks associated with their applications and products.

NXP Semiconductors does not accept any liability related to any default, damage, costs or problem which is based on any weakness or default in the customer's applications or products, or the application or use by customer's third party customer(s). Customer is responsible for doing all necessary testing for the customer's applications and products using NXP Semiconductors products in order to avoid a default of the applications and the products or of the application or use by customer's third party customer(s). NXP does not accept any liability in this respect.

**Limiting values —** Stress above one or more limiting values (as defined in the Absolute Maximum Ratings System of IEC 60134) will cause permanent damage to the device. Limiting values are stress ratings only and (proper) operation of the device at these or any other conditions above those given in the Recommended operating conditions section (if present) or the Characteristics sections of this document is not warranted. Constant or repeated exposure to limiting values will permanently and irreversibly affect the quality and reliability of the device.

**Terms and conditions of commercial sale —** NXP Semiconductors products are sold subject to the general terms and conditions of commercial sale, as published at http://www.nxp.com/profile/terms, unless otherwise agreed in a valid written individual agreement. In case an individual agreement is concluded only the terms and conditions of the respective agreement shall apply. NXP Semiconductors hereby expressly objects to applying the customer's general terms and conditions with regard to the purchase of NXP Semiconductors products by customer.

**No offer to sell or license —** Nothing in this document may be interpreted or construed as an offer to sell products that is open for acceptance or the grant, conveyance or implication of any license under any copyrights, patents or other industrial or intellectual property rights.

**Export control —** This document as well as the item(s) described herein may be subject to export control regulations. Export might require a prior authorization from national authorities.

**Quick reference data —** The Quick reference data is an extract of the product data given in the Limiting values and Characteristics sections of this document, and as such is not complete, exhaustive or legally binding.

**Non-automotive qualified products —** Unless this data sheet expressly states that this specific NXP Semiconductors product is automotive qualified, the product is not suitable for automotive use. It is neither qualified nor tested in accordance with automotive testing or application requirements. NXP Semiconductors accepts no liability for inclusion and/or use of non-automotive qualified products in automotive equipment or applications.

In the event that customer uses the product for design-in and use in automotive applications to automotive specifications and standards, customer (a) shall use the product without NXP Semiconductors' warranty of the product for such automotive applications, use and specifications, and (b) whenever customer uses the product for automotive applications beyond NXP Semiconductors' specifications such use shall be solely at customer's own risk, and (c) customer fully indemnifies NXP Semiconductors for any liability, damages or failed product claims resulting from customer design and use of the product for automotive applications beyond NXP Semiconductors' standard warranty and NXP Semiconductors' product specifications.

### 8.4 Trademarks

Notice: All referenced brands, product names, service names and trademarks are the property of their respective owners.

## 9. Contact information

For more information, please visit: **http://www.nxp.com**

For sales office addresses, please send an email to: **salesaddresses@nxp.com**

## 10. Contents





For more information, please visit: http://www.nxp.com
For sales office addresses, please send an email to: salesaddresses@nxp.com

**Date of release: 28 September 2010**
**Document identifier: BGD704**

LifeElectronics
Живое партнерство

**ООО «ЛайфЭлектроникс»** **“LifeElectronics” LLC**

*ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703*

*Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.*

*С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров*

*Мы предлагаем:*

- *Конкурентоспособные цены и скидки постоянным клиентам.*
- *Специальные условия для постоянных клиентов.*
- *Подбор аналогов.*
- *Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.*

- *Приемлемые сроки поставки, возможна ускоренная поставка.*
- *Доставку товара в любую точку России и стран СНГ.*
- *Комплексную поставку.*
- *Работу по проектам и поставку образцов.*
- *Формирование склада под заказчика.*

- *Сертификаты соответствия на поставляемую продукцию (по желанию клиента).*
- *Тестирование поставляемой продукции.*
- *Поставку компонентов, требующих военную и космическую приемку.*
- *Входной контроль качества.*
- *Наличие сертификата ISO.*

*В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.*

*Конструкторский отдел помогает осуществить:*

- *Регистрацию проекта у производителя компонентов.*
- *Техническую поддержку проекта.*
- *Защиту от снятия компонента с производства.*
- *Оценку стоимости проекта по компонентам.*
- *Изготовление тестовой платы монтаж и пусконаладочные работы.*

*Тел: +7 (812) 336 43 04 (многоканальный)*
*Email: org@lifeelectronics.ru*

***www.lifeelectronics.ru***