

**Semiconductor devices - Micro-electromechanical
devices - Part 20: Gyroscopes**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

**Semiconductor devices - Micro-electromechanical devices -
Part 20: Gyroscopes
(IEC 62047-20:2014)**

Dispositifs à semiconducteurs - Dispositifs
microélectromécaniques -
Partie 20: Gyroscopes
(CEI 62047-20:2014)

Halbleiterbauelemente - Bauelemente der
Mikrosystemtechnik -
Teil 20: Gyroskope
(IEC 62047-20:2014)

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European Committee for Electrotechnical Standardization
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Foreword

The text of document 47F/188/FDIS, future edition 1 of IEC 62047-20, prepared by SC 47F "Microelectromechanical systems" of IEC/TC 47 "Semiconductor devices" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62047-20:2014.

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SEMICONDUCTOR DEVICES – MICRO-ELECTROMECHANICAL DEVICES –

Part 20: Gyroscopes

1 Scope

This part of IEC 62047 specifies terms and definitions, ratings and characteristics, and measuring methods of gyroscopes.

Gyroscopes are primarily used for consumer, general industries and aerospace applications. MEMS and semiconductor lasers are widely used for device technology of gyroscopes.

Hereafter, gyroscope is referred to as gyro.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

None

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

rotating table rate table

rotating tool on which a gyro is loaded during measurement

3.2

earth rate

angular rate generated in inertial space due to the rotation of the earth

Note 1 to entry: When the angular rate in inertial space is defined as stellar day 23 hours, 56 minutes, a reference of 4,098 903 691 seconds is obtained as specified by the International Earth Rotation and Reference Systems Service (IERS) and therefore, the angular rate of Earth in inertial space is approximately 15,04 °/h. For details of the definition, refer to the IERS website (<http://www.iers.org>).

3.3

scale factor

ratio of gyro output voltage or output digital signal versus the rotating angular rate being applied, described in unit: V/(°/s) or bit/(°/s)

4 Essential ratings and characteristics

4.1 Categorization of gyro

Table 1 shows uses of gyro categorized by application fields.