

<b>STN</b>	<b>Zabezpečovanie výrobkov kozmického programu. Všeobecné požiadavky na obstarávanie hybridných komponentov.</b>	<b>STN EN 16602-60-05</b>  31 0542
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Space product assurance - Generic procurement requirements for hybrids

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/15

Obsahuje: EN 16602-60-05:2014

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Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, odbor SÚTN, 2015  
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

ICS 49.140

English version

## Space product assurance - Generic procurement requirements for hybrids

Assurance produit des projets spatiaux - exigences  
génériques d'approvisionnement des composants hybrides

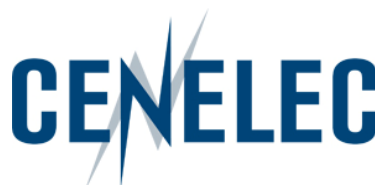
Raumfahrtproduktsicherung - Allgemeine  
Beschaffungsanforderungen an Hybride

This European Standard was approved by CEN on 13 March 2014.

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**CEN-CENELEC Management Centre:  
Avenue Marnix 17, B-1000 Brussels**

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## Foreword

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This document (EN 16602-60-05:2014) has been prepared by Technical Committee CEN/CLC/TC 5 "Space", the secretariat of which is held by DIN.

This standard (EN 16602-60-05:2014) originates from ECSS-Q-ST-60-05C Rev. 1.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2015, and conflicting national standards shall be withdrawn at the latest by March 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This document has been developed to cover specifically space systems and has therefore precedence over any EN covering the same scope but with a wider domain of applicability (e.g. : aerospace).

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Introduction

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The objective of this Standard is to define the requirements for the procurement of hybrid microcircuits for use in space systems.

This Standard covers the following requirement domains:

- Validation procedure for a hybrid microcircuit manufacturer.
- Design of hybrid microcircuits.
- Procurement of active and passive chips.
- Procurement of materials and piece parts.
- Screening of hybrid microcircuit lots.
- Lot acceptance tests for hybrid microcircuits.
- Customer involvement, key inspection points.
- Repair provisions.
- Hybrids and data package delivery.



# 1 Scope

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The procurement requirements for hermetic hybrid microcircuits for use in space projects are defined in this Standard.

This Standard also provides details concerning the documentation requirements and the procedures relevant to obtain approval for the use of hybrid microcircuits in the fabrication of space systems and associated equipment.

The provisions of this Standard apply to all participants in the production of space systems, at all levels and are applicable to manned and unmanned spacecraft, launchers, satellites, payloads, experiments, and their corresponding organizations.

This standard may be tailored for the specific characteristic and constraints of a space project in conformance with ECSS-S-ST-00.

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## Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this ECSS Standard. For dated references subsequent amendments to, or revisions of any of these publications do not apply. However, parties to agreements based on this ECSS Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references the latest edition of the publication referred to applies.

EN reference	Reference in text	Title
EN 16601-00-01	ECSS-S-ST-00-01	ECSS system – Glossary of terms
EN 16602-60	ECSS-Q-ST-60	Space product assurance – Electrical, electronic and electromechanical (EEE) components
EN 16602-60-12	ECSS-Q-ST-60-12	Space product assurance - Design, selection, procurement and use of die form monolithic microwave integrated circuits (MMICs)
EN 16602-30-11	ECSS-Q-ST-30-11	Space product assurance – Derating - EEE components
EN 16602-70	ECSS-Q-ST-70	Space product assurance – Materials, mechanical parts and processes
	MIL-STD-883G	Tests methods and procedures for microelectronics
	MIL-STD-750D	Test method standard for semiconductor devices
	ESCC 20600	Preservation, packaging and despatch of ESCC components
	ESCC 2043000	Internal visual inspection of capacitors
	ESCC 2044000	Internal visual inspection of resistors
	ESCC 2045010	Internal visual inspection of microwave devices
	ESCC 2049010	Internal visual inspection of monolithic microwave devices
	ESCC 2053000	External visual inspection of capacitors
	ESCC 2054000	External visual inspection of resistors
	ESCC 2093000	Radiographic inspection of capacitors
	ESCC 2094000	Radiographic inspection of resistors