



# SLOVENSKI STANDARD SIST EN 16602-70-38:2019

01-julij-2019

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## Zagotavljanje kakovosti proizvodov v vesoljski tehniki - Visoka zanesljivost spajkanja za površinsko montažo in mešano tehnologijo

Space product assurance - High-reliability soldering for surface-mount and mixed technology

Raumfahrtproduktsicherung - Hochzuverlässiges Löten von Oberflächen-Befestigungen und gemischte Technologien

Assurance produit spatiale - Soudure haute fiabilité pour technologies à montage de surface et mixte

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## Space product assurance - High-reliability soldering for surface-mount and mixed technology

Assurance produit des projets spatiaux - Soudure  
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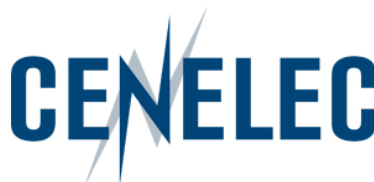
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Technologien

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## Table of contents

<b>European Foreword</b> .....	<b>11</b>
<b>Introduction</b> .....	<b>12</b>
<b>1 Scope</b> .....	<b>15</b>
<b>2 Normative references</b> .....	<b>16</b>
<b>3 Terms, definitions and abbreviated terms</b> .....	<b>18</b>
3.1 Terms from other standards.....	18
3.2 Terms specific to the present standard .....	18
3.3 Abbreviated terms.....	20
3.4 Nomenclature.....	21
3.4.1 Formal verbs.....	21
<b>4 Principles of reliable soldered connections</b> .....	<b>22</b>
<b>5 Process identification document (PID)</b> .....	<b>23</b>
5.1 General.....	23
5.1.1 Purpose .....	23
5.1.2 Document preparation.....	23
5.1.3 <<deleted>>.....	23
5.1.4 Approval.....	23
5.1.5 SMT contact person.....	24
5.2 <<deleted>> .....	24
5.3 Process identification document updating.....	24
<b>6 Preparatory conditions</b> .....	<b>25</b>
6.1 Calibration .....	25
6.2 Facility cleanliness.....	25
6.3 Environmental conditions.....	25
6.4 Precautions against static charges .....	25
6.5 Lighting requirements .....	25
6.6 Equipment and tools.....	25
6.6.1 Brushes.....	25

6.6.2	Cutters and Pliers .....	26
6.6.3	Bending tools .....	26
6.6.4	Clinching tools.....	26
6.6.5	Insulation strippers .....	26
6.6.6	Soldering tools .....	26
6.6.7	Soldering irons and resistance soldering equipment .....	26
6.6.8	<<deleted>>.....	26
6.6.9	Solder baths for degolding and pretinning .....	26
6.7	Soldering machines and equipment.....	27
6.7.1	General.....	27
6.7.2	Dynamic wave-solder machines.....	27
6.7.3	Condensation (vapour phase) reflow machines.....	28
6.7.4	Hot gas reflow machines.....	28
6.7.5	<<deleted>>.....	28
6.7.6	Convection and radiation reflow systems .....	28
6.7.7	Other equipment for reflow soldering .....	29
6.8	Ancillary equipment.....	29
6.8.1	General.....	29
6.8.2	Solder deposition equipment.....	29
6.8.3	Automatic device placement equipment.....	29
6.8.4	<<deleted>>.....	29
6.8.5	Cleanliness testing equipment .....	30
6.8.6	Magnification aids .....	30
6.8.7	X-ray inspection equipment.....	30
6.8.8	Metallographic equipment .....	30
<b>7</b>	<b>Material selection .....</b>	<b>31</b>
7.1	General.....	31
7.2	Solder .....	31
7.2.1	Form .....	31
7.2.2	Composition.....	31
7.2.3	Solder paste.....	31
7.2.4	Maintenance of paste purity .....	33
7.3	Flux .....	33
7.3.1	Rosin based flux .....	33
7.3.2	Corrosive acid flux.....	33
7.3.3	Flux controls for wave-soldering equipment .....	33
7.4	Solvents.....	33

## EN 16602-70-38:2019 (E)

7.5	Flexible insulation materials.....	34
7.6	Terminals.....	34
7.7	Wires.....	34
7.8	Printed circuit substrates.....	34
7.8.1	<<deleted>>.....	34
7.8.2	<<deleted>>.....	34
7.8.3	<<deleted>>.....	34
7.8.4	<<deleted>>.....	34
7.8.5	<<deleted>>.....	35
7.8.6	<<deleted>>.....	35
7.9	Devices.....	35
7.9.1	General.....	35
7.9.2	<<deleted>>.....	36
7.9.3	Moisture sensitive devices.....	36
7.9.4	<<deleted>>.....	36
7.10	Adhesives, encapsulants and conformal coatings.....	36
<b>8</b>	<b>Preparation for soldering.....</b>	<b>38</b>
8.1	Preparation of devices and terminals.....	38
8.1.1	Preparation of wires and terminals.....	38
8.1.2	Preparation of surfaces to be soldered.....	38
8.1.3	Degolding and pretinning of conductors.....	38
8.1.4	Alloying of pure tin finish.....	38
8.2	Preparation of solder bit.....	39
8.3	Handling.....	39
8.4	Storage.....	39
8.5	Baking of PCBs and moisture sensitive devices.....	39
<b>9</b>	<b>Mounting of devices prior to soldering.....</b>	<b>40</b>
9.1	General requirements.....	40
9.2	Lead bending and cutting requirements.....	40
9.3	Mounting of terminals to PCBs.....	40
9.4	Lead attachment to through holes.....	40
9.5	Mounting of devices to terminals.....	40
9.6	Mounting of through hole connectors to PCBs.....	40
9.7	Surface mount requirements.....	41
9.7.1	General.....	41
9.7.2	Stress relief.....	41
9.7.3	Registration of devices and footprints.....	42

9.7.4	Lead forming .....	42
9.7.5	Mounting devices in solder paste .....	42
9.7.6	Leadless devices .....	43
9.7.7	Leaded devices .....	43
9.7.8	<<deleted>> .....	43
9.7.9	Stacking and bonding of heavy devices .....	43
<b>10 Attachment of conductors to terminals, solder cups and cables .....</b>		<b>45</b>
<b>11 Soldering to printed circuit boards .....</b>		<b>46</b>
11.1	General.....	46
11.2	<<deleted>> .....	46
11.3	Solder applications to PCBs .....	46
11.4	Wicking.....	46
11.5	Soldering of SMDs.....	46
11.5.1	General requirements .....	46
11.5.2	End-capped and end-metallized devices.....	47
11.5.3	Bottom terminated chip devices .....	49
11.5.4	Cylindrical and square end-capped devices .....	50
11.5.5	Castellated chip carrier devices.....	52
11.5.6	Flat pack and Gull-wing leaded devices with round, rectangular, ribbon leads .....	53
11.5.7	Devices with J leads .....	54
11.5.8	Area array devices .....	54
11.5.9	Devices with ribbon terminals without stress relief .....	56
11.5.10	L-Shape inwards devices .....	57
11.5.11	Stacked modules devices with leads protruding vertically from bottom.....	58
11.5.12	Leaded device with plane termination .....	59
11.5.13	Moulded magnetics .....	59
11.6	<<deleted>> .....	60
11.7	<<deleted>> .....	60
11.8	<<deleted>> .....	60
<b>12 Cleaning of PCB assemblies .....</b>		<b>61</b>
12.1	General.....	61
12.2	Ultrasonic cleaning .....	61
12.3	Monitoring for cleanliness .....	61
<b>13 Final inspection .....</b>		<b>62</b>
13.1	General.....	62

**EN 16602-70-38:2019 (E)**

13.2	Acceptance criteria .....	62
13.3	Visual rejection criteria .....	63
13.4	X-ray rejection criterion .....	65
13.5	Warp and twist of populated boards .....	65
13.6	Inspection records .....	65
<b>14</b>	<b>Verification procedure.....</b>	<b>66</b>
14.1	General.....	66
14.2	Verification by similarity .....	68
14.2.1	General .....	68
14.2.2	Conditions for similarity .....	69
14.3	Verification programme.....	71
14.4	Electrical testing of devices.....	75
14.4.1	General .....	75
14.5	Vibration and shock .....	78
14.6	Temperature cycling test.....	78
14.7	Microsection .....	79
14.7.1	Microsection facilities .....	79
14.7.2	Microsectioning .....	79
14.8	<<deleted>> .....	95
14.9	Special verification testing for hermetic ceramic area array packages .....	95
14.9.1	<<deleted>> .....	95
14.9.2	<<deleted>> .....	95
14.9.3	General .....	95
14.9.4	Evaluation of capability samples .....	98
14.9.5	Verification .....	98
14.10	Verification acceptance and rejection criteria .....	99
14.11	Approval of verification .....	108
14.12	Withdrawal of approval status .....	108
14.13	Conditions for delta verification .....	108
14.14	Verification of cleanliness .....	111
14.15	Verification approval procedure .....	111
14.15.1	Request for verification .....	111
14.15.2	Technology sample .....	111
14.15.3	Audit of assembly processing.....	111
14.15.4	Verification programme .....	112
14.15.5	Final verification review .....	112
14.15.6	Certification approval of assembly line .....	112



<b>15 Quality assurance</b> .....	<b>113</b>
15.1 General.....	113
15.2 Data.....	113
15.3 Nonconformance .....	113
15.4 Calibration .....	113
15.5 Traceability .....	113
15.6 Workmanship standards .....	113
15.7 Inspection .....	114
15.8 Operator and inspector training and certification.....	114
15.9 Quality records .....	114
<b>16 &lt;&lt;deleted and moved into clause 14.7.2 and Annex I&gt;&gt;</b> .....	<b>115</b>
<b>Annex A (informative) &lt;&lt;deleted&gt;&gt;</b> .....	<b>116</b>
<b>Annex B (informative) &lt;&lt;deleted, SMT summary table DRD created in Annex H&gt;&gt;</b> .....	<b>117</b>
<b>Annex C (informative) &lt;&lt;deleted&gt;&gt;</b> .....	<b>118</b>
<b>Annex D (informative) Example of an SMT audit report</b> .....	<b>119</b>
<b>Annex E (informative) Additional information</b> .....	<b>128</b>
E.1 <<deleted>> .....	128
E.2 Melting temperatures and choice .....	128
<b>Annex F (normative) Process Identification Document (PID) - DRD</b> .....	<b>129</b>
F.1 DRD identification.....	129
F.1.1 Requirement identification and source document.....	129
F.1.2 Purpose and objective.....	129
F.2 Expected response .....	129
F.2.1 Scope and content .....	129
F.2.2 Special remarks .....	131
<b>Annex G (normative) Verification programme report - DRD</b> .....	<b>132</b>
G.1 DRD identification.....	132
G.1.1 Requirement identification and source document.....	132
G.1.2 Purpose and objective.....	132
G.2 Expected response .....	132
G.2.1 Scope and content .....	132
G.2.2 Special remarks .....	133
<b>Annex H (normative) SMT summary table - DRD</b> .....	<b>134</b>

**EN 16602-70-38:2019 (E)**

H.1	DRD identification.....	134
H.1.1	Requirement identification and source document.....	134
H.1.2	Purpose and objective.....	134
H.2	Expected response.....	134
H.2.1	Scope and content.....	134
H.2.2	Special remarks.....	134
<b>Annex I (informative) Visual and X-ray workmanship standards .....</b>		<b>136</b>
I.1	Workmanship illustrations for standard SMDs.....	136
I.1.1	Chip components.....	136
I.1.2	MELF components.....	139
I.1.3	Gull-wing leaded devices with round, rectangular, ribbon shape.....	140
I.1.4	“J” leaded devices.....	142
I.1.5	L-shape Inward leaded component.....	144
I.1.6	LCC devices.....	144
I.1.7	Miscellaneous soldering defects.....	145
I.2	Workmanship illustrations for ball grid array devices.....	146
I.3	Workmanship illustrations for column grid array devices.....	148
<b>Bibliography.....</b>		<b>151</b>
<a href="https://standards.iteh.ai/catalog/standards/sist/3201eb07-6f03-4bb4-be09-fbce25c8b627/sist-en-16602-70-38-2019">SIST EN 16602-70-38:2019</a>		
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<b>Figures</b>		
Figure 9-1:	Exposed element.....	43
Figure 11-1:	Mounting of rectangular and square end-capped and end-metallized devices.....	48
Figure 11-2:	Mounting of bottom terminated chip devices.....	49
Figure 11-3:	Mounting of cylindrical end-capped devices.....	50
Figure 11-4:	Mounting of square end-capped devices.....	51
Figure 11-5:	Mounting of castellated chip carrier devices.....	52
Figure 11-6:	Mounting of gull-wing leaded devices with round, rectangular, ribbon leads.....	53
Figure 11-7:	Mounting of devices with “J” leads.....	54
Figure 11-8:	<<deleted>>.....	55
Figure 11-9:	Typical ceramic area array showing ball grid array configuration on left and column grid array on right (CBGA & CCGA).....	55
Figure 11-10:	Typical assembled CCGA device.....	55
Figure 11-11:	Mounting of devices without stress relief.....	56
Figure 11-12:	Mounting of devices with “L-shape inwards” leads (1 = Toe, 2 = Heel).....	57
Figure 11-13:	Mounting of stacked modules devices with leads protruding vertically from bottom.....	58

Figure 11-14: Mounting of leaded devices with leads with plane termination .....	59
Figure 11-15: <<deleted>> .....	60
Figure 14-1: Verification programme flow chart (standard flow) .....	74
Figure 14-2: Verification programme flow chart (electrical testing).....	77
Figure 14-3: Verification programme flow chart (AAD).....	97
Figure 14-4: <<deleted>> .....	100
Figure I-1 : Preferred solder (see also Table 11-1) .....	136
Figure I-2 : Acceptable, maximum solder (see also Table 11-1) .....	136
Figure I-3 : Acceptable, minimum Solder (see also Table 11-1).....	137
Figure I-4 : Unacceptable, excessive solder (see also Table 11-1).....	137
Figure I-5 : Unacceptable, poor wetting (see also Table 11-1).....	137
Figure I-6 : Unacceptable, excessive tilt (see also Table 11-1).....	138
Figure I-7 : Unacceptable, tombstone effect .....	138
Figure I-8 : Examples of Unacceptable solder joints - (see also Table 11-1).....	138
Figure I-9 : Acceptable, terminal wetted along end, face and sides (see also Table 11-1).....	139
Figure I-10 : Acceptable, maximum solder joint (see also Table 11-3).....	139
Figure I-11 : Not Acceptable, insufficient solder joint (see also Table 11-3).....	139
Figure I-12 : Unacceptable overhang.....	139
Figure I-13 : Examples of Gullwing leads: Acceptable .....	140
Figure I-14 : Examples of gull-wing device with rectangular lead: Acceptable .....	140
Figure I-15 : Acceptable, minimum solder joint .....	140
Figure I-16 : Unacceptable, insufficient heel fillet.....	141
Figure I-17 : Unacceptable, excessive solder .....	141
Figure I-18 : Unacceptable, excessive solder .....	141
Figure I-19 : Preferred solder joint .....	142
Figure I-20 : Acceptable solder joint .....	142
Figure I-21 : Unacceptable, excessive solder joint.....	143
Figure I-22 : Unacceptable, excessive degolding.....	143
Figure I-23 : Acceptable, preferred solder joint .....	144
Figure I-24 : LCC General view, acceptable solder joints .....	144
Figure I-25 : Examples of unacceptable soldering .....	145
Figure I-26 : Angled-transmission X-radiograph showing solder paste shadow due to partial reflow: Reject.....	146
Figure I-27 : Micrograph showing .....	146
Figure I-28 : Perpendicular transmission X-radiograph showing unacceptable defects.....	147
Figure I-29 : Perpendicular transmission X-radiograph showing non-wetted footprint.....	147
Figure I-30 : Underside view showing missing column.....	148

**EN 16602-70-38:2019 (E)**

Figure I-31 : CGA mounted on PCB showing columns tilted < 10°: Accept.....	148
Figure I-32 : X-radiograph of CGA mounted on PCB showing solder bridge: Reject.....	149
Figure I-33 : X-radiograph of CGA showing solder fillets at base of columns: acceptable ...	149
Figure I-34 : Micrograph of CGA mounted on PCB, bent column: reject .....	150
Figure I-35 : Micrograph of CGA mounted on PCB.....	150

**Tables**

Table 7-1: Chemical composition of spacecraft solders .....	32
Table 7-2: <<deleted>> .....	34
Table 11-1: Dimensional and solder fillet for rectangular and square end capped devices.....	48
Table 11-2: Dimensional and solder fillet for bottom terminated chip devices .....	49
Table 11-3: Dimensional and solder fillet for cylindrical end-capped devices.....	50
Table 11-4: Dimensional and solder fillet for square end-capped devices .....	51
Table 11-5: Dimensional and solder fillet for castellated chip carrier devices.....	52
Table 11-6: Dimensional and solder fillet for gull-wing leaded devices with round, rectangular, ribbon leads.....	53
Table 11-7: Dimensional and solder fillet for devices with “J” leads .....	54
Table 11-8: Dimensional and solder fillet for area array devices.....	55
Table 11-9: Dimensional and solder fillet for devices without stress relief.....	56
Table 11-10: Dimensional and solder fillet for “L-shape inwards” devices.....	57
Table 11-11: Dimensional and solder fillet for stacked modules devices with leads protruding vertically from bottom .....	58
Table 11-12: Dimensional and solder fillet for leaded devices with plane termination .....	59
Table 14-1: Device type classification.....	68
Table 14-2: Device microsection location .....	81
Table 14-3: Critical zone definition per device type and acceptance criteria .....	101
Table 14-4: Conditions invoking verification.....	110
Table E-1 : Guide for choice of solder type.....	128
Table H-1 : Device type preparation and mounting configuration.....	135

## European Foreword

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This document (EN 16602-70-38:2019) has been prepared by Technical Committee CEN-CENELEC/TC 5 "Space", the secretariat of which is held by DIN.

This standard (EN 16602-70-38:2019) originates from ECSS-Q-ST-70-38C 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 October 2019, and conflicting national standards shall be withdrawn at the latest by October 2019.

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 standardization request 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).

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## Introduction

This Standard prescribes requirements for electrical connections of leadless and leaded surface mounted devices (SMD) on spacecraft and associated equipment, utilising a range of substrate assemblies and employing solder as the interconnection media. The principal types of SMDs can be gathered in the following families:

<p><b>Rectangular and square end-capped or end-metallized device with rectangular body, leadless chip (see 11.5.2)</b> e.g. end capped chip resistors and end capped chip capacitors.</p>	
<p><b>Cylindrical and square end-capped devices with cylindrical body, leadless chip (see 11.5.4)</b> e.g. MELF for cylindrical end capped or e.g. D-5A for square end capped</p>	
<p><b>Bottom terminated chip device (see 11.5.3)</b> This type of device has metallised terminations on the bottom side only.  e.g. inductors and SMD0.5, SMD1, SMD2, SMD0.2, SMD0.22  e.g. Quad Flat Pack No lead (QFN)</p>	

<p><b>Castellated chip carrier device (see 11.5.5)</b></p> <p>The main device of this type is leadless ceramic chip carrier (LCCC).</p> <p>e.g. LCC6</p>	
<p><b>Flat pack and gull-wing leaded device with round, rectangular, ribbon leads (see 11.5.6)</b></p> <p>e.g. small-outline transistor (SOT), small-outline package (SO), flat pack and quad flat pack (QFP) and SMD connectors with stress-relief.</p> <p>This family also comprises devices for through-hole mounting that have been reconfigured to surface mounting.</p>	
<p><b>Moulded magnetics (see 11.5.13)</b></p> <p>e.g. 1553 interface transformers or specific transformers</p>	
<p><b>“J” leaded device (see 11.5.7)</b></p> <p>e.g. ceramic leaded chip carriers (CLCC) and plastic leaded chip carriers (PLCC).</p>	

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