

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Radio-frequency connectors –
Part 69: Sectional specification for RF coaxial connectors with push on mating –
Characteristic impedance 50 Ω (type SMP3)**

**Connecteurs pour fréquences radioélectriques –
Partie 69: Spécification intermédiaire relative aux connecteurs coaxiaux pour
fréquences radioélectriques à accouplement par poussée – Impédance
caractéristique 50 Ω (type SMP3)**



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RADIO-FREQUENCY CONNECTORS –

Part 69: Sectional specification for RF coaxial connectors
with push on mating – Characteristic impedance 50 Ω (type SMP3)

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IEC 61169-69 has been prepared by subcommittee 46F: RF and microwave passive components, of IEC technical committee 46: Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
46F/666/FDIS	46F/671/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts of the IEC 61169 series, under the general title: *Radio-frequency connectors*, can be found on the IEC website.

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RADIO-FREQUENCY CONNECTORS –

Part 69: Sectional specification for RF coaxial connectors with push on mating – Characteristic impedance 50 Ω (type SMP3)

1 Scope

This part of IEC 61169, which is a sectional specification (SS), provides information and rules for the preparation of detail specifications (DS) for RF coaxial connectors with push-on coupling, typically for use in 50 Ω RF cables or micro-strips in microwave, telecommunication, wireless systems, and other fields (SMP3).

It specifies mating face dimensions for general purpose connectors – grade 2, dimensional details of standard face connectors-grade 0, gauging information and tests selected from IEC 61169-1, applicable to all detail specifications relating to series SMP3 RF connectors.

This specification indicates recommended performance characteristics to be considered when writing a detail specification and it covers test schedules and inspection requirements for assessment levels M and H.

The SMP3 push-on coupling structure series RF coaxial connectors with the characteristic of normative impedance 50 Ω are used with various kinds of RF cables or micro-strips in microwave, telecommunication, wireless systems, and other fields. The operating frequency limit is up to 65 GHz.

NOTE Imperial dimensions are the original dimensions since this is a very miniature RF connector. There is a concern that conversion to the metric system could lead to rounding errors which can lead to performance degradation from the original imperial design. The SMP3M connector was released as an imperial design for this reason. All undimensioned pictorial information is for reference only.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61169-1:2013, *Radio frequency connectors – Part 1: Generic specification – General requirements and measuring methods*

IEC 60068-1, *Environmental testing – Part 1: General and guidance*

3 Terms and definitions

No terms and definitions are listed in this document.

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