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Passive RF and microwave devices, intermodulation level measurement

Part 6: Measurement of passive intermodulation in antennas

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(IEC 62037-6:2013)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
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Foreword

The text of document 46/410/FDIS, future edition 1 of IEC 62037-6, prepared by IEC TC 46 "Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62037-6:2013.

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The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated r

		Passive RF and microwave devices, intermodulation level measurement - Part 1: General requirements and measuring methods	EN 62037-1	2012
IEC 62037-3	-	Passive RF and microwave devices, intermodulation level measurement - Part 3: Measurement of passive intermodulation in coaxial connectors	EN 62037-3	-

CONTENTS

PASSIVE RF AND MICROWAVE DEVICES, INTERMODULATION LEVEL MEASUREMENT –

Part 6: Measurement of passive intermodulation in antennas

1 Scope

This part of IEC 62037 defines test fixtures and procedures recommended for measuring levels of passive intermodulation generated by antennas, typically used in wireless communication systems. The purpose is to define qualification and acceptance test methods for antennas for use in low intermodulation (low IM) applications.

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.

IEC 62037-1:2012, *Passive r.f. and microwave devices, intermodulation level measurement – Part 1: General requirements and measuring methods*

IEC 62037-3, *Passive r.f. and microwave devices, intermodulation level measurement – Part 3: Measurement of passive intermodulation in coaxial connectors*

3 Abbreviations

AIM Active intermodulation
AUT Antenna under test
ESD Electrostatic discharge
HPA High power amplifier
IM Intermodulation
LNA Low noise amplifier
PIM Passive intermodulation
RF Radio frequency

4 Antenna definitions as it pertains to PIM

4.1 Antenna

An antenna is that part of a radio transmitting or receiving system which is designed to provide the required coupling between a transmitter or a receiver and the medium in which the radio wave propagates.

The antenna consists of a number of parts or components. These components include, but are not limited to, one or many radiating elements, one or many RF interfaces, a distribution or combining feed network, internal support structures, devices which control or adjust the amplitude/phase response and distribution to the radiating element(s), filters, diplexers, orthomode transducers, polarizers, waveguides, coaxial cables or printed circuits. In addition, peripheral components could also influence the PIM performance of the antenna. These