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**Integrated circuits – EMC evaluation of transceivers –
Part 5: Ethernet transceivers**

**Circuits intégrés – Évaluation de la CEM des émetteurs-récepteurs –
Partie 5: Émetteurs-récepteurs Ethernet**



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**INTEGRATED CIRCUITS –
EMC EVALUATION OF TRANSCEIVERS –**

Part 5: Ethernet transceivers

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INTEGRATED CIRCUITS – EMC EVALUATION OF TRANSCEIVERS –

Part 5: Ethernet transceivers

1 Scope

This part of IEC 62228 specifies test and measurement methods for EMC evaluation of Ethernet transceiver ICs under network condition. It defines test configurations, test conditions, test signals, failure criteria, test procedures, test setups and test boards. It is applicable for transceiver of the Ethernet systems

- 100BASE-T1 according to ISO/IEC/IEEE 8802-3/AMD1;
- 100BASE-TX according to ISO/IEC/IEEE 8802-3;
- 1000BASE-T1 according to ISO/IEC/IEEE 8802-3/AMD4

and covers

- the emission of RF disturbances;
- the immunity against RF disturbances;
- the immunity against impulses;
- the immunity against electrostatic discharges (ESD).

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 61967-1, *Integrated circuits – Measurement of electromagnetic emissions – Part 1: General conditions and definitions*

IEC 61967-4, *Integrated circuits – Measurement of electromagnetic emissions, 150 kHz to 1 GHz – Part 4: Measurement of conducted emissions, 1 ohm/150 ohm direct coupling method*

IEC 62132-1, *Integrated circuits – Measurement of electromagnetic immunity – Part 1: General conditions and definitions*

IEC 62132-4, *Integrated circuits – Measurement of electromagnetic immunity 150 kHz to 1 GHz – Part 4: Direct RF power injection method*

IEC 62215-3, *Integrated circuits – Measurement of impulse immunity – Part 3: Non-synchronous transient injection method*

IEC 62228-1, *Integrated circuits – EMC evaluation of transceivers – Part 1: General conditions and definitions*

ISO 10605, *Road vehicles – Test methods for electrical disturbances from electrostatic discharge*