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Semiconductor devices – Discrete devices – Part 8: Field-effect transistors

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Semiconductor devices – Discrete devices – Part 8: Field-effect transistors



IEC 60747-8:2010-12+AMD1:2021-06 CSV(en)

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SEMICONDUCTOR DEVICES – DISCRETE DEVICES –

Part 8: Field-effect transistors

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b) “Clause 4 Terminology and letter symbols” was divided into “Clause 3 Terms and definitions” and “Clause 4 Letter symbols” was amended with additions and deletions.
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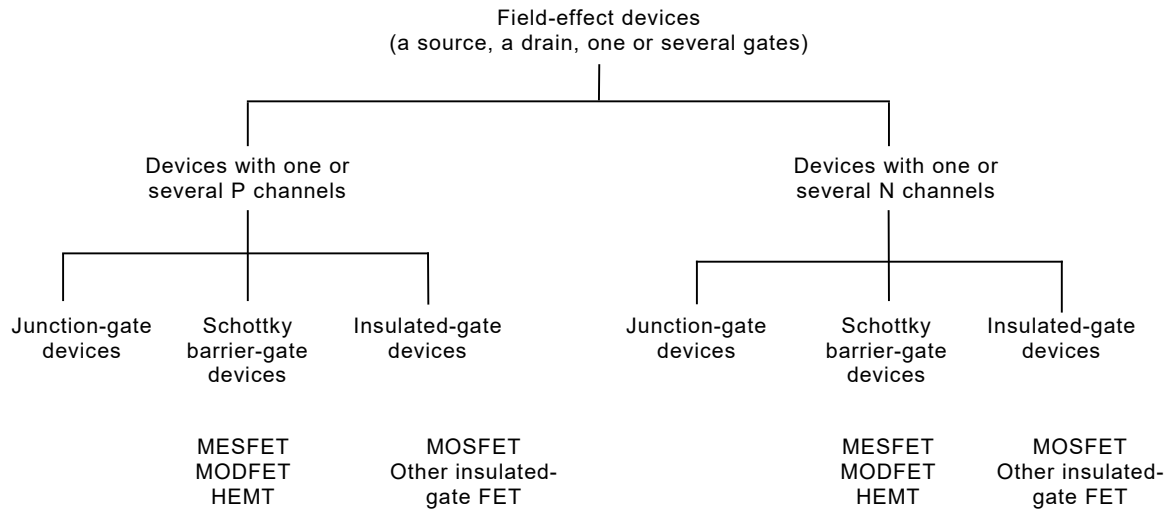
Part 8: Field-effect transistors

1 Scope

This part of IEC 60747 gives standards for the following categories of field-effect transistors:

– type A: junction-gate type;
– type B: insulated-gate depletion (normally on) type;
– type C: insulated-gate enhancement (normally off) type.

Since a field-effect transistor may have one or several gates, the classification shown below results:



NOTE 1 Schottky barrier-gate and insulated gate devices include depletion type devices and enhancement type devices.

NOTE 2 MOSFETs for some applications may not have inverse diode characteristics in the data sheet. Special circuit element structures to eliminate body diode are under development for such applications. MOSFET applications such as motor control equipment need to specify the inverse diode characteristics in the MOSFET to use the inverse diode as a free wheeling diode.

NOTE 3 The graphical symbol only for type C is used in this standard. The standard equally applies for P-channel and for type A and B devices.

2 Normative references

The following referenced documents are indispensable for the application 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 61340 (all parts), *Electrostatics*

IEC 60747-1:2006, *Semiconductor devices – Part 1: General*

IEC 60747-7:2000, *Semiconductor devices – Part 7: Bipolar transistors*

IEC 60749-23:2004, *Semiconductor devices – Mechanical and climatic test methods – Part 23: High temperature operating life*

IEC 60749-34, *Semiconductor devices – Mechanical and climatic test methods – Part 34: Power cycling*

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Semiconductor devices – Discrete devices – Part 8: Field-effect transistors



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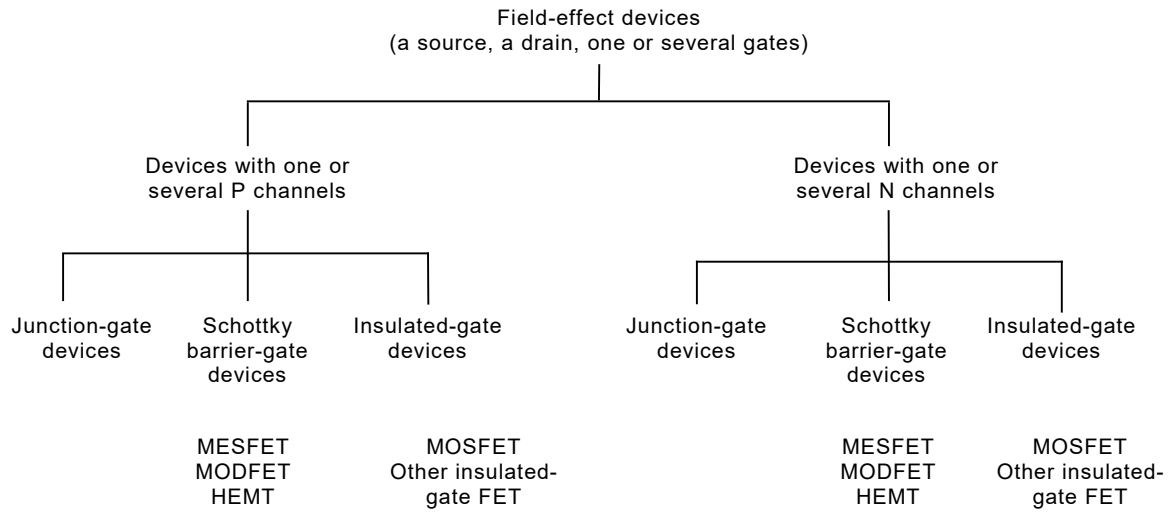
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IEC 60749-34, *Semiconductor devices – Mechanical and climatic test methods – Part 34: Power cycling*