CLAIMS

1. System comprising a tester for integrated circuits on a silicon wafer, characterised in that the tester comprises two connections for supplying electrical energy to an integrated circuit, and in that the system comprises:

- means (Icc), included in the integrated-circuit tester, for measuring a first current delivered to the integrated circuit,

- means (Vt), included in the integrated-circuit tester, for transmitting a message to the integrated circuit, the message being transmitted while modulating the amplitude of the supply voltage of the integrated circuit by a predetermined binary sequence, said predetermined sequence representing a command for configuring a communication interface of the integrated circuit, the communication interface being connected to the two connections,

- means, included in the integrated circuit, for receiving a message comprising a configuration command sent by a tester, the message being a predetermined binary sequence amplitude modulating the supply voltage of the integrated circuit, the message indicating that an analogue voltage value is requested or a current value is requested or that a reference voltage is transmitted,

- means, included in the integrated circuit, for configuring a communication interface of the integrated circuit according to the configuration command while positioning a switch of the communication interface in a closed position, the communication interface being connected to the two connections and, when the switch of the communication interface is in the closed position, a part of the current delivered to the integrated circuit passes through a resistor when the message indicates that an analogue voltage value is requested, or a current source is connected to the two connections when the message indicates that a current value is requested or a resistor in series with a charge pump or a voltage divider bridge are connected to the two connections when the message indicates that a reference voltage is being transmitted,

- means (Icc), included in the integrated-circuit tester, for measuring a second current delivered to the integrated circuit,

- means, included in the integrated-circuit tester, for calculating, from the measured currents, information for testing the integrated circuit.

2. System according to claim 1, characterised in that the means for measuring the first current delivered to the integrated circuit are activated prior to the transfer of the message to the integrated circuit and the means for measuring the second current delivered to the integrated circuit are activated after the transfer of the message to the integrated circuit.

3. System according to claim 1, characterised in that, when the command for configuring the communication interface of the integrated circuit is a command for obtaining an electrical voltage in the integrated circuit, the information calculated is the electrical voltage in the integrated circuit.

4. System according to claim 1, characterised in that, when the command for configuring the communication interface of the integrated circuit is a command for obtaining an electrical current in the integrated circuit, the information calculated is the electrical current in the integrated circuit.

5. System according to claim 1, characterised in that, when the command for configuring the communication interface of the integrated circuit is a command for transmitting a reference voltage to the integrated circuit, the configuration command comprises a coefficient to be applied by the integrated circuit to the supply voltage of the integrated circuit and the information calculated is a voltage for checking whether the reference voltage has been applied.

6. System according to claim 5, characterised in that the means for measuring the first and second current delivered to the integrated circuit are activated after the transfer of the message to the integrated circuit and the measurements of the currents being spaced apart by a predefined period.

7. Method for testing integrated circuits on a silicon wafer, characterised in that a tester comprises two connections for supplying electrical energy to the integrated circuit, characterised in that the method comprises the steps of:

- measuring, by the integrated-circuit tester, a first current delivered to the integrated circuit,

- transmitting, by the integrated-circuit tester, a message to the integrated circuit, the message being transmitted while modulating the amplitude of the supply voltage of the integrated circuit by a predetermined binary sequence, said predetermined sequence representing a command for configuring a communication interface of the integrated circuit, the communication interface being connected to the two connections,

- receiving, by the integrated circuit, a message comprising a configuration command sent by a tester, the message being a predetermined binary sequence amplitude modulating the supply voltage of the integrated circuit, the message indicating that an analogue voltage value is requested or a current value is requested or that a reference voltage is transmitted,

- configuring, by the integrated circuit, a communication interface of the integrated circuit according to the configuration command while positioning a switch of the communication interface in a closed position, the communication interface being connected to the two connections and, when the switch of the communication interface is in the closed position, a part of the current delivered to the integrated circuit passes through a resistor when the message indicates that an analogue voltage value is requested, or a current source is connected to the two connections when the message indicates that a current value is requested or a resistor in series with a charge pump or a voltage divider bridge are connected to the two connections when the message indicators that a reference voltage is transmitted, a measurement by the integrated-circuit tester, of a measurement of a second current delivered to the integrated circuit,

- calculating, by the integrated-circuit tester, from the currents measured, information for testing the integrated circuit.

CLAIMS

1. A system comprising a tester for integrated circuits on a silicon wafer, and an integrated circuit, characterised in that the tester comprises two connections for supplying electrical energy to an integrated circuit, and in that the system comprises:

means (Icc), included in the integrated-circuit tester, for measuring a first current delivered to the integrated circuit,

means (Vt), included in the integrated-circuit tester, for transmitting a message to the integrated circuit, the message being transmitted while modulating the amplitude of a supply voltage of the integrated circuit by a predetermined binary sequence, the predetermined binary sequence representing a command for configuring a communication interface of the integrated circuit, the communication interface being connected to the two connections,

means, included in the integrated circuit, for receiving the message, the message indicating that an analogue voltage value is requested or a current value is requested or that a reference voltage is transmitted,

means, included in the integrated circuit, for configuring the communication interface of the integrated circuit according to the configuration command by positioning a switch of the communication interface in a closed position, the communication interface being connected to the two connections and, when the switch of the communication interface is in the closed position, a part of the first current delivered to the integrated circuit passes through a resistor when the message indicates that an analogue voltage value is requested, or a current source is connected to the two connections when the message indicates that a current value is requested or a resistor in series with a charge pump or a voltage divider bridge are connected to the two connections when the message indicates that a reference voltage is being transmitted,

means (Icc), included in the integrated-circuit tester, for measuring a second current delivered to the integrated circuit,

means, included in the integrated-circuit tester, for calculating, from the measured currents, information for testing the integrated circuit.

2. A system according to Claim 1, characterised in that the means for measuring the first current delivered to the integrated circuit are activated prior to the transfer of the message to the integrated circuit and the means for measuring the second current delivered to the integrated circuit are activated after the transfer of the message to the integrated circuit.

3. A system according to Claim 1, characterised in that, when the command for configuring the communication interface of the integrated circuit is a command for obtaining the analogue voltage value in the integrated circuit, the information calculated is the electrical voltage in the integrated circuit.

4. A system according to Claim 1, characterised in that, when the command for configuring the communication interface of the integrated circuit is a command for obtaining the current value in the integrated circuit, the information calculated is the electrical current in the integrated circuit.

5. A system according to Claim 1, characterised in that, when the command for configuring the communication interface of the integrated circuit is a command for transmitting a reference voltage to the integrated circuit, the configuration command comprises a coefficient to be applied by the integrated circuit to the supply voltage of the integrated circuit and the information calculated is a voltage for checking whether the reference voltage has been applied.

6. A system according to Claim 5, characterised in that the means for measuring the first and second current delivered to the integrated circuit are activated after the transfer of the message to the integrated circuit and the measurements of the currents being spaced apart by a predefined period.

7. A method for testing integrated circuits on a silicon wafer, characterised in that a tester comprises two connections for supplying electrical energy to the integrated circuit, characterised in that the method comprises the steps of:

measuring, by the integrated-circuit tester, a first current delivered to the integrated circuit,

transmitting, by the integrated-circuit tester, a message to the integrated circuit, the message being transmitted while modulating the amplitude of a supply voltage of the integrated circuit by a predetermined binary sequence, the predetermined binary sequence representing a command for configuring a communication interface of the integrated circuit, the communication interface being connected to the two connections,

receiving, by the integrated circuit, the message comprising the configuration command sent by the tester, the message being the predetermined binary sequence amplitude modulating the supply voltage of the integrated circuit, the message indicating that an analogue voltage value is requested or a current value is requested or that a reference voltage is transmitted,

configuring, by the integrated circuit, the communication interface of the integrated circuit according to the configuration command by positioning a switch of the communication interface in a closed position, the communication interface being connected to the two connections and, when the switch of the communication interface is in the closed position, a part of the first current delivered to the integrated circuit passes through a resistor when the message indicates that an analogue voltage value is requested, or a current source is connected to the two connections when the message indicates that a current value is requested or a resistor in series with a charge pump or a voltage divider bridge are connected to the two connections when the message indicators that a reference voltage is transmitted,

measuring, by the integrated-circuit tester, a second current delivered to the integrated circuit,

calculating, by the integrated-circuit tester, from the currents measured, information for testing the integrated circuit.