

1024 x 8-Bit n-MOS EEPROM with I²C-Bus Interface

The INA2586 is a 8-Kbit (1024 x 8-bit) n-MOS floating gate electrically erasable programmable read only memory (EEPROM). IC works in systems with serial I²C-bus. Up to two INA2586 devices may be connected to the I²C-bus. The programming of the array is implemented by electron's tunneling. The programming voltage is generated on-chip, using a voltage multiplier. Device is functionally identical to the SDA2586, Siemens. IC are made in 8-pin DIP and 8-pin SOP.

FEATURES

- ◆ Non-volatile storage of information during 10 years
- ◆ Single supply (U_{CC}=4,75 B - 5,25 B)
- ◆ On-chip voltage multiplier
- ◆ On-chip generator of bulk biasing
- ◆ Serial input/output I²C-bus
- ◆ 10 000 ERASE/WRITE cycles per byte;
- ◆ Internal reprogramming (no external components)
- ◆ Duration of the ERASE/WRITE cycle is 15 ms
- ◆ Temperature range: 0 ÷ +70⁰C

ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Symbol	Min.	Max
Supply current, mA	U _{CC} =5,25 B	I _{CC0}	-	20,0
Output low voltage (SDA), V	I _{OL} =3 mA U _{CC} =4.75B	U _{OL}	-	0,4
High leakage current:				
-on output (SDA), μA	U _{OH} =5,25 B	I _{LOH}	-	10,0
-on inputs SCL, SDA, μA	U _{IH} =5,25 B	I _{LIH}	-	10,0
-on inputs CS, TP1, TP2, μA	U _{IH} =5,25 B	I _{LIH}	-	100,0
Input capacitance, pF	U _I = 0 B	C _I	-	10,0
Clock input frequency, kHz		f _{SCL}	0	100
Reprogramming cycle time, ms	Erase and Write	t _{PROG}	10,0	20,0
Erase of die cycle time, ms	U _{TP2} = 5,0 B	t _{ER}	-	20,0
The number of E/W cycles on 1 byte			10 000	-
Input high voltage:				
-inputs SDA, SCL, V		U _{IH}	3,0	U _{CC}
-inputs CS, TP1, TP2, V			4,5	U _{CC}
Input low voltage:				
-inputs SDA, SCL, V		U _{IL}	-	1,5
-inputs CS, TP1, TP2, V			-	0,2

PIN ASSIGNMENT

PIN DESCRIPTION

SYMBOL	PIN	DESCRIPTION
U _{SS}	1	GND
CS	2	Chip selection
TP1	3	Testing pin
TP2	4	Testing pin (0V - normal mode, 5V - chip erasing)
SDA	5	Informational line, input/output
SCL	6	Clock input
TP3	7	Testing pin, not connected
U _{CC}	8	Supply Voltage

