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

INA2586

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 (Ucc=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

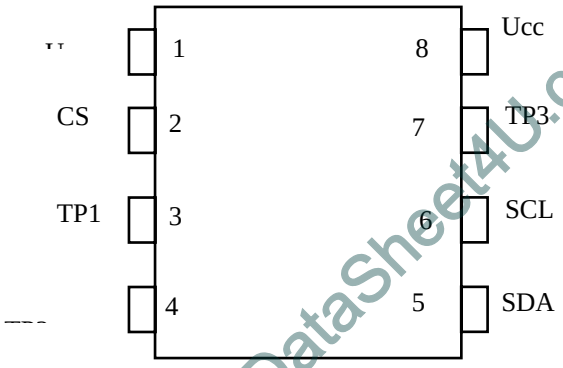
ELECTRICAL CHARACTERISTICS

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 -on inputs SCL, SDA, µA -on inputs CS, TP1, TP2,µA	 U_{OH}=5,25 B U_{IH}=5,25 B U_{IH}=5,25 B	 I_{LOH} I_{LIH} I_{LIH}	 - - -	 10,0 10,0 100,0
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 -inputs CS, TP1, TP2, V		U_{IH}	 3,0 4,5	 U_{CC} U_{CC}
Input low voltage: -inputs SDA, SCL, V -inputs CS, TP1, TP2, V		U_{IL}	 - -	 1,5 0,2

PIN DESCRIPTION

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

PIN ASSIGNMENT



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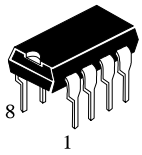
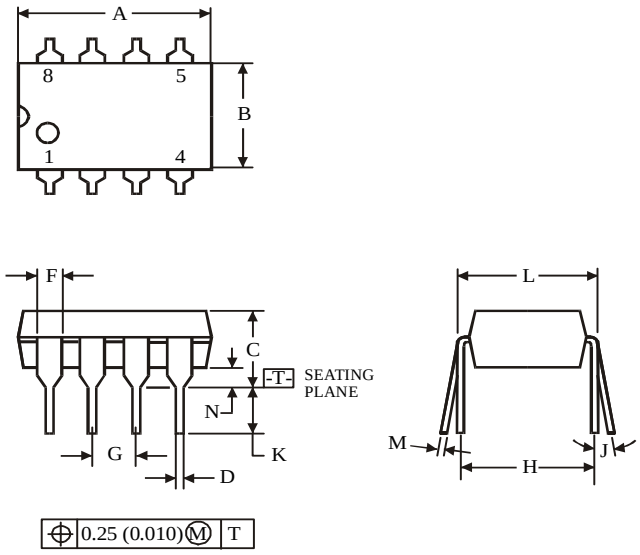
N SUFFIX PLASTIC DIP
(MS – 001BA)





	Dimension, mm	
Symbol	**MIN**	**MAX**
A	8.51	10.16
B	6.1	7.11
C		5.33
D	0.36	0.56
F	1.14	1.78
G	2.54	
H	7.62	
J	0°	10°
K	2.92	3.81
L	7.62	8.26
M	0.2	0.36
N	0.38	

NOTES:

1. Dimensions “A”, “B” do not include mold flash or protrusions.
   Maximum mold flash or protrusions 0.25 mm (0.010) per side.