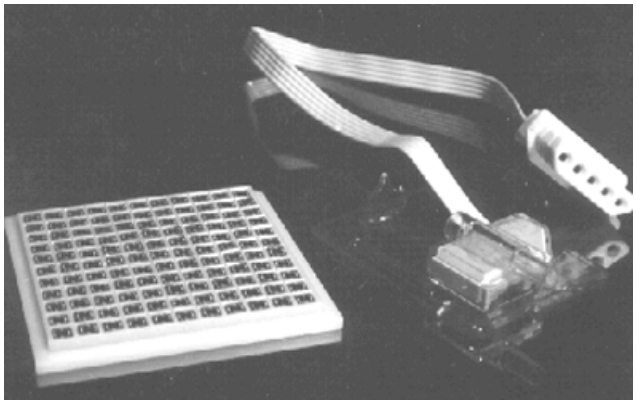
PRESSURE SENSOR CHIPS FOR MEDICAL USE

SP-7, SP-7A



The SP-7 pressure sensor is intended for the use in medical instrumentation. Special design and use of Iso-Boron manufacturing technology enable single step and single temperature compensation without troubles with NTC resistor. All chips are 100% electrically tested. Sensor chips are shipped in waffle pack. No orientation is necessary.

FEATURES

- Single resistor span
- Simple closed-bridge configuration with near open-bridge performance

APPLICATIONS

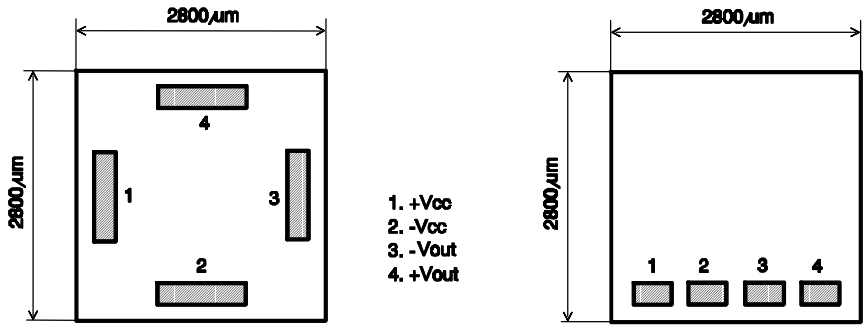
- Blood pressure transducers according to AAMI specifications
- Catheters (SP-7A)

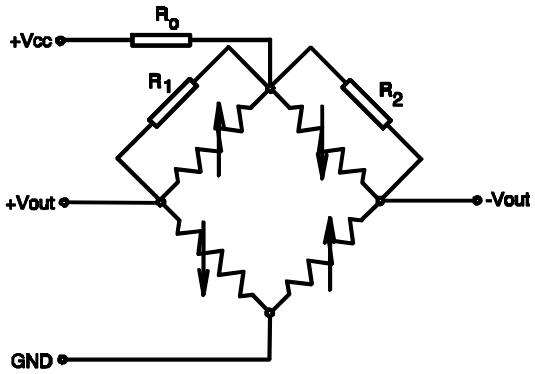
SPECIFICATIONS

- Ambient temperature 22^{O}C, unless otherwise stated

Parameter	typical	min	max	Units	Notes
Pressure range	300			mmHg	Range up to 760 mmHg on request
Pressure overload			3000	mmHg	
Supply voltage	7	7.5	8	V	Including compensation resistor, range (0-70)^{O}C
Span	11.25			mV, 7.5 Vcc	
TCR span	0.02		0.05	%/^{O}C	Including compensation resistor, range (0-70)^{O}C
Nonlinearity	0.2		0.3	% FS BLS	
Offset	±30			% FS	Before trimming
TCR offset	0.02		0.05	% FS/^{O}C	Including compensation resistor, range (0-70)^{O}C
Bridge resistance	300	350	400	Ω	(250-500)Ω on request

DIMENSIONS AND SCHEMATICAL DRAWING





COMPENSATION PROCEDURE

Connect supply voltage. For positive offset remove R_1 and trim R_2 down to zero offset. Opposite for negative offset. Initial values of R_1 and R_2 are 15K, TCR+1400 ppm.

Apply full pressure. Trim $R_0$to 11.25 mV output. Initial value of R_0 is 1K, TCR 100 ppm.