

Figure Captions

- Fig.1. Pressure and temperature variation of relative resistivity for Russian (1) and German (2) manganin
- Fig.2. Pressure variation of the relative changes of the pressure sensitivity coefficient for Russian manganin sensors (1,2,3)
- Fig.3. Pressure variation of resistivity for two tellurium monocrystals  
 $1,2 - a^R = 1.75 \times 10^{-5} \text{ eV/atm}$  ( $R_0 = 19,6 \text{ ohm}$ )  
 $3,4 - a^R = 1.48 \times 10^{-5} \text{ eV/atm}$  ( $R_0 = 6,5 \text{ ohm}$ )
- Fig.4.  $I_C = f(V_C)$  as a function of pressure and temperature for a planar transistor (OE connection)  
 1 -  $P_{\text{atm}}$ ,  $20^\circ\text{C}$ ; 2 -  $P_{\text{atm}}$ ,  $22^\circ\text{C}$ ; 3 - 4000 atm,  $20^\circ\text{C}$ ;  
 4 -  $P_{\text{atm}}$ ,  $24^\circ\text{C}$ ; 5 - 4000 atm,  $22^\circ\text{C}$ ; 6 -  $P_{\text{atm}}$ ,  $26^\circ\text{C}$ ;  
 7 - 4000 atm,  $24^\circ\text{C}$ ; 8 - 4000 atm,  $26^\circ\text{C}$ .
- Fig.5. The relative changes of  $V_{BE}$  as a function of pressure for a planar transistor (OE connection)  
 1,2,3 - transistor 12;  $I_B: 30, 20, 10 \mu\text{A}$   
 4,5,6 - transistor 13;  $I_B: 30, 20, 10 \mu\text{A}$   
 7,8,9 - transistor 12;  $I_C: 2 \text{ mA}, 500 \mu\text{A}, 100 \mu\text{A}$ .
- Fig.6.  $I_C = f(U_{BE})$  for a planar transistor (OE connection)  
 1 - atmospheric pressure; 2 - 6000 atm
- Fig.7. The relative changes of  $U_{BE}$  as a function of temperature for a planar transistor (OE connection)  
 1,2,3, -  $I_C = 2 \text{ mA}$ ; P : atmospheric, 2500 atm, 5000 atm  
 4,5,6 -  $I_C = 500 \mu\text{A}$ ; P : atmospheric, 2500 atm, 5000 atm
- Fig.8. Coefficient of pressure quality for electric sensors  
 1,2,3 - manganin sensors (item 1,2 and 3 in Table 2)  
 4,5,6,7 - Te, InSb sensors (item 4,5,6 and 7 in Table 2)  
 10, 11 - planar transistor sensor (item 10 and 11 in Table 2).

Table 1.  
Values of Coefficients a,b,c in Eq.2  
(in the temperature range 0 - 50°C)

Electric Sensor	a $\times 10^{-7}$ [deg $^{-2}$ ]	b $\times 10^{-5}$ [deg $^{-1}$ ]	c $\times 10^{-4}$	$(\frac{\Delta R}{R_0})_{\max}$ $\times 10^{-5}$	t <sub>max</sub> [deg]
1 German manganin at atmospheric pressure†	-4.1	1.26	-0.88	0.88	15.4
2 German manganin at 6000 atm	-3.57	1.82	-2.2	1.07	25.5
3 Russian manganin before heat treatment	-6.2	3.5	-4.5	4.25	28.2
4 Russian manganin after heat treatment	-4.65	2.38	-2.91	1.42	25.6
5 Russian manganin as in (4) at 3000 atm and 6000 atm	-4.1	3.11	-4.58	12.8	37.8
6 German-Russian manganin sensor‡	-4.35	1.82	-1.89	0.06	21.0
7 Te* (selected crystal)	-540	350	-490	770	32.4
8 InSb* (selected crystal)	0	-0.085	1700	-	-
9 Te + InSb**	-500	260	-330	126	26.0

†Before and after heat treatment.

‡Sensor constructed by Czaputowicz by connecting German and Russian manganin (as in items (2) and (4)).

\*In the temperature range 15 - 30°C.

\*\*Monocrystals Te ( $R_{Te} \approx 12.5$  ohm) and InSb ( $R_{InSb} \approx 1$  ohm) connected in series.