

This is an electromagnetic, high frequency, not hermetically sealed, polarized relay with coaxial terminals and one change-over contact; designed to switch DC & AC electrical circuits with the frequency to 500 MHz and power to 24 W; and with the frequency to 1000 MHz and power to 2W.



Environmental ratings; temperate and cold climate.

Type models: bistable - RPV 5/4; monostable - RPV 5/7.

Ordering data: **Relay RPV 5/7 PC4.521.322 Br0.452.002 TY**

## Technical Specifications

|   |          |
|---|----------|
| Rated Voltage, V  | 27±3     |
| Coil Resistance, Ohm  | 1100±165 |
| Operate Current Strength, mA, not more than   | 13       |
| Release Current Strength, (for relay RPV 5/7), mA, not less than  | 2        |
| Operate Time, ms, not more than   | 5        |
| Release Time, ms, not more than   | 3        |
| Electric Capacitance, pf, not more than:  |          |
| between contacts and package  | 4        |
| between contacts:   |          |
| incl. capacitance between contacts and package  | 2        |
| excl. capacitance between contacts and package (transfer capacitance)   | 0,1      |
| Insulation Resistance, mOhm, not less than: in Normal Ambient Conditions:   |          |
| between contacts  | 500      |
| between current carrying elements, between current carrying elements and package                                    | 200      |
| At Maximum Temperature:   |          |
| between current carrying circuits, between current carrying circuits and package                                    | 20       |
| In Conditions of High Humidity:   |          |
| between contacts, between contacts and package  | 10       |
| between coil and package  | 5        |
| Test Voltage (effective value) between Current Carrying Elements, between Current Carrying Elements and Package, V: |          |
| in normal ambient conditions  | 500      |
| in conditions of high humidity  | 300      |
| at low air pressure   | 180      |
| Contact Resistance, Ohm, not more:  |          |
| for models PC4.521.322; PC4.521.323; PC4.521.324*   | 1,5      |
| for models PC4.521.325; PC4.521.326*  | 0,15     |
| Coupling Attenuation on Terminals and Contact System, Percentage of Throughput, not more:                           |          |
| on the frequency to 600 MHz   | 1        |
| on the frequency of 600—1000 MHz  | 2,5      |
| Relative Pulse Ratio of Coil Power Supply during Periodic On-Switching  | 1,5-3    |
| Weight, g, not more than  | 30       |

\* Relay type RPV 5/4 has the following models PC4.521.324 and PC4.521.325; Relay type RPV5/7 — PC4.521.322, PC4.521.323 and PC4.521.326.

They can switch high-frequency, active termination when circuit characteristic impedance is 50 or 75 Ohm.

|                |      |      |      |      |      |      |      |
|----------------|------|------|------|------|------|------|------|
| Frequency, MHz | 200  | 300  | 400  | 500  | 600  | 800  | 1000 |
| VSWR           | 1,35 | 1,45 | 1,50 | 1,60 | 1,80 | 1,82 | 1,95 |

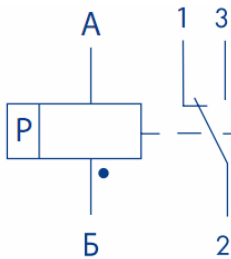
## Switching Modes

| Switching Range                                      |           | Type of Load                        | Current Type              | Switching Frequency, Hz, not more than | Number of Switching Cycles |                                  |
|--|-----------|-------------------------------------|---------------------------|--|----------------------------|----------------------------------|
| I, A   | U, V      |                                     |                           |  | $\Sigma$                   | $t^{\circ}=100^{\circ} \text{C}$ |
| PC4.521.323 (contact 1-2); PC4. 521.325; PC4.521.326 |           |                                     |                           |  |                            |                                  |
| $10^{-6}-10^{-5}$                                    | 0,05-1    | Active                              | Const & Var (до 1000 MHz) | 10                                     | $10^5$                     | $2 \cdot 10^4$                   |
| $10^{-5}-10^{-4}$                                    | 0,5-10    |                                     | Const & Var (до 500 MHz)  |  |                            |                                  |
| 0,0001-0,2   | 2-30      | Inductive<br>$t \leq 50 \text{ ms}$ | Const                     | 5                                      | $0,5 \cdot 10^5$           | $1,25 \cdot 10^4$                |
| 0,005-0,06   | 2-30      |                                     | Var 50-1000 MHz           | 1                                      | $10^5$                     | $2 \cdot 10^4$                   |
| 0,0001-0,1   | 2-30      | Inductive $\cos \varphi \geq 0,3$   | Const                     | 1                                      | $0,2 \cdot 10^5$           | $0,5 \cdot 10^4$                 |
| 0,05-0,15*   | 2-30      | Inductive<br>$t \leq 15 \text{ ms}$ | Var 50-1000 MHz           | 1                                      | $10^5$                     | $2 \cdot 10^4$                   |
| PC4.521.322; PC4. 521.323 (contact 2-3); PC4.521.324 |           |                                     |                           |  |                            |                                  |
| 0,2-0,8  | 6-30      | Active                              | Const & Var (до 500 MHz)  | 10                                     | $10^5$                     | $2 \cdot 10^4$                   |
| 0,1-0,2  | 30-110    |                                     | Const & Var (до 1000 MHz) |  |                            |                                  |
| 0,05-0,1   | 110-250** | Inductive<br>$t < 15 \text{ ms}$    | Const                     | 10                                     | $0,5 \cdot 10^5$           | $2,5 \cdot 10^4$                 |
| 0,05-0,4   | 6-30      |                                     | Var 50-1000 MHz           | 1                                      | $10^5$                     | $2 \cdot 10^4$                   |
| 0,1-0,4  | 6-30      | Inductive $\cos \varphi > 0,3$      | Const                     | 1                                      | $10^5$                     | $2 \cdot 10^4$                   |

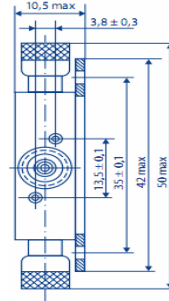
\* For models PC4.521.325 and PC4.521.326: 0,06—0,15 A.

\*\* \*\* At air pressure between 666 and 53320 Pa (from 5 to 400 mm of Mercury ) the voltage on the contacts is not more than 120V AC or 170V DC.

### Schematic Circuit Diagram



### External Dimensions



### Operating Conditions

|   |  |
|---|--|
| Ambient Temperature, °C                                   | from minus 60 to plus 100  |
| Air pressure, Pa, (mm of Mercury)                         | $6,6 \cdot 10^2 \dots 2,1 \cdot 10^5$ ( $5 \dots 1,6 \cdot 10^3$ )   |
| Relative Humidity at 35 °C, %                             | to 98  |
| Vibration Loads:<br>over 5 to 50 Hz<br>over 50 to 2000 Hz | with amplitude of 1,5 mm<br>with acceleration to $98 \text{ m/sec}^2$ (10g)  |
| Shock Loads:<br>single shocks<br>multiple shocks          | 9 shocks with acceleration of $1470 \text{ m/sec}^2$ (150g)<br>10000 shocks with acceleration to $343 \text{ m/sec}^2$ (35g) |
| Shock Resistance  | at acceleration to $343 \text{ m/sec}^2$ (35g)   |
| Linear Loads<br>RPV5/4<br>RPV5/7                          | to $490 \text{ m/sec}^2$ (50g)<br>to $245 \text{ m/sec}^2$ (25g)   |