

password varying within the decimal number (i.e., from 0 to 9). Figure 16(e) shows the corresponding output signals for the coding information of "53219078", together with step-by-step sliding indications on the respective directions.

Examples

Example 1

As shown in Figure 2(a), a sensor device 10 was fabricated with electrodes formed from HPE. The HPE was then examined under stretched motion by a linear motor. In the stretching process, the resistance range was about $18\text{ K}\Omega$ - $30\text{ K}\Omega$ based on an applied voltage of 1.5 V. The electrical characteristics curve is shown in Figure 2(c). It can be seen that the electrode material still exhibits good electrical conductivity under a stretchable state up to 200% strain. Demonstration and test curves of its electrical conductivity are shown in Figure 22. Dimensions of the 2D sensor 10 are listed in Table SI.

Table SI . Dimensions of the sensor

Parameter Name	Value
Length of device	80 mm
Width of device	80 mm
Length of each electrode	70 mm
Width of each electrode	10 mm
Width of grid line	2 mm
Thickness of grid line	1.5 mm
Side length of each small lattice	10 mm
Thickness of electrode	1.5 mm
Thickness of silicone rubber	2 mm