

Thin-Film Passive Integrated Devices

Based on passive integration technology, the company integrates two or three types of components-resistors, capacitors, and inductors-into one device, reducing interconnects and improving integration and electrical performance. The products are widely used in defense, 5G, and optical communications, with thin-film RC network devices as the main product line.

As communication equipment becomes smaller and more multifunctional, integrated RC devices align with industry trends. Their integrated structure reduces size, combines component functions, lowers overall production cost, and strengthens market competitiveness.

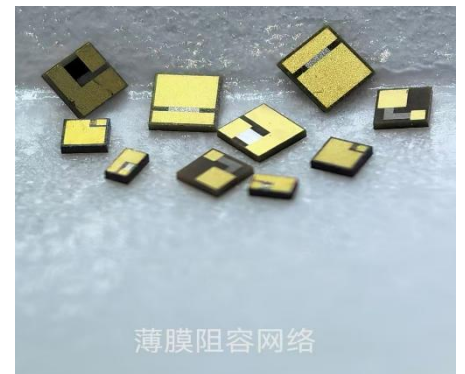
Thin-Film RC Networks

I. Applications

Mainly used in microwave integrated circuits (MICs) to reduce circuit area and component cost.

II. Features

- Resistors and capacitors are integrated together, reducing the number of components;
- Gold wire bonding is possible;
- Tantalum nitride film.

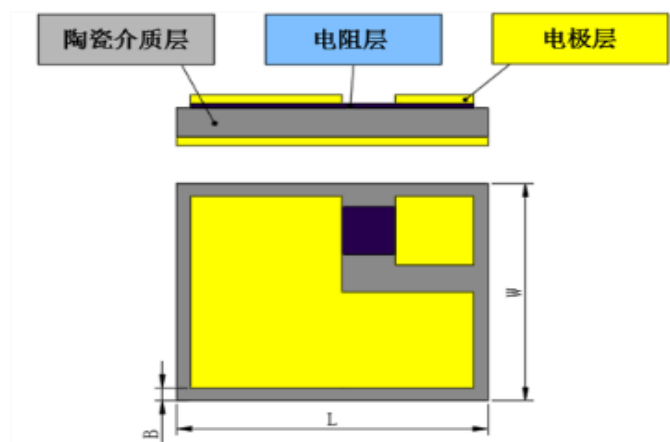


III. Part Numbering Rules

SI - 25 - 5 - N - 500 - K - 101 - M - S - T - W
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

① indicates product type: thin-film resistance capacitance.

② indicates product dimensions.



length / width	25	30	35	40
length (mm)	0.635±0.076	0.762±0.076	0.889±0.102	1.016±0.127
width (mm)	0.635±0.076	0.762±0.076	0.889±0.102	1.016±0.127
margin (mm)	0.051±0.025			
thickness (mm)	0.102~0.254			

Note: product outline can customer customization, 2.54mmx7.62mm rectangular outside shape.

③ indicates rated voltage: B=16V; 2=25V; 5=50V; 1=100V.

④ indicates product dielectric: see the dielectric coding rule table.

⑤ indicates resistance value: the first two digits represents nominal resistance value, the third digit indicates the number of zeros.: 2R0=2.0Ω; 220=22Ω; 101=100Ω.

⑥ indicates resistance tolerance: F: ±1.0%; G: ±2.0%; J: ±5.0%; K: ±10%; L: ±15%; M: ±20%.

⑦ indicates capacitance: the first two digits represent the nominal capacitance value, and the third digit indicates the number of zeros. For example: R05=0.05 pF; 2R0=2.0 pF; 220=22 pF; 101=100 pF; 102=1000 pF.

⑧ indicates capacitance tolerance: A: ±0.05 pF; B: ±0.1 pF; C: ±0.25 pF; D: ±0.5 pF; F: ±1.0%; G: ±2.0%; J: ±5.0%; K: ±10%; L: ±15%; M: ±20%; S: -20%~+50%; Z: -20%~+80%.

⑨ indicates outline structure: N indicates no-margin type; S indicates margin type.

⑩ indicates electrode material: T represents TiW/Ni/Au terminals; N represents TiW/Au terminals; S represents special requirements.

⑪ indicates packaging method: W represents anti-static chip-box packaging; C represents special packaging.

IV. Selection Table

length, width number	25	30	35	40
length, width (mm)	0.635±0.076	0.762±0.076	0.889±0.102	1.016±0.127
capacitance (pF)	Capacitance Tolerance			
0.5~270	K=±10% M=±20% O=±40% Z=-20%~+80%			
		K=±10% M=±20% O=±40%		
		Z=-20%~+80%	K=±10% M=±20% O=±40% Z=-20%~+80%	
270~390				
390~680				K=±10% M=±20% O=±40%
680~1000				Z=-20%~+80%
resistance value (Ω)	0.5~200	Resistance Tolerance		J=±5% K=±10% M=±20%
dielectric code	C~Z			