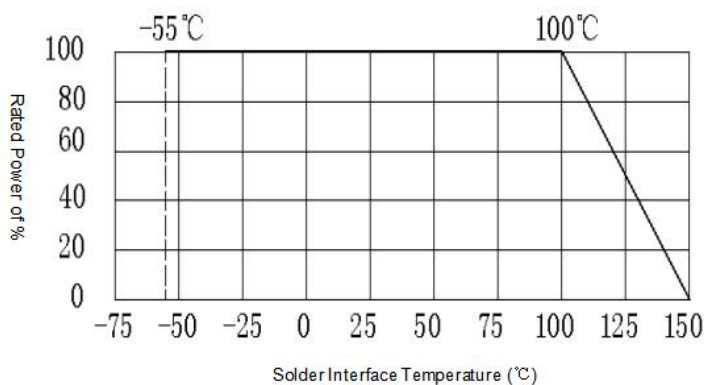


CVD Diamond Surface Mount Terminations

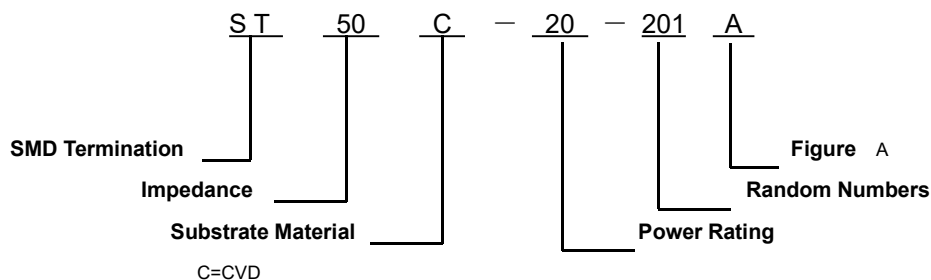
Electrical Features

- ✧ **Nominal Impedance:** 50 Ω
- ✧ **Resistance Tolerance:** $\pm 5\%$ (default)
- ✧ **Substrate Material:** CVD
- ✧ **Power Rating:** 20W-300W
- ✧ **Frequency Range:** DC-42.5GHz
- ✧ **Temperature Coefficient:** $\pm 300\text{ppm}/^\circ\text{C}$
- ✧ **Operating Temperature:** -55°C to $+150^\circ\text{C}$
- ✧ **Installation Method:** Gold wire bonding on the front side, soldering or bonding on the back.

Power Derating



HOW TO ORDER



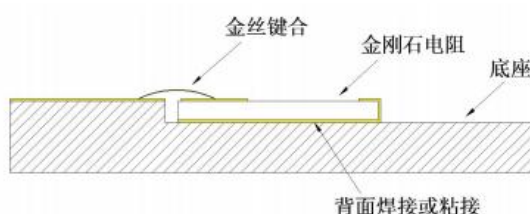
General Specifications and Dimensions

Part Number	Substrate	Power Rating (W)	Frequency Range (GHz)	VSWR (Max.)	Dimensions (mm)		
					L	W	T
ST50C-20-801A	CVD	20	DC-42.5	1.40 :1	0.98	0.98	0.32
ST50C-25-201A	CVD	25	DC-7	1.20 :1	1.6	0.89	0.38
ST50C-25-601A	CVD	25	DC-26	1.60 :1	1.7	0.9	0.38
ST50C-50-302A	CVD	50	DC-20	1.60 :1	1.4	1.4	0.38
ST50C-100-002A	CVD	100	DC-18	1.50 :1	2.16	1.4	0.38
ST50C-150-202A	CVD	150	DC-14	1.40 :1	3.4	2.7	0.38
ST50C-300-201A	CVD	300	DC-6	1.25 :1	4.06	3.05	0.38

* Customized products are available, please consult with Kete.

Installation Instruction

1. The front side is connected by gold wire bonding. The bottom side is welding or bonding.
2. The back side is bonded with conductive adhesive or welded with solder paste below 320 degrees.



◆ Usage Precautions

1. Storage Conditions: It is recommended to store in a constant temperature and humidity warehouse.
2. When manually welding the lead end, a constant temperature soldering iron $\leq 350^{\circ}\text{C}$ should be used, and the welding time should be controlled within 5 seconds.
3. The front electrode port should be bonded with gold wire.
4. To meet the derating curve, install a radiator with a large enough size. Solder paste should be sintered between the metal surface and the radiator, and the solder should melt for less than 5 seconds. Add air cooling or water cooling if necessary.

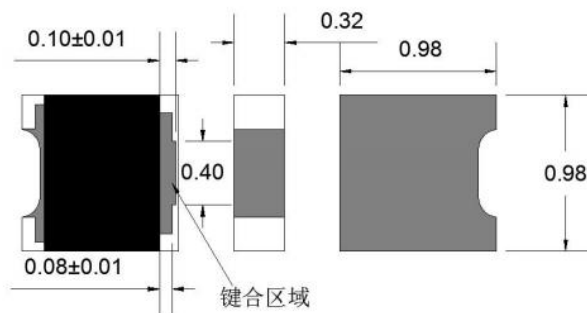
CVD Diamond Surface Mount Terminations

Part Number: ST50C-20-801A

Electrical Specifications

- ✧ **Impedance:** 50 Ω
- ✧ **Tolerance:** $\pm 5\%$
- ✧ **Substrate Material:** CVD
- ✧ **Power Rating:** 20W
- ✧ **Frequency Range:** DC-42.5GHz
- ✧ **VSWR:** $\leq 1.40 : 1$
- ✧ **Temperature Coefficient:** $\pm 300 \text{ppm}/^\circ\text{C}$
- ✧ **Operating Temperature:** -55°C to $+150^\circ\text{C}$
- ✧ **Electrode:** Gold

Outline Drawing (mm)

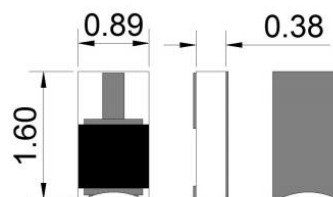


Part Number: ST50C-25-201A

Electrical Specifications

- ✧ **Impedance:** 50 Ω
- ✧ **Tolerance:** $\pm 5\%$
- ✧ **Substrate Material:** CVD
- ✧ **Power Rating:** 25W
- ✧ **Frequency Range:** DC-7GHz
- ✧ **VSWR:** $\leq 1.20 : 1$
- ✧ **Temperature Coefficient:** $\pm 300 \text{ppm}/^\circ\text{C}$
- ✧ **Operating Temperature:** -55°C to $+150^\circ\text{C}$
- ✧ **Electrode:** Gold

Outline Drawing (mm)

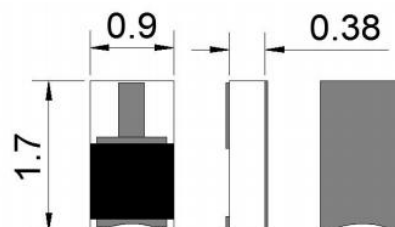


Part Number: ST50C-25-601A

Electrical Specifications

- ✧ **Impedance:** 50 Ω
- ✧ **Tolerance:** $\pm 5\%$
- ✧ **Substrate Material:** CVD
- ✧ **Power Rating:** 25W
- ✧ **Frequency Range:** DC-26GHz
- ✧ **VSWR:** $\leq 1.60 : 1$
- ✧ **Temperature Coefficient:** $\pm 300 \text{ppm}/^\circ\text{C}$
- ✧ **Operating Temperature:** -55°C to $+150^\circ\text{C}$
- ✧ **Electrode:** Gold

Outline Drawing (mm)



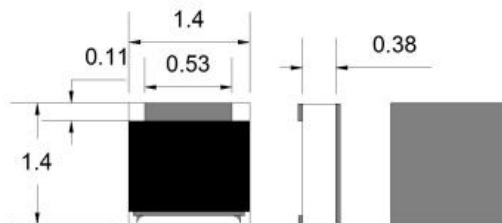
CVD Diamond Surface Mount Terminations

Part Number: ST50C-50-302A

Electrical Specifications

- ✧ **Impedance:** 50 Ω
- ✧ **Tolerance:** $\pm 5\%$
- ✧ **Substrate Material:** CVD
- ✧ **Power Rating:** 50W
- ✧ **Frequency Range:** DC-20GHz
- ✧ **VSWR:** $\leq 1.60 : 1$
- ✧ **Temperature Coefficient:** $\pm 300\text{ppm}/^\circ\text{C}$
- ✧ **Operating Temperature:** -55°C to $+150^\circ\text{C}$
- ✧ **Electrode:** Gold

Outline Drawing (mm)

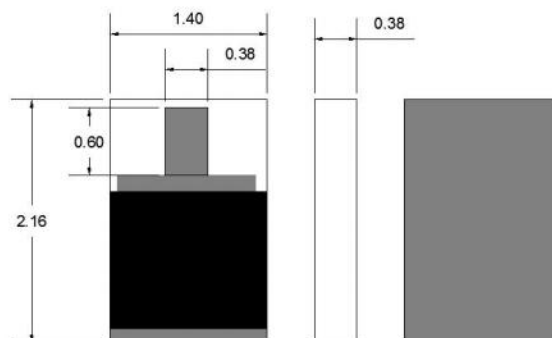


Part Number: ST50C-100-002A

Electrical Specifications

- ✧ **Impedance:** 50 Ω
- ✧ **Tolerance:** $\pm 5\%$
- ✧ **Substrate Material:** CVD
- ✧ **Power Rating:** 100W
- ✧ **Frequency Range:** DC-18GHz
- ✧ **VSWR:** $\leq 1.50 : 1$
- ✧ **Temperature Coefficient:** $\pm 300\text{ppm}/^\circ\text{C}$
- ✧ **Operating Temperature:** -55°C to $+150^\circ\text{C}$
- ✧ **Electrode:** Gold

Outline Drawing (mm)

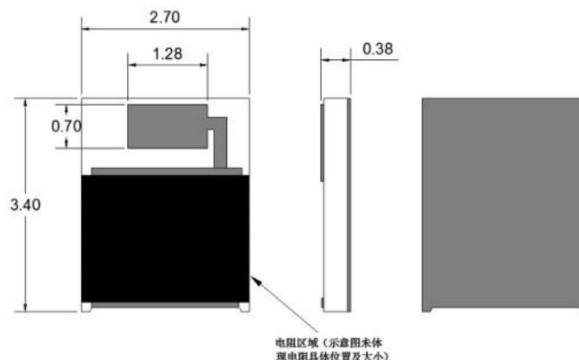


Part Number: ST50C-150-202A

Electrical Specifications

- ✧ **Impedance:** 50 Ω
- ✧ **Tolerance:** $\pm 5\%$
- ✧ **Substrate Material:** CVD
- ✧ **Power Rating:** 150W
- ✧ **Frequency Range:** DC-14GHz
- ✧ **VSWR:** $\leq 1.40 : 1$
- ✧ **Temperature Coefficient:** $\pm 300\text{ppm}/^\circ\text{C}$
- ✧ **Operating Temperature:** -55°C to $+150^\circ\text{C}$
- ✧ **Electrode:** Gold

Outline Drawing (mm)



CVD Diamond Surface Mount Terminations

Part Number: ST50C-300-201A

Electrical Specifications

- ✧ **Impedance:** 50 Ω
- ✧ **Tolerance:** $\pm 5\%$
- ✧ **Substrate Material:** CVD
- ✧ **Power Rating:** 300W
- ✧ **Frequency Range:** DC-6GHz
- ✧ **VSWR:** $\leq 1.25 : 1$
- ✧ **Temperature Coefficient:** $\pm 300 \text{ ppm}/^\circ\text{C}$
- ✧ **Operating Temperature:** -55°C to $+150^\circ\text{C}$
- ✧ **Electrode:** Gold

Outline Drawing (mm)

