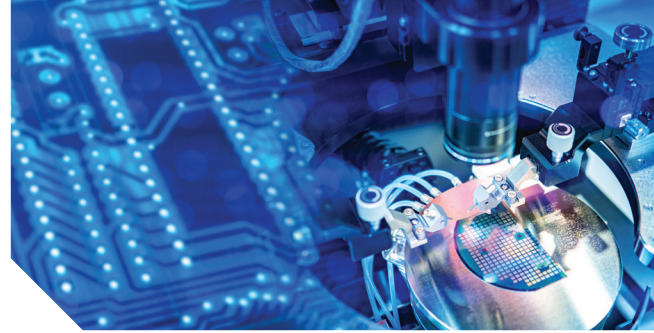




Purpose-Built Capacitors for RF Power in Semiconductor Manufacturing

One supplier. Seven critical capacitor jobs. Designed for RF generators and matching networks

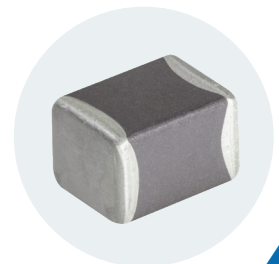
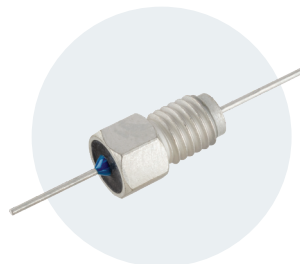
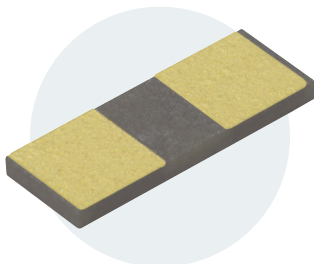
A complete, high power capacitor portfolio designed for RF generators, matching networks, and next generation EVC architectures

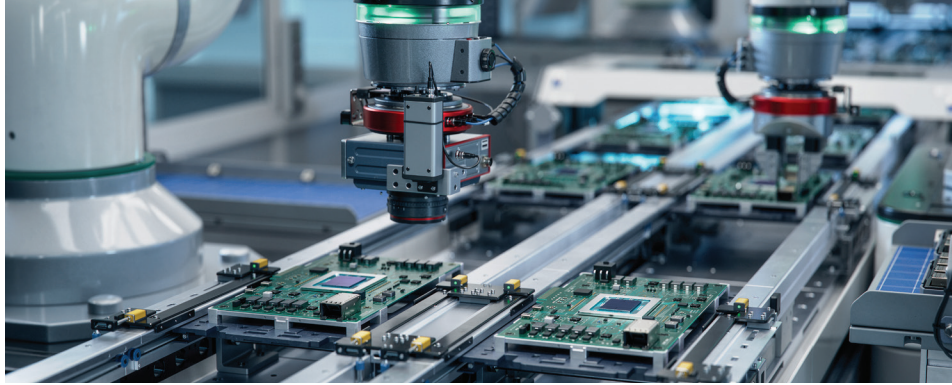
Modern plasma tools rely on **high power, multi frequency RF systems** operating at kW power levels and hundreds to thousands of volts. As the industry shifts to **electronically variable capacitors (EVCs)** and **pulsed RF**, commodity capacitors fall short on stability, power handling, and lifetime reliability.

Knowles' Advantage: One Portfolio, Seven Critical Jobs

Knowles provides a complete portfolio for RF generators and matching networks — eliminating multi supplier qualification.

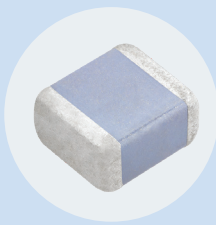
RF JOB		PRIMARY KNOWLES SOLUTION	KEY VALUE
1.	Impedance Matching	High Power RF MLCCs (2225, 4040)	C0G stability, to 7 kV
2.	DC Blocking	High Q MLCCs / DLI Single Layer Caps	Highest SRF, zero drift
3.	Harmonic Filtering	High Q Porcelain (AH, CF)	Ultra stable, high SRF
4.	PA Resonant Tank	High Power RF MLCCs (4040)	Maximum RF power handling
5.	EMI Containment	SFCD Feedthrough Filters	C / Pi / T, 50–500 V
6.	Power Supply Filtering	Aluminum Electrolytics + Hiteca™ MLCCs	0% aging, long life
7.	Precision Tuning	Knowles' Voltronics brand Giga Trim Trimmers	To 7.5 kV / 15 kV DWV





Knowles uniquely supports every capacitor function inside RF power delivery:

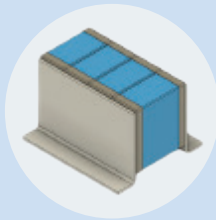
- ✓ High Power RF MLCCs (COG) to 7 kV
- ✓ RF Capacitor Assemblies explicitly designed for plasma tools
- ✓ Knowles' DLI brand Single Layer Capacitors — industry reference standard
- ✓ High Voltage Trimmers (Knowles' Voltronics brand) to 15 kV DWV
- ✓ Feedthrough EMI Filters (SFCD)
- ✓ Hiteca™ MLCCs with 0% aging



HOT PRODUCTS

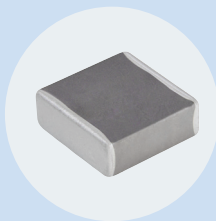
High Power RF MLCCs — 4040 Case Size

Largest MLCC for maximum power handling in PA resonant tanks and HV matching.



RF Capacitor Assemblies

Custom, multi element solutions enabling EVC architectures and sticky design-ins.



Hiteca™ MLCCs

0% aging under DC bias — ideal for long life RF generator power supplies.

Knowles offers purpose built solutions across the entire RF capacitor stack.

Knowles helps RF generator and matching network OEMs:

- Reduce supplier count
- Enable EVC and pulsed RF designs
- Improve long term stability and uptime
- Win next generation semiconductor tool designs

Knowles enables next generation RF plasma tools by delivering unmatched power handling, stability, and portfolio breadth — from matching networks to PA tanks to EMI containment.

One supplier. Seven RF capacitor jobs. Built for semiconductor manufacturing.