



High Voltage Capacitors

DRIVING INNOVATION. POWERING SUCCESS.

General Atomics Electromagnetic Systems (GA-EMS) is globally recognized as the leading U.S. developer and manufacturer of advanced high voltage capacitors for DC, pulsed, high frequency AC, and specialized system applications for defense, commercial, industrial, and research systems worldwide.

Military

Research & Development

Medical

Industrial

Transportation

High Voltage Capacitors

GA-EMS' innovative technology designs meet customer requirements for:

- High energy density
- High peak currents
- Low inductance, low ESR
- Wide temperature range
- High mechanical shock
- Greater reliability

Our extensive product portfolio includes all types of film and paper dielectrics, metalized and discrete foil electrodes, oil-filled and dry constructions, and a wide variety of packages. In addition to an extensive line of off-the-shelf products, GA-EMS offers customization services to meet specific application requirements and exacting voltage and capacitance specifications.



Metal Case Capacitors

METAL CASE CAPACITORS

Wide range of capabilities from high peak current microsecond discharges to high energy density, self-healing, long-life designs.

SERIES	TYPE	VOLTAGE	CAPACITANCE & ESL	KEY FEATURES
CMX	Self-Healing Energy Storage Capacitors	2.8 kV – 13.2 kV	575 μ F – 64,000 μ F 150 nH – 1,200 nH	Self-healing metalized film capacitors in welded metal cans. Up to 3.0 J/cc. Designed for millisecond discharge. Standard ratings up to 13 kV and 255 kJ.
CMF	Self-Healing Energy Storage Capacitors	5.6 kV – 26 kV	255 μ F – 9,500 μ F 150 nH – 800 nH	Self-healing metalized film capacitors in welded metal cans. Designed for millisecond discharge. Standard ratings to 26 kV and 200 kJ.
C	Energy Storage High Voltage Capacitors	10 kV – 100 kV	3 μ F – 830 μ F 35 nH – 100 nH	Extended foil capacitors in welded metal cans. Standard ratings up to 100 kV. Low inductance, high peak current. Low profile bushings.
DM	Metalized Capacitors	1 kV – 3 kV	25 μ F – 750 μ F 75 nH – 200 nH	Self-healing metalized film capacitors in drawn metal cans. Designed for industrial rep-rate applications. Peak currents up to 11.6 kA.
DP	General Purpose Pulse Capacitors	2 kV – 15 kV	2 μ F – 185 μ F 50 nH – 200 nH	Extended foil capacitors in drawn metal cans. For pulsed applications such as lasers, flash lamps and other circuits where moderate to long-life is required.
DQ	Defibrillator Capacitors	2.1 kV – 5.5 kV	32 μ F – 196 μ F 65 nH – 200 nH	Small metalized film capacitors in drawn metal cans. Peak currents up to 300 A.

PLASTIC CASE CAPACITORS

Compact designs for high voltage, low inductance, pulsed applications.

SERIES	TYPE	VOLTAGE	CAPACITANCE & ESL	KEY FEATURES
PDS/PDSS	Fast Pulsed Capacitors	100 kV	8 nF – 300 nF 6 nH – 25 nH	Double-ended plastic case with output terminal rails. Very low inductance, low ESR. Sub-microsecond pulse rise time to 100 kV.
PM/PD	Pulse Discharge & DC Capacitors	25 kV – 62 kV	4.5 nF – 200 nF 15 nH – 70 nH	Extended foil, double-ended plastic case capacitors. Designed for long life and fault tolerance. Shot life > 1x10 ⁹ .
S/SS	High Voltage 1 pps Capacitors	30 kV – 100 kV	0.04 μF – 1.0 μF 15 nH – 40 nH	Single-ended plastic case capacitors. Compact design for high voltage, low inductance, pulsed applications.
DE	High Voltage Pulse Discharge Capacitors	5 kV – 50 kV	0.007 μF – 2.0 μF 10 nH – 90 nH	Extended foil, double-ended plastic case capacitors. Low-loss dielectric.
SE/SSE	High Voltage 1,000 pps Capacitors	30 kV – 80 kV	0.04 μF – 0.15 μF 15 nH – 25 nH	Extended foil, single-ended plastic case capacitors. Very low inductance, high rep rate.

SPECIALIZED CAPACITORS AND COMPONENTS

TYPE	VOLTAGE	CAPACITANCE & ESL	KEY FEATURES
Military (MIL-Spec) Capacitors			Contact GA-EMS for custom MIL-Spec capacitor designs.
Custom High Voltage Capacitors	1 kV – 2 MV	100 pF – 100,000 μF	Custom designs to meet your requirements. Current ratings up to 1 MA.
High Energy Density Capacitors	1 kV – 100 kV	25 μF – 64,000 μF	For maximum stored energy in the smallest possible volume. Shot life ratings from 1x10 ³ up to 1x10 ¹¹ .
Very High Voltage Capacitors	100 kV – 2 MV	0 pF – 4 μF	Capacitance values ranging from microfarads at 100 kV to nanofarads at 1 MV.



Plastic Case Capacitors



Specialized Capacitors and Components

CATALOG CAPACITORS

Select capacitors are available in-stock.

SERIES	PART NUMBER	VOLTAGE	CAPACITANCE & ESL	CASE DIMENSIONS H x W x L
DP	30543	2 kV	100 μ F	3.75 in. x 4.56 in. x 7.75 in.
DMC	30549	3.5 kV	50 μ F	3.75 in. x 4.56 in. x 7.75 in.
S	31150	30 kV	5 μ F	2.3 in. x 5.9 in. x 9.8 in.
S	31151	30 kV	0.6 μ F	2.3 in. x 5.9 in. x 11.8 in.
S	31159	50 kV	0.15 μ F	2.3 in. x 5.9 in. x 9.8 in.
S	31160	50 kV	0.22 μ F	2.3 in. x 5.9 in. x 11.8 in.
S	31165	100 kV	0.04 μ F	2.3 in. x 5.9 in. x 10.8 in.

APPLICATIONS



MILITARY



RESEARCH &
DEVELOPMENT



MEDICAL

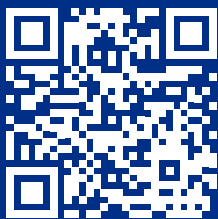
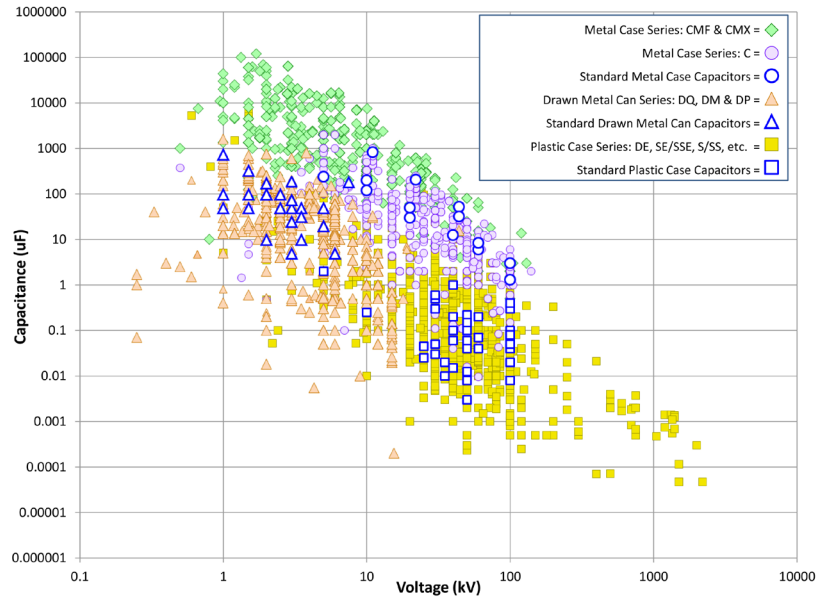


INDUSTRIAL



TRANSPORTATION

GA-EMS provides leading-edge technology, extensive design expertise, quality manufacturing services and comprehensive testing capabilities to support a wide range of voltage, capacitance and application specific requirements. We supply capacitors with the highest possible energy densities with charge and discharge cycle lifetime ratings ranging from 1000 cycles up to 10 billion cycles.



CONTACT INFORMATION

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