



KEMET Organic Capacitor (KO-CAP)

T591 High Performance Automotive Grade Polymer 105°C / 125°C



Why Choose KEMET

KEMET Electronics Corporation is a leading global supplier of electronic components. We offer our customers the broadest selection of capacitor technologies in the industry, along with an expanding range of electromechanical devices, electromagnetic compatibility solutions and supercapacitors. Our vision is to be the preferred supplier of electronic component solutions for customers demanding the highest standards of quality, delivery and service.

Features & Benefits

- Ultra-low ESR
- Polymer cathode technology
- Non-ignition failure mode
- Qualification package based on AEC-Q200
- High reliability up to 500 hours with 85°C / 85% RH load
- TS 16949 certified plant
- Halogen-free epoxy
- RoHS compliance and lead-free terminations
- Laser marked case

Product Checklist

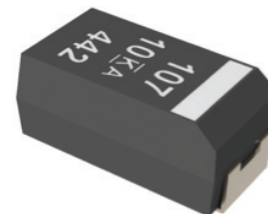
- What is the circuit operating voltage?
- What is the application temperature?
- Is your application subject to humidity conditions? If yes, what is the maximum humidity level?
- Does your application require PPAP/PSW?
- What is the necessary reliability level?
- Are there any physical space restrictions?

For more information, samples and engineering kits, please visit us at www.kemet.com or call 1.877.myKEMET.

Programs Supported

Decoupling and filtering in a variety of market segments with special emphasis in automotive applications:

- Infotainment
- Advanced driver assist systems
- DC/DC converters
- Industrial
- Telecommunications



Performance/Physical Characteristics

Case Size	Tolerances	Dielectric	Temperature Range	Voltage Options	Capacitance Values
T591					
B D V	M = ±20%	Ta ₂ O ₅	-55°C to 105°C / 125°C	2.5 – 50 V	Up to 330 μF

Ordering Information

T	591	D	107	M	010	A	T	E025
Capacitor Class	Series	Case Sizes	Capacitance Code (pF)	Capacitance Tolerance	Voltage (VDC)	Failure Rate/ Design	Lead Material	ESR
T = Tantalum	591 = Automotive Grade Polymer	B, D, V	First two digits represent significant figures. Third digit specifies number of zeros.	M = ±20%	2R5 = 2.5 006 = 6.3 010 = 10 016 = 16 020 = 20 025 = 25 035 = 35 050 = 50	A=NA	T = 100% Tin (Sn)	Max. ESR in mΩ, 025 = 25 mΩ



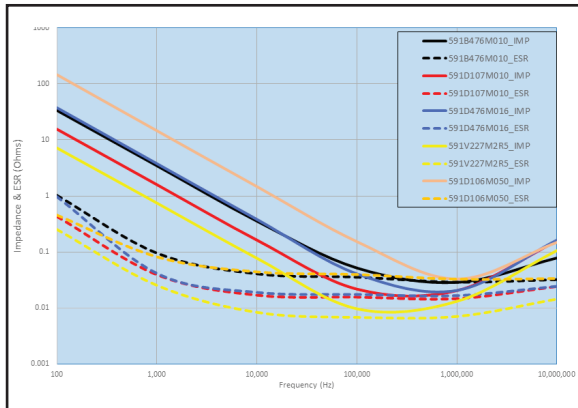
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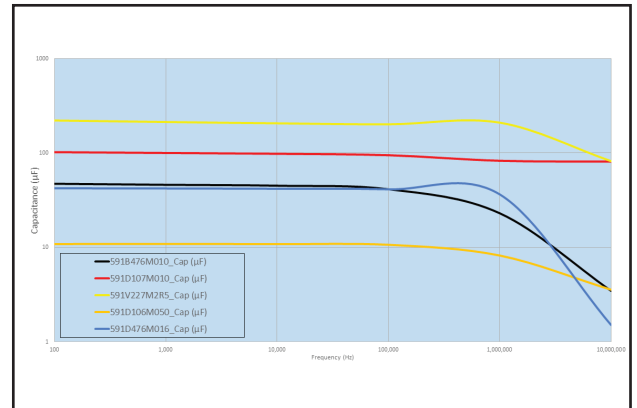


Electrical Characteristics

ESR vs. Frequency



Capacitance vs. Frequency



Derating Guidelines

Voltage Rating	Maximum Recommended Steady State Voltage	Maximum Recommended Transient Voltage (1 ms – 1 μs)
	-55°C to 105°C	
$2.5 V \leq V_R \leq 10 V$	90% of V_R	V_R
$V_R > 16 V$	80% of V_R	V_R
	105°C to 125°C	
$2.5 V \leq V_R \leq 10 V$	60% of V_R	67% of V_R
$V_R > 16 V$	54% of V_R	67% of V_R

V_R = Rated voltage

