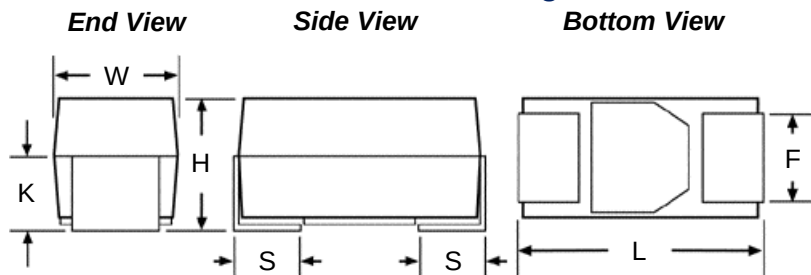


AO-CAP Data Sheet

KEMET's AO-CAP, designated the A700 Series, has been targeted for power management applications. The structure of the AO-CAP uses aluminum as the anode material, aluminum oxide as the dielectric, and a conductive organic polymer for its counter-electrode material. The AO-CAP offers many advantages:

- Extremely low ESR
- High capacitance retention for superior performance at high operating frequencies
- No voltage derating up to 125°C
- Robust to the surface-mount process
- No dry-out-related failure mechanism
- Pb free

Outline Drawing



Dimensions - Millimeters

Case Size		L	W	H	K Min.	F ±0.1	S ±0.2
KEMET	EIA						
V	7343-20	7.3 ± 0.3	4.3 ± 0.3	1.9 ± 0.1	1.1	2.4	1.3
D	7343-31	7.3 ± 0.3	4.3 ± 0.3	2.8 ± 0.3	1.3	2.4	1.3
X	7343-43	7.3 ± 0.3	4.3 ± 0.3	4.0 ± 0.3	2.1	2.4	1.3

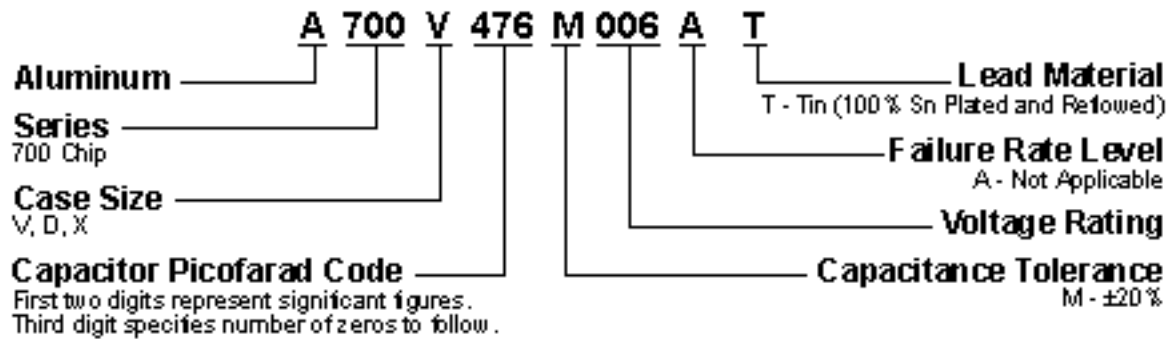
Note that glue pad shape may differ at KEMET's discretion.

A700 Ratings & Part Number Reference

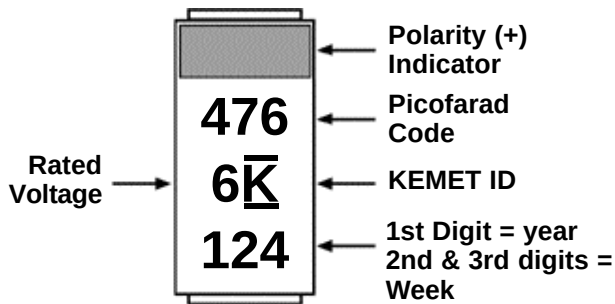
Cap μF (±20%)	Voltage	Case Size	KEMET Part Number	DC Leakage μA +25°C Max	DF % 120 Hz + 25°C Max	ESR mW 100kHz 25°C Max	Ripple Current A rms 100kHz, @ Max ESR 25°C to 105°C
100.0	2	V/7343-20	A700V107M002AT	12.0	6%	28	2.1
150.0	2	V/7343-20	A700V157M002AT	18.0	6%	28	2.1
180.0	2	D/7343/31	A700D187M002AT	21.6	6%	18	2.9
220.0	2	D/7343-31	A700D227M002AT	26.4	6%	18	2.9
220.0	2	D/7343-31	A700D227M002AT6050	26.4	6%	15	3.2
220.0	2	D/7343-31	A700D227M002AT6051	26.4	6%	12	3.5
270.0	2	X/7343-43	A700X277M002AT	26.4	6%	15	3.2
390.0	2	X/7343-43	A700X397M002AT	46.8	6%	15	3.3
390.0	2	X/7343-43	A700X397M002AT6050	46.8	6%	10	4.1
82.0	2.5	V/7343-20	A700V826M004AT6003	12.3	6%	28	2.1
150.0	2.5	D/7343/31	A700D157M004AT6003	22.5	6%	18	2.9
220.0	2.5	X/7343-43	A700X227M004AT6003	33.0	6%	15	3.3
82.0	4	V/7343-20	A700V826M004AT	19.7	6%	28	2.1
120.0	4	D/7343-31	A700D127M004AT	28.8	6%	18	2.9
150.0	4	D/7343-31	A700D157M004AT	36.0	6%	18	2.9
180.0	4	X/7343-43	A700X187M004AT	43.2	6%	15	3.3
220.0	4	X/7343-43	A700X227M004AT	52.8	6%	15	3.3
47.0	6.3	V/7343-20	A700V476M006AT	11.8	6%	28	2.1
56.0	6.3	V/7343-20	A700V566M006AT	14.1	6%	28	2.1
68.0	6.3	V/7343-20	A700V686M006AT	17.1	6%	28	2.1
100.0	6.3	D/7343-31	A700D107M006AT	25.2	6%	18	2.9
150.0	6.3	X/7343-43	A700X157M006AT	37.8	6%	15	3.3

Note that DC leakage limits are after a minimum of 2 minutes charge time at rated voltage.

A700 Ordering Information



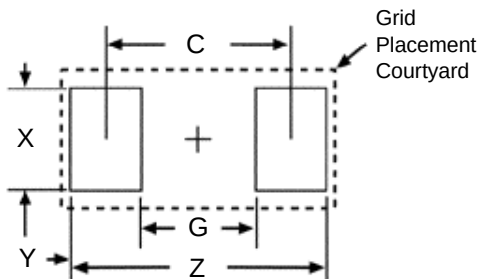
Component Marking



Tape & Reel Packaging

Case Codes		Tape & Reel Dimensions				
KEMET	EIA	Tape Width mm	Pitch mm ± 0.1		Reel Quantity	
			Part	Sprocket	180mm (7" dia)	330mm (13" dia)
V	7343-20	12 ± 0.3	8	4	1000	3000
D	7343-31	12 ± 0.3	8	4	500	2500
X	7343-43	12 ± 0.3	8	4	500	2000

Recommended Mounting Pad Geometries - Millimeters

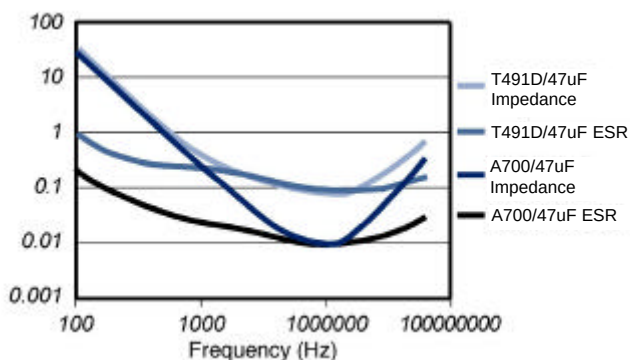


Land Pattern Dimensions for Reflow Solder

KEMET/EIA Size Code	Pad Dimensions				
	Z	G	X	Y (ref)	C (ref)
V/7343-20, D/7343-31 X/7343-43	8.90	3.80	2.70	2.55	6.35

Typical ESR and Impedance

T491D/47 μ F (Tantalum Cap) vs. A700/47 μ F (AO-CAP)



Capacitance vs. Frequency

T491 (MnO₂) vs. A700 (Polymer)

