

Material Composition Declaration

Film Capacitors DC Link, DC Filtering



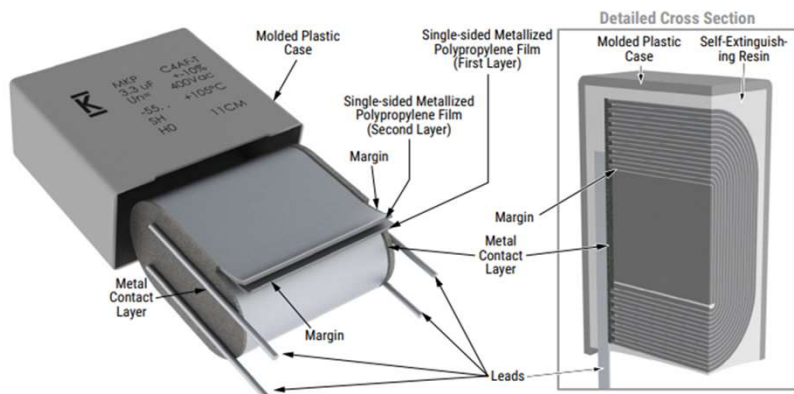
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Material Declaration Plastic film capacitor

C4AF SERIES Radial, 2 or 4 Leads, 250 – 400 VAC, for Harsh Environment AC Filtering (Automotive Grade)

Construction



Voltage Range : 250 – 600 VAC

Capacitance Range : 1 – 62 μ F

Size range : 11x20x31.5 – 45x65x57.5

2 or 4 wires (7th digit code PN -terminals code U or W)

Environmental Compliance

Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3116_C4AF.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Film	Polipropylene	see Annex 1	PP	9003-07-0
		Aluminium		Al	7429-90-5
		Zinc		Zn	7440-66-6
	Metal Spray	Tin		Sn	7440-31-5
Zinc		Zn		7440-66-6	
Encapsulation	Thermosetting Resin	Modified cured EP		Epoxy resin	-
	Plastic Case PBT	Polybutylene terephthalate		PBT	26062-94-2
		Antimony trioxide		Sb2O3	1309-64-4
		Halogenated Flame Ret. except for PBB and PBDE		-	-
		Glass Fiber		GF	65997-17-3
Termination	Core Metal	Copper	Cu-ETP	7440-50-8	
	Finish plating	Tin	EP-Sn	7440-31-5	

Remark: Material declaration of special part number or part number with C-spec will be individually released.

<https://www.kemet.com/en/us/rohs-documents.html>

Annex 1

Material Declaration Plastic film capacitor



C4AF SERIES [Radial, 2 or 4 Leads, 250 – 400 VAC, for Harsh Environment AC Filtering \(Automotive Grade\)](#)

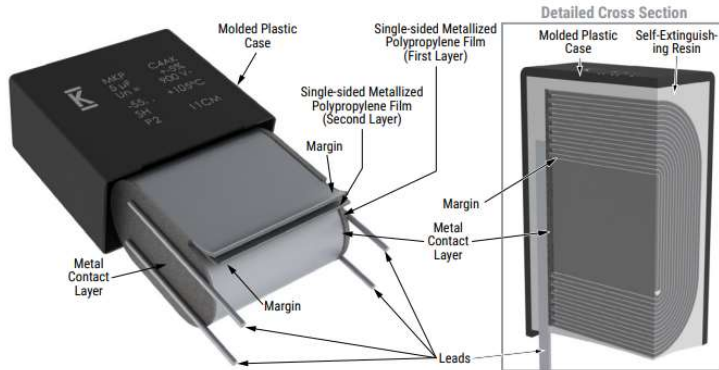
Pitch mm				27.5	37.5	52.5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 7,5µF Box dimension 22x37x31,5 mm	MAXIMUM size Cap 24,5µF Box dimension 30x50x42 mm	MAXIMUM size Cap 62µF Box dimension 45x65x57,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	11,818	41,42	84,639
	Metal	Al	7429-90-5	0,005	0,019	0,038
	Metal	Sn	7440-31-5	0,332	0,702	1,174
	Metal	Zn	7440-66-6	3,092	6,677	11,293
Homogeneous Level Weight				15,247	48,818	97,144
Encapsulation	Thermosetting Resin	Epoxy Resin	-	14,008	45,155	97,933
	Plastic Case	PBT	26062-94-2	3,157	8,496	19,47
		Sb2O3	1309-64-4	0,187	0,504	1,155
		Halogenated Flame Ret. except for PBB and PBDE	-	0,776	2,088	4,785
		GF	65997-17-3	1,070	2,880	6,600
		Further Additives	-	0,161	0,432	0,990
Homogeneous Level Weight				19,359	59,555	130,933
Termination	Core Metal	Cu-ETP	7440-50-8	0,362	1,590	1,880
	Finish plating	EP-Sn	7440-31-5	0,032	0,037	0,043
Homogeneous Level Weight				0,394	1,627	1,923
Total Weight				35,000	110,000	230,000

Material Declaration Plastic film capacitor

C4AK SERIES [Radial, 2 Leads, 700 – 900 VDC, for DC Link](#)



Construction



Voltage Range : 700 – 900 VDC

Capacitance Range : 1.5 – 60 μ F

Size range : 11x20x32 – 35x50x57.5

2 or 4 wires (7th digit code PN -terminals code U or W)

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3129_C4AK.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Film	Polipropylene	see Annex 2	PP	9003-07-0
		Cyclic olefin copolyer		COC	26007-43-2
		Zinc		Zn	7440-66-6
		Aluminium		Al	7429-90-5
	Metal Spray	Tin		Sn	7440-31-5
		Zinc		Zn	7440-66-6
Encapsulation	Thermosetting Resin	Modified cured EP		Epoxy resin	-
		Polyphenylene sulfide		PPS	26125-40-6
	Plastic Case	Glass Fiber		GF	65997-17-3
		Calcium Carbonate		CaCO3	471-34-1
		Carbon Black		C	1333-86-4
		Polyphenylene sulfide		PPS	25212-74-2
	Plastic Case (*)	Glass Fiber	GF	65997-17-3	
		Calcium Carbonate	CaCO3	471-34-1	
		Others	-	-	
		-	-	-	
Termination	Core Metal	Copper	Cu-ETP	7440-50-8	
	Finish plating	Tin	EP-Sn	7440-31-5	

(*) alternative available for some PNs

Remark: Material declaration of special part number or part number with C-spec will be individually released.

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Annex 2

Material Declaration Plastic film capacitor

C4AK SERIES [Radial, 2 Leads, 700 – 900 VDC, for DC Link](#)



Pitch mm				27,5	37,5	52,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 12,5µF Box dimension 22x37x32 mm	MAXIMUM size Cap 35µF Box dimension 33x48x42 mm	MAXIMUM size Cap 60µF Box dimension 35x50x57,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	11,768	27,363	46,314
	Thermoplastics	COC	26007-43-2	2,942	6,841	11,579
	Metal	Al	7429-90-5	0,063	0,148	0,250
	Metal	Sn	7440-31-5	1,329	2,542	2,809
	Metal	Zn	7440-66-6	2,017	3,886	4,385
	Metal	Cu	7440-50-8	0,043	0,083	0,091
	Miscellaneous		-	0,003	0,008	0,013
Homogeneous Level Weight				18,165	40,871	65,441
Encapsulation	Thermosetting Resin	Epoxy Resin	-	16,130	39,541	56,932
	Plastic Case	PPS	26125-40-6	2,004	3,600	5,200
			25212-74-2	2,004	3,600	5,200
		GF	65997-17-3	4,008	7,200	10,400
		CaCO3	471-34-1	1,954	3,510	5,070
		C	1333-86-4	0,050	0,090	0,130
	Plastic Case (*)	PPS	25212-74-2	4,008	7,200	10,400
		GF	65997-17-3	3,006	5,400	7,800
		CaCO3	471-34-1	2,605	4,680	6,760
		Others	-	0,401	0,720	1,040
Homogeneous Level Weight				26,15	57,541	82,932
Termination	Core Metal	Cu-ETP	7440-50-8	0,670	1,552	1,590
	Finish plating	EP-Sn	7440-31-5	0,015	0,036	0,037
Homogeneous Level Weight				0,685	1,588	1,627
Total Weight				45,000	100,000	150,000

(*) alternative available for some PNs

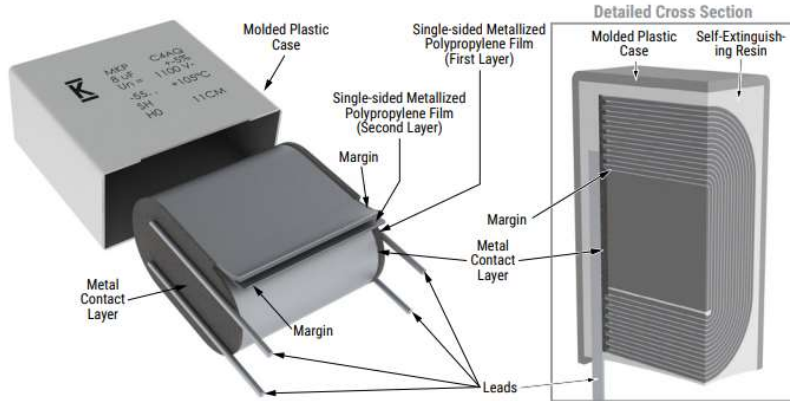
Remark: Material declaration of special part number or part number with C-spec will be individually released.

Material Declaration Plastic film capacitor

C4AQ SERIES Radial, 2 or 4 Leads, 500 - 1,500 VDC, for DC Link (Automotive Grade)



Construction



Voltage Range : 500 -1500 VDC

Capacitance Range : 1 – 210 µF

Size range : 11x20x31,5 – 45x65x57.5

2 or 4 wires (7th digit code PN -terminals code U or W)

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3114_C4AQ.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Film	Polipropylene	see Annex 3	PP	9003-07-0
		Zinc		Zn	7440-66-6
		Aluminium		Al	7429-90-5
	Metal Spray	Tin		Sn	7440-31-5
		Zinc		Zn	7440-66-6
Encapsulation	Thermosetting Resin	Modified cured EP		Epoxy resin	-
	Plastic Case	Polybutylene terephthalate		PBT	26062-94-2
		Antimony trioxide		Sb2O3	1309-64-4
		Halogenated Flame Ret. except for PBB and PBDE		-	Multi
		Glass Fiber		GF	65997-17-3
		Further Additives	-	-	
Termination	Core Metal	Copper	Cu-ETP	7440-50-8	
	Finish plating	Tin	EP-Sn	7440-31-5	

Remark: Material declaration of special part number or part number with C-spec will be individually released.

<https://www.kemet.com/en/us/rohs-documents.html>

Annex 3

Material Declaration Plastic film capacitor



a YAGEO company

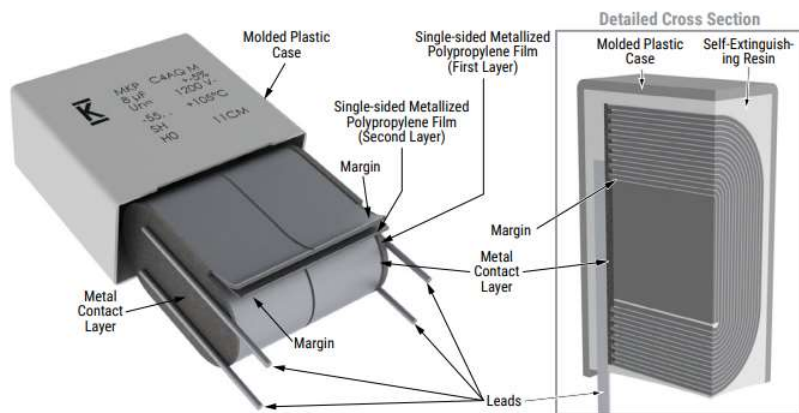
C4AQ SERIES [Radial, 2 or 4 Leads, 500 - 1,500 VDC, for DC Link \(Automotive Grade\)](#)

Pitch mm				27,5	37,5	52,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 25µF Box dimension 22x37x31,5 mm	MAXIMUM size Cap 90µF Box dimension 35x50x42 mm	MAXIMUM size Cap 210µF Box dimension 45x65x57,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	12,766	43,727	93,147
	Metal	Al	7429-90-5	0,006	0,020	0,042
	Metal	Sn	7440-31-5	0,332	0,702	1,174
	Metal	Zn	7440-66-6	3,100	6,697	11,366
Homogeneous Level Weight				16,204	51,146	105,729
Encapsulation	Thermosetting Resin	Epoxy Resin	-	13,052	42,827	89,348
	Plastic Case	PBT	26062-94-2	3,156	8,496	19,47
		Sb2O3	1309-64-4	0,187	0,504	1,155
		Halogenated Flame Ret. except for PBB and PBDE	-	0,776	2,088	4,785
		GF	65997-17-3	1,070	2,880	6,600
		Further Additives	-	0,161	0,432	0,990
Homogeneous Level Weight				18,402	57,227	122,348
Termination	Core Metal	Cu-ETP	7440-50-8	0,362	1,590	1,880
	Finish plating	EP-Sn	7440-31-5	0,032	0,037	0,043
Homogeneous Level Weight				0,394	1,627	1,923
Total Weight				35,000	110,000	230,000

Material Declaration Plastic film capacitor

C4AQ-M SERIES Miniaturized DC Link, Radial, 2 or 4 Leads, 500 -1,200 VDC (Automotive Grade)

Construction



https://content.kemet.com/datasheets/KEM_F3125_C4AQ_M.pdf

Voltage Range : 500 -1200 VDC

Capacitance Range : 1.1 – 210 μ F

Size range : 11x20x31,5 – 45x65x57.5

2 or 4 wires (7th digit code PN -terminals code U or W)

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Film	Polipropylene	see Annex 4	PP	9003-07-0
		Zinc		Zn	7440-66-6
		Aluminium		Al	7429-90-5
	Metal Spray	Tin		Sn	7440-31-5
		Zinc		Zn	7440-66-6
Encapsulation	Thermosetting Resin	Modified cured EP		Epoxy resin	-
	Plastic Case	Polybutylene terephthalate		PBT	26062-94-2
		Antimony trioxide		Sb2O3	1309-64-4
		Halogenated Flame Ret. except for PBB and PBDE		-	Multi
		Glass Fiber		GF	65997-17-3
Further Additives	-	-			
Termination	Core Metal	Copper	Cu-ETP	7440-50-8	
	Finish plating	Tin	EP-Sn	7440-31-5	

Remark: Material declaration of special part number or part number with C-spec will be individually released.

<https://www.kemet.com/en/us/rohs-documents.html>

Annex 4

Material Declaration Plastic film capacitor

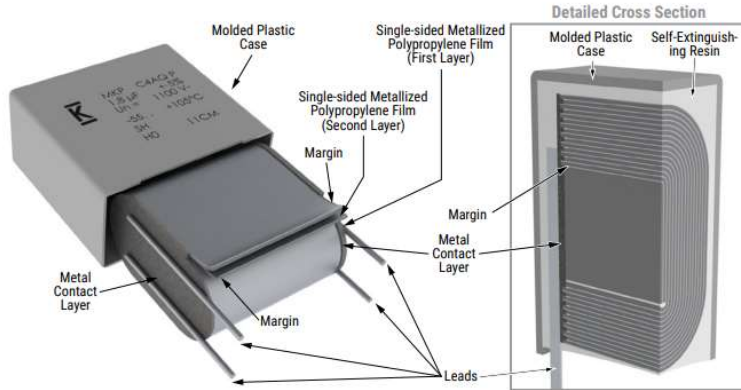
C4AQ-M SERIES Miniaturized DC Link, Radial, 2 or 4 Leads, 500 -1,200 VDC (Automotive Grade)

Pitch mm				27,5	37,5	52,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 25 μ F Box dimension 22x37x31,5 mm	MAXIMUM size Cap 110 μ F Box dimension 38x57x42 mm	MAXIMUM size Cap 210 μ F Box dimension 45x65x57,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	11,606	46,468	86,86
	Metal	Al	7429-90-5	0,005	0,021	0,039
	Metal	Sn	7440-31-5	0,332	0,869	1,174
	Metal	Zn	7440-66-6	3,090	8,222	11,312
Homogeneous Level Weight				15,033	55,58	99,385
Encapsulation	Thermosetting Resin	Epoxy Resin	-	14,222	46,154	95,692
		PBT	26062-94-2	3,157	15,635	19,470
	Plastic Case	Sb2O3	1309-64-4	0,187	0,928	1,155
		Halogenated Flame Ret. except for PBB and PBDE	-	0,776	3,843	4,785
		GF	65997-17-3	1,070	5,300	6,600
		Further Additives	-	0,161	0,795	0,990
Homogeneous Level Weight				19,573	72,655	128,692
Termination	Core Metal	Cu-ETP	7440-50-8	0,362	1,725	1,880
	Finish plating	EP-Sn	7440-31-5	0,032	0,040	0,043
Homogeneous Level Weight				0,394	1,765	1,923
Total Weight				35,000	130,000	230,000

Material Declaration Plastic film capacitor

C4AQ-P SERIES [Radial, 2 or 4 Leads, 450 – 1,100 VDC, for DC Link \(Automotive Grade\) - 125°C with Long Life](#)

Construction



Voltage Range :

450-1100 VDC

Capacitance Range :

1 – 210 µF

Size range :

11x20x31,5 – 45x65x57.5

2 or 4 wires (7th digit code PN -terminals code U or W)

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3128_C4AQ_P.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Film	Polipropylene	see Annex 5	PP	9003-07-0
		Zinc		Zn	7440-66-6
		Aluminium		Al	7429-90-5
	Metal Spray	Tin		Sn	7440-31-5
		Zinc		Zn	7440-66-6
		Copper		Cu	7440-50-8
Encapsulation	Thermosetting Resin	Modified cured EP		Epoxy resin	-
	Plastic Case	Polybutylene terephthalate		PBT	26062-94-2
		Antimony trioxide		Sb2O3	1309-64-4
		Halogenated Flame Ret. except for PBB and PBDE		-	Multi
		Glass Fiber		GF	65997-17-3
		Further Additives		-	-
Termination	Core Metal	Copper	Cu-ETP	7440-50-8	
	Finish plating	Tin	EP-Sn	7440-31-5	

Remark: Material declaration of special part number or part number with C-spec will be individually released.

<https://www.kemet.com/en/us/rohs-documents.html>

Annex 5

Material Declaration Plastic film capacitor



C4AQ-P SERIES [Radial, 2 or 4 Leads, 450 – 1,100 VDC, for DC Link \(Automotive Grade\) - 125°C with Long Life](#)

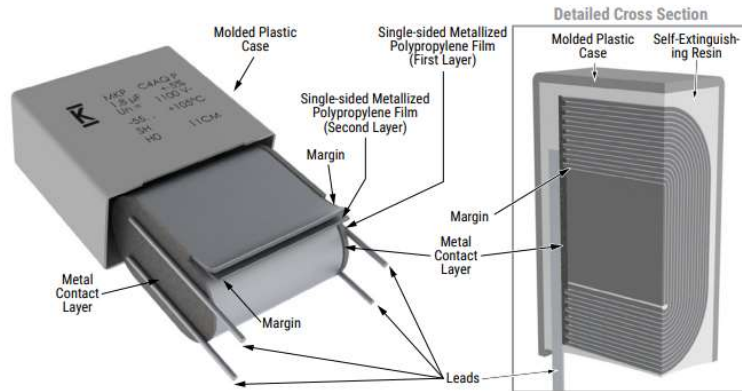
Pitch mm				27,5	37,5	52,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 25µF Box dimension 22x37x31,5 mm	MAXIMUM size Cap 90µF Box dimension 35x50x42 mm	MAXIMUM size Cap 210µF Box dimension 45x65x57,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	11,606	44,787	86,86
	Metal	Al	7429-90-5	0,050	0,193	0,375
	Metal	Sn	7440-31-5	1,329	2,809	4,694
	Metal	Zn	7440-66-6	2,003	4,325	7,283
	Metal	Cu	7440-50-8	0,043	0,091	0,153
	Miscellaneous		-	0,003	0,010	0,020
Homogeneous Level Weight				15,034	52,215	99,385
Encapsulation	Thermosetting Resin	Epoxy Resin	-	14,221	41,758	95,692
		PBT	26062-94-2	3,157	8,496	19,470
	Plastic Case	Sb2O3	1309-64-4	0,187	0,504	1,155
		Halogenated Flame Ret. except for PBB and PBDE	-	0,776	2,088	4,785
		GF	65997-17-3	1,070	2,880	6,600
		Further Additives	-	0,161	0,432	0,990
Homogeneous Level Weight				19,572	56,158	128,692
Termination	Core Metal	Cu-ETP	7440-50-8	0,362	1,590	1,880
	Finish plating	EP-Sn	7440-31-5	0,032	0,037	0,043
Homogeneous Level Weight				0,394	1,627	1,923
Total Weight				35,000	110,000	230,000

Material Declaration Plastic film capacitor

C4AU SERIES Radial, 2 or 4 Leads, 500 - 1,200 VDC



Construction



Voltage Range : 500-1200 VDC
Capacitance Range : 1 – 210 µF
Size range : 11x20x32 – 45x65x57.5
2 or 4 wires (7th digit code PN -terminals code U or W)

https://content.kemet.com/datasheets/KEM_F3126_C4AU.pdf

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Film	Polipropylene	see Annex 6	PP	9003-07-0
		Zinc		Zn	7440-66-6
		Aluminium		Al	7429-90-5
	Metal Spray	Tin		Sn	7440-31-5
		Zinc		Zn	7440-66-6
		Copper		Cu	7440-50-8
Encapsulation	Thermosetting Resin	Modified cured EP		Epoxy resin	-
	Plastic Case	Polyphenylene sulfide		PPS	26125-40-6
		Glass Fiber		GF	25212-74-2
		Calcium Carbonate		CaCO3	65997-17-3
		Carbon Black		C	471-34-1
	Plastic Case (*)	PPS		PPS	1333-86-4
		Glass Fiber	PPS	25212-74-2	
		Calcium Carbonate	GF	65997-17-3	
		Others	CaCO3	471-34-1	
		-	-	-	
Termination	Core Metal	Copper	Cu-ETP	7440-50-8	
	Finish plating	Tin	EP-Sn	7440-31-5	

(*) alternative available for some PNs

Remark: Material declaration of special part number or part number with C-spec will be individually released.

<https://www.kemet.com/en/us/rohs-documents.html>

Annex 6

Material Declaration Plastic film capacitor

C4AU SERIES Radial, 2 or 4 Leads, 500 - 1,200 VDC



Pitch mm				27,5	37,5	52,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 18µF Box dimension 22x37x32 mm	MAXIMUM size Cap 70µF Box dimension 33x48x42 mm	MAXIMUM size Cap 210µF Box dimension 45x65x57,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	10,376	30,559	88,023
	Metal	Al	7429-90-5	0,045	0,132	0,380
	Metal	Sn	7440-31-5	1,673	3,202	5,912
	Metal	Zn	7440-66-6	2,502	4,837	9,076
	Metal	Cu	7440-50-8	0,054	0,104	0,192
	Miscellaneous		-	0,002	0,007	0,020
Homogeneous Level Weight				14,65	38,834	103,583
Encapsulation	Thermosetting Resin	Epoxy Resin	-	19,934	41,571	96,974
	Plastic Case	PPS	26125-40-6	2,004	3,600	7,500
			25212-74-2	2,004	3,600	7,500
		GF	65997-17-3	4,008	7,200	15,000
		CaCO3	471-34-1	1,954	3,510	7,313
		C	1333-86-4	0,050	0,090	0,187
	Plastic Case (*)	PPS	25212-74-2	4,008	7,200	15,000
		GF	65997-17-3	3,006	5,400	11,250
		CaCO3	471-34-1	2,605	4,680	9,750
		Others	-	0,401	0,720	1,500
Homogeneous Level Weight				29,954	77,571	171,974
Termination	Core Metal	Cu-ETP	7440-50-8	0,362	1,552	1,880
	Finish plating	EP-Sn	7440-31-5	0,032	0,036	0,043
Homogeneous Level Weight				0,394	1,588	1,923
Total Weight				44,998	117,993	277,480

(*) alternative available for some PNs

Remark: Material declaration of special part number or part number with C-spec will be individually released.