

Material Composition Declaration

Film & Paper Capacitors EMI –RFI SUPPRESSION

Remarks:

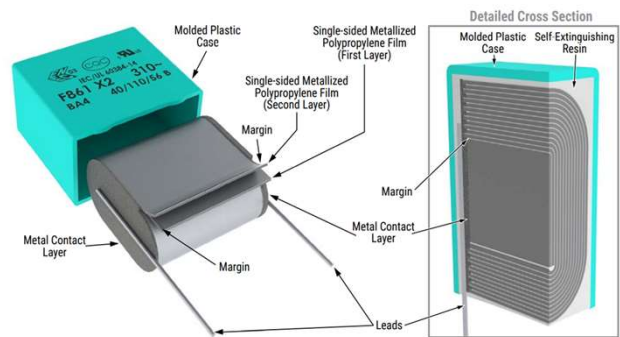
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Material Declaration Radial Plastic Film Capacitor

F861 Series Metallized Polypropylene Film, Class X2, 310 VAC



Construction



Voltage Range : 310 VAC

Capacitance Range : 0.01 – 4.7 μ F

Lead Spacing : 7.5 -37.5 mm

Environmental Compliance

Pb Free	YES
RoHS Compliant	YES
Halogen Free	Available for some PNs

https://content.kemet.com/datasheets/KEM_F3001_F861_X2_310.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Zn Film	Polypropylene	see Annex 1	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	-
	Halogen free plastic case (*)	Polybutylene terephthalate		PBT	26062-94-2
		Glass Fiber		GF	65997-17-3
		Organic phosphorous compound FR		-	-
		Tetrahydrofuran		-	109-99-9
	Plastic Case	PBT		PBT	26062-94-2
		Glass Fiber		GF	65997-17-3
		Halogenated Flame Ret. except for PBB and PBDE		-	-
		Antimony trioxide		Sb2O3	1309-64-4
Termination	Core Metal	Iron (*)		Fe	7439-89-6
	Core Metal	Nickel (*)		Ni	7440-02-0
	Core Metal	Copper		Cu	7440-50-8
	Finish plating	Tin		Sn	7440-31-5

(*) version available for some PNs
Remark: Material declaration of special part number will be individually released

Annex 1

Material Declaration Radial Plastic Film Capacitor

F861 Series [Metallized Polypropylene Film, Class X2, 310 VAC](#)



Pitch mm				7,5	10	15	22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 33nF Box dimension 6x12x10.5 mm	MAXIMUM size Cap 0.18uF Box dimension 7x17x13 mm	MAXIMUM size Cap 1uF Box dimension 12x20x18 mm	MAXIMUM size Cap 2.5uF Box dimension 15.5x24.5x26 mm	MAXIMUM size Cap 3.9uF Box dimension 31x19x31.5 mm	MAXIMUM size Cap 4.7uF Box dimension 24x19x41 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	0,142	0,360	1,402	3,463	5,249	6,077
	Metal	Al	7429-90-5	0,000	0,000	0,000	0,001	0,003	0,003
	Metal	Sn	7440-31-5	0,022	0,039	0,114	0,188	1,044	0,777
	Metal	Zn	7440-66-6	0,086	0,155	0,453	0,749	1,291	0,982
	Metal	Cu (*)	7440-50-8	-	-	-	0,749	0,035	0,026
Homogeneous Level Weight				0,249	0,555	1,970	5,150	7,622	7,865
Encapsulation	Thermosetting Resin	Epoxy Resin	-	0,439	1,079	2,483	4,778	8,616	10,743
	Halogen free plastic case (*)	PBT	26062-94-2	0,265	0,327	0,616	1,986	2,744	2,893
		Glass Fiber	65997-17-3	0,050	0,061	0,116	0,372	0,686	0,723
		Organic phosphorous compound FR	-	0,015	0,018	0,035	0,112	-	-
		Tetrahydrofuran	109-99-9	0,002	0,002	0,004	0,012	-	-
	Plastic case	PBT	26062-94-2	-	-	-	1,936	-	-
		Glass Fiber	65997-17-3	-	-	-	0,372	-	-
		Halogenated Flame Ret. except for PBB and PBDE	-	-	-	-	0,087	-	-
		Antimony trioxide	1309-64-4	-	-	-	0,087	-	-
Homogeneous Level Weight				0,770	1,488	3,253	7,260	12,046	14,359
Termination	Core Metal	Iron (*)	7439-89-6	-	0,154	0,299	0,367	-	-
	Core Metal	Nickel (*)	7440-02-0	-	-	-	-	0,002	0,002
	Core Metal	Copper	7440-50-8	0,136	0,041	0,080	0,099	0,326	0,568
	Finish plating	Tin	7440-31-5	0,016	0,008	0,011	0,014	0,004	0,006
Homogeneous Level Weight				0,152	0,203	0,390	0,480	0,331	0,576
Total Weight				1,171	2,245	5,613	12,890	20,000	22,800

(*) version available for some PNs

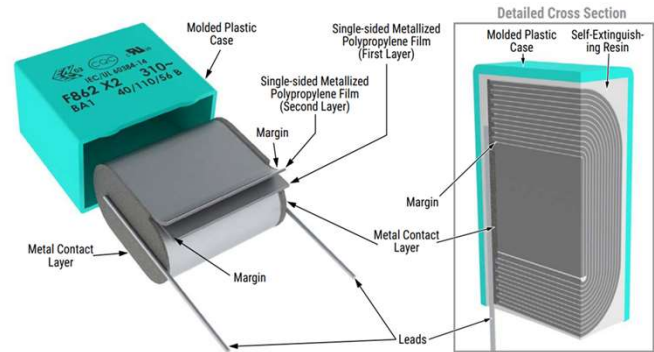
Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

F862 Series Metallized Polypropylene Film, Harsh Environmental Conditions, Class X2, 310 VAC



Construction



https://content.kemet.com/datasheets/KEM_F3092_F862_X2_310.pdf

Voltage Range : 310 VAC
Capacitance Range : 0.01 – 4.7 µF
Lead Spacing : 15 -27.5 mm

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	YES

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Zn Film	Polypropylene	see Annex 2	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	-
	Halogen free plastic case	Polybutylene terephthalate		PBT	26062-94-2
		Glass Fiber		GF	65997-17-3
		Organic phosphorous compound FR		-	-
		Tetrahydrofuran		-	109-99-9
	Core Metal	Copper		Cu	7440-50-8
Termination	Finish plating	Tin		Sn	7440-31-5

Remark: Material declaration of special part number will be individually released

Annex 2

Material Declaration Radial Plastic Film Capacitor



F862 Series Metallized Polypropylene Film, Harsh Environmental Conditions, Class X2, 310 VAC

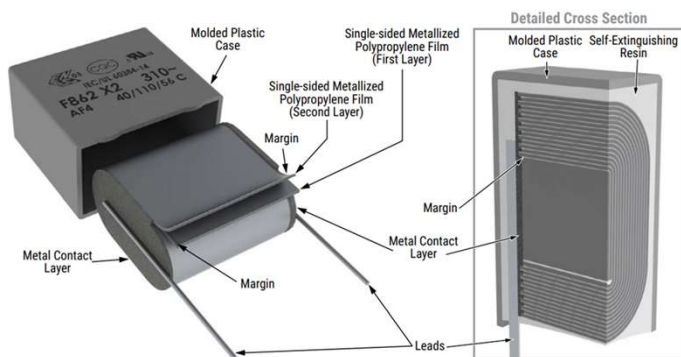
Pitch mm				15	22,5	27,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.56uF Box dimension 12x20x18 mm	MAXIMUM size Cap 1uF Box dimension 13x22x26 mm	MAXIMUM size Cap 4.7uF Box dimension 22x37x31.5 mm
				Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	1,345	2,115	9,328
	Metal	Al	7429-90-5	0,000	0,000	0,002
	Metal	Sn	7440-31-5	0,220	0,230	0,712
	Metal	Zn	7440-66-6	0,254	0,270	0,923
	Metal	Cu	7440-50-8	0,007	0,008	0,024
Homogeneous Level Weight				1,826	2,623	10,988
Encapsulation	Thermosetting Resin	Epoxy Resin	-	2,911	4,826	14,884
	Halogen free plastic case	PBT	26062-94-2	0,616	1,647	4,149
		Glass Fiber	65997-17-3	0,116	0,309	0,778
		Organic phosphorous compound FR	-	0,035	0,093	0,233
		Tetrahydrofuran	109-99-9	0,004	0,010	0,026
Homogeneous Level Weight				3,682	6,885	20,070
Termination	Core Metal	Copper	7440-50-8	0,276	0,278	0,529
	Finish plating	Tin	7440-31-5	0,007	0,007	0,014
Homogeneous Level Weight				0,283	0,285	0,543
Total Weight				5,791	9,793	31,601

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

F862-V054 Series Metallized Polypropylene Film for Harsh Environmental Conditions, 310 VAC

Construction



Voltage Range : 310 VAC

Capacitance Range : 0.1 – 4.7 μ F

Lead Spacing : 15 -27.5 mm

Environmental Compliance

Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3092_F862_X2_310.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	see Annex 3	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	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
		Further Additives		-	-
	Core Metal	Copper		Cu-ETP	7440-50-8
Termination	Finish plating	Tin		EP-Sn	7440-31-5
	Core Metal	Iron (*)		Fe	7439-89-6
	Finish plating	Copper (*)		Cu	7440-50-8
	Finish plating	Tin (*)		Sn	7440-31-5

(*) version available for some PNs

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

Annex 3

Material Declaration Radial Plastic Film Capacitor

F862-V054 Series [Metallized Polypropylene Film for Harsh Environmental Conditions, 310 VAC](#)



Pitch mm				15	22,5	27,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0,56µF Box dimension 12x20x18 mm	MAXIMUM size Cap 1,2µF Box dimension 13x22x26 mm	MAXIMUM size Cap 4,7µF Box dimension 22x37x31,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	1,384	2,642	9,329
	Metal	Al	7429-90-5	0,001	0,001	0,004
	Metal	Sn	7440-31-5	0,087	0,108	0,357
	Metal	Zn	7440-66-6	0,791	0,997	3,298
Homogeneous Level Weight				2,263	3,748	12,988
Encapsulation	Thermosetting Resin	Epoxy Resin	-	3,449	4,673	16,266
	Plastic Case	PBT	26062-94-2	0,714	1,61	3,745
		Antimony trioxide	1309-64-4	0,071	0,161	0,375
		Halogenated Flame Ret. except for PBB and PBDE	-	0,071	0,161	0,375
		GF	65997-17-3	0,153	0,345	0,803
		Further Additives	-	0,010	0,023	0,054
Homogeneous Level Weight				4,468	6,973	21,618
Termination	Core Metal	Cu-ETP	7440-50-8	0,246	0,256	0,362
	Finish plating	EP-Sn	7440-31-5	0,023	0,023	0,032
	Core Metal	Fe (*)	7439-89-6	0,201	0,209	/
	Finish plating	Cu (*)	7440-50-8	0,042	0,049	/
	Finish plating	Sn (*)	7440-31-5	0,026	0,021	/
Homogeneous Level Weight				0,269	0,279	0,394
Total Weight				7,000	11,000	35,000

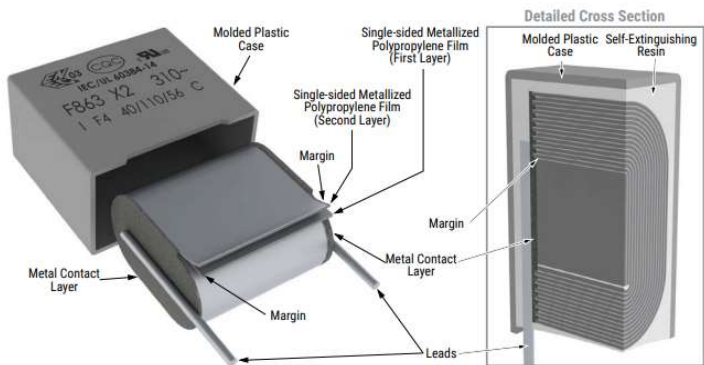
(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

F863 Series Metallized Polypropylene Film for Harsh Environmental Conditions (Indoor Applications), 310 VAC (Automotive Grade)

Construction



Voltage Range : 310 VAC
Capacitance Range : 0.1 – 10 μ F
Lead Spacing : 15 -37.5 mm

Environmental Compliance

Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3110_F863_X2_310.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	see Annex 4	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	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		-	-
	Core Metal	Copper		Cu-ETP	7440-50-8
Termination	Finish plating	Tin		EP-Sn	7440-31-5
	Core Metal	Iron (*)		Fe	7439-89-6
	Finish plating	Copper (*)		Cu	7440-50-8
	Finish plating	Tin (*)		Sn	7440-31-5

(*) version available for some PNs
Remark: Material declaration of special part number will be individually released

Annex 4

Material Declaration Radial Plastic Film Capacitor



F863 Series [Metallized Polypropylene Film for Harsh Environmental Conditions \(Indoor Applications\), 310 VAC \(Automotive Grade\)](#)

Pitch mm				15	22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0,56µF Box dimension 11x19x18 mm	MAXIMUM size Cap 1,5µF Box dimension 13x22x26.5 mm	MAXIMUM size Cap 4,7µF Box dimension 22x37x32 mm	MAXIMUM size Cap 10µF Box dimension 30x45x41,5 mm
				Weight (gr)	Weight (gr)	alternative material Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	1,457	3,182	11,285	23,038
	Metal	Al	7429-90-5	0,001	0,001	0,005	0,010
	Metal	Sn	7440-31-5	0,052	0,091	0,332	0,542
	Metal	Zn	7440-66-6	0,481	0,842	3,087	5,074
Homogeneous Level Weight				1,991	4,116	14,709	28,664
Encapsulation	Thermosetting Resin	Epoxy Resin	-	2,505	4,268	14,597	29,963
	Plastic Case	PBT	26062-94-2	0,868	1,638	4,410	7,560
		Antimony trioxide	1309-64-4	0,087	0,164	0,441	0,756
		Halogenated Flame Ret. except for PBB and PBDE	-	0,087	0,164	0,441	0,756
		GF	65997-17-3	0,186	0,351	0,945	1,620
		Further Additives	-	0,012	0,023	0,063	0,108
Homogeneous Level Weight				3,745	6,608	20,897	40,763
Termination	Core Metal	Cu-ETP	7440-50-8	/	0,253	0,362	0,560
	Finish plating	EP-Sn	7440-31-5	/	0,023	0,032	0,013
	Core Metal	Fe (*)	7439-89-6	0,198	0,207	/	/
	Finish plating	Cu (*)	7440-50-8	0,046	0,048	/	/
	Finish plating	Sn (*)	7440-31-5	0,020	0,021	/	/
Homogeneous Level Weight				0,264	0,276	0,394	0,573
Total Weight				6,000	11,000	36,000	70,000

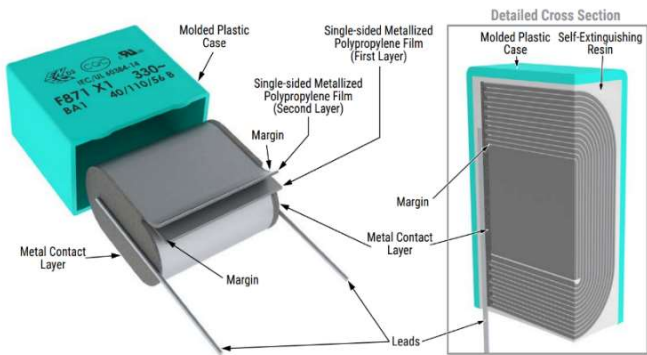
(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

F871 Series Metallized Polypropylene Film, Class X1, 330 VAC

Construction



Voltage Range : 330 VAC
Capacitance Range : 0.001 – 8.2 µF
Lead Spacing : 10 -37.5 mm

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	YES

https://content.kemet.com/datasheets/KEM_F3002_F871_X1_330.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	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	-
	Halogen free plastic case	Polybutylene terephthalate		PBT	26062-94-2
		Glass Fiber		GF	65997-17-3
		Organic phosphorous compound FR		-	-
		Tetrahydrofuran		-	109-99-9
Termination	Core Metal	Iron (*)		Fe	7439-89-6
	Core Metal	Nickel (*)		Ni	7440-02-0
	Core Metal	Copper		Cu	7440-50-8
	Finish plating	Tin		Sn	7440-31-5

(*) version available for some PN's
Remark: Material declaration of special part number will be individually released

Annex 5

Material Declaration Radial Plastic Film Capacitor

F871 Series Metallized Polypropylene Film, Class X1, 330 VAC



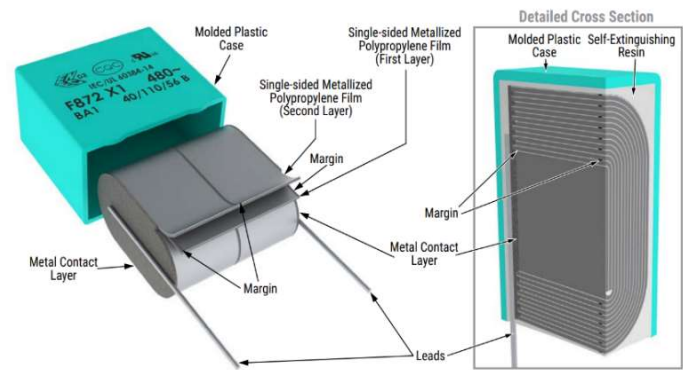
Pitch mm				10	15	22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.035uF Box dimension 7x17x13 mm	MAXIMUM size Cap 0.25uF Box dimension 12x20x18 mm	MAXIMUM size Cap 0.82uF Box dimension 15.5x24.5x26 mm	MAXIMUM size Cap 2.2uF Box dimension 22x37x31.5 mm	MAXIMUM size Cap 6.8uF Box dimension 30x45x41 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	0,304	1,300	3,291	8,389	23,619
	Metal	Al	7429-90-5	0,000	0,000	0,001	0,004	0,012
	Metal	Sn	7440-31-5	0,034	0,107	0,179	1,271	1,263
	Metal	Zn	7440-66-6	0,133	0,423	0,715	1,592	1,728
	Metal	Cu (*)	7440-50-8	-	-	-	0,042	0,042
Homogeneous Level Weight				0,471	1,830	4,186	11,298	26,665
Encapsulation	Thermosetting Resin	Epoxy Resin	-	1,147	2,677	5,258	12,004	19,180
	Halogen free plastic case	PBT	26062-94-2	0,327	0,616	1,986	3,970	6,576
		Glass Fiber	65997-17-3	0,061	0,116	0,372	0,992	1,644
		Organic phosphorous compound FR	-	0,018	0,035	0,112	-	-
		Tetrahydrofuran	109-99-9	0,002	0,004	0,012	-	-
Homogeneous Level Weight				1,556	3,447	7,740	16,966	27,400
Termination	Core Metal	Iron (*)	7439-89-6	0,128	0,293	0,367	-	-
	Core Metal	Nickel (*)	7440-02-0	-	-	-	0,001	0,004
	Core Metal	Copper	7440-50-8	0,034	0,079	0,099	0,231	0,923
	Finish plating	Tin	7440-31-5	0,006	0,011	0,014	0,003	0,009
Homogeneous Level Weight				0,168	0,383	0,479	0,235	0,936
Total Weight				2,195	5,660	12,405	28,500	55,000

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

F872 Series Metallized Polypropylene Film, Class X1, 480 VAC

Construction



Voltage Range : 480 VAC
Capacitance Range : 0.001 – 3.5 µF
Lead Spacing : 10 -37.5 mm

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	YES

https://content.kemet.com/datasheets/KEM_F3003_F872_X1_480.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	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	-
	Halogen free plastic case	Polybutylene terephthalate		PBT	26062-94-2
		Glass Fiber		GF	65997-17-3
		Organic phosphorous compound FR		-	-
		Tetrahydrofuran		-	109-99-9
Termination	Core Metal	Iron (*)		Fe	7439-89-6
	Core Metal	Nickel (*)		Ni	7440-02-0
	Core Metal	Copper		Cu	7440-50-8
	Finish plating	Tin		Sn	7440-31-5

(*) version available for some PN's
Remark: Material declaration of special part number will be individually released

Annex 6

Material Declaration Radial Plastic Film Capacitor

F872 Series Metallized Polypropylene Film, Class X1, 480 VAC



Pitch mm				10	15	22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.015uF Box dimension 7x17x13 mm	MAXIMUM size Cap 0.12uF Box dimension 12x20x18 mm	MAXIMUM size Cap 0.39uF Box dimension 15.5x24.5x26 mm	MAXIMUM size Cap 1.2uF Box dimension 22x37x31.5 mm	MAXIMUM size Cap 3.3uF Box dimension 30x45x41 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	0,350	1,352	3,484	9,554	25,472
	Metal	Al	7429-90-5	0,000	0,000	0,001	0,005	0,013
	Metal	Sn	7440-31-5	0,038	0,110	0,188	1,271	1,263
	Metal	Zn	7440-66-6	0,149	0,434	0,750	1,603	1,746
	Metal	Cu (*)	7440-50-8	-	-	-	0,042	0,042
Homogeneous Level Weight				0,536	1,896	4,423	12,475	28,536
Encapsulation	Thermosetting Resin	Epoxy Resin	-	1,037	2,595	4,758	10,827	17,309
	Halogen free plastic case	PBT	26062-94-2	0,327	0,616	1,986	3,970	6,576
		Glass Fiber	65997-17-3	0,061	0,116	0,372	0,992	1,644
		Organic phosphorous compound FR	-	0,018	0,035	0,112	-	-
		Tetrahydrofuran	109-99-9	0,002	0,004	0,012	-	-
Homogeneous Level Weight				1,446	3,365	7,240	15,789	25,529
Termination	Core Metal	Iron (*)	7439-89-6	0,131	0,295	0,367	-	-
	Core Metal	Nickel (*)	7440-02-0	-	-	-	0,001	0,004
	Core Metal	Copper	7440-50-8	0,035	0,079	0,099	0,231	0,923
	Finish plating	Tin	7440-31-5	0,007	0,011	0,014	0,003	0,009
Homogeneous Level Weight				0,173	0,385	0,479	0,235	0,936
Total Weight				2,155	5,646	12,142	28,500	55,000

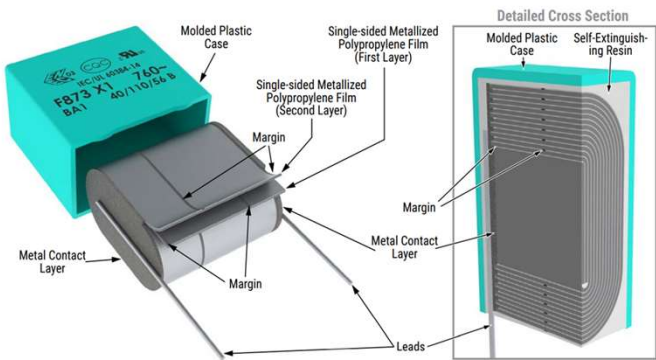
(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

F873 Series Metallized Polypropylene Film, Class X1, 760 VAC

Construction



Voltage Range : 760 VAC
Capacitance Range : 0.01 – 1.8µF
Lead Spacing : 22.5 -37.5 mm

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	YES

https://content.kemet.com/datasheets/KEM_F3004_F873_X1_760.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	see Annex 7	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	-
	Halogen free plastic case	Polybutylene terephthalate		PBT	26062-94-2
		Glass Fiber		GF	65997-17-3
		Organic phosphorous compound FR		-	-
		Tetrahydrofuran		-	109-99-9
Termination	Core Metal	Iron (*)		Fe	7439-89-6
	Core Metal	Nickel (*)		Ni	7440-02-0
	Core Metal	Copper		Cu	7440-50-8
	Finish plating	Tin		Sn	7440-31-5

(*) version available for some PN's
Remark: Material declaration of special part number will be individually released

Annex 7

Material Declaration Radial Plastic Film Capacitor

F873 Series Metallized Polypropylene Film, Class X1, 760 VAC



Pitch mm				22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.15uF Box dimension 15.5x24.5x26 mm	MAXIMUM size Cap 0.39uF Box dimension 22x37x31.5 mm	MAXIMUM size Cap 3.3uF Box dimension 30x45x41 mm
				Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	3,679	8,622	27,324
	Metal	Al	7429-90-5	0,001	0,004	0,014
	Metal	Sn	7440-31-5	0,202	1,271	1,263
	Metal	Zn	7440-66-6	0,804	1,594	1,764
	Metal	Cu (*)	7440-50-8	-	0,042	0,042
Homogeneous Level Weight				4,685	11,534	30,407
Encapsulation	Thermosetting Resin	Epoxy Resin	-	4,149	11,769	15,437
	Halogen free plastic case	PBT	26062-94-2	1,986	3,970	6,576
		Glass Fiber	65997-17-3	0,372	0,992	1,644
		Organic phosphorous compound FR	-	0,112	-	-
		Tetrahydrofuran	109-99-9	0,012	-	-
Homogeneous Level Weight				6,631	16,731	23,657
Termination	Core Metal	Iron (*)	7439-89-6	0,241	-	-
	Core Metal	Nickel (*)	7440-02-0	-	0,001	0,004
	Core Metal	Copper	7440-50-8	0,065	0,231	0,923
	Finish plating	Tin	7440-31-5	0,009	0,003	0,009
Homogeneous Level Weight				0,315	0,235	0,936
Total Weight				11,631	28,500	55,000

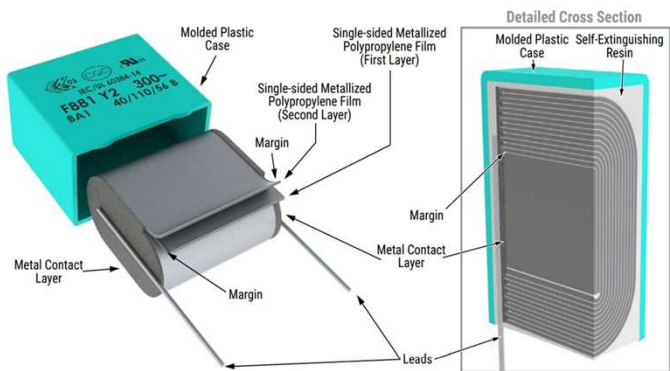
(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

F881 Series Metallized Polypropylene Film, Class Y2, 300 VAC

Construction



https://content.kemet.com/datasheets/KEM_F3005_F881_Y2_300.pdf

Voltage Range : 300 VAC
Capacitance Range : 0.001 – 1µF
Lead Spacing : 7.5 -37.5 mm

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	YES

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	see Annex 8	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		EP	-
	Halogen free plastic case	Polybutylene terephthalate		PBT	26062-94-2
		Glass Fiber		GF	65997-17-3
		Organic phosphorous compound FR		-	-
		Tetrahydrofuran		-	109-99-9
Termination	Core Metal	Iron (*)		Fe	7439-89-6
	Core Metal	Nickel (*)		Ni	7440-02-0
	Core Metal	Copper		Cu	7440-50-8
	Finish plating	Tin		Sn	7440-31-5

(*) version available for some PNs
Remark: Material declaration of special part number will be individually released

Annex 8

Material Declaration Radial Plastic Film Capacitor

F881 Series Metallized Polypropylene Film, Class Y2, 300 VAC



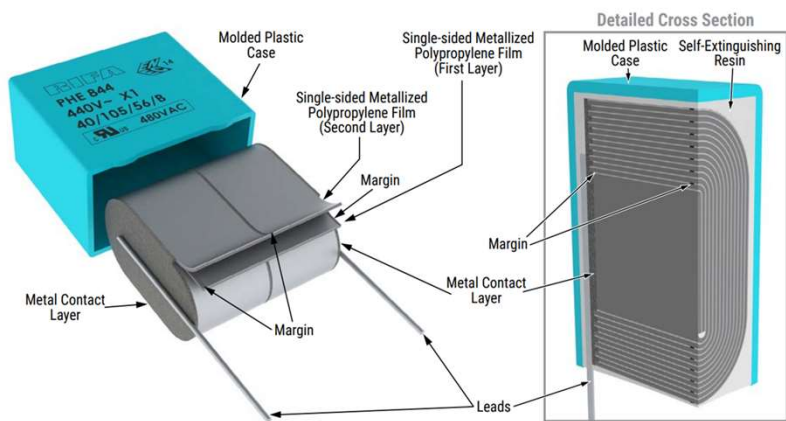
Pitch mm				7,5	10	15	22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.0039uF Box dimension 6x12x10.5 mm	MAXIMUM size Cap 0.0082uF Box dimension 7x17x13 mm	MAXIMUM size Cap 0.082uF Box dimension 12x20x18 mm	MAXIMUM size Cap 0.33uF Box dimension 15.5x24.5x26 mm	MAXIMUM size Cap 0.82uF Box dimension 22x37.5x31.5 mm	MAXIMUM size Cap 1uF Box dimension 19x32x41 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	0,155	0,326	1,439	3,788	8,156	9,294
	Metal	Al	7429-90-5	0,000	0,000	0,000	0,001	0,004	0,005
	Metal	Sn	7440-31-5	0,023	0,035	0,117	0,204	1,271	0,805
	Metal	Zn	7440-66-6	0,091	0,140	0,462	0,813	1,589	1,046
	Metal	Cu (*)	7440-50-8	-	-	-	-	0,042	0,027
Homogeneous Level Weight				0,269	0,501	2,019	4,806	11,063	11,177
Encapsulation	Thermosetting Resin	Epoxy Resin	-	0,400	1,088	2,403	4,134	12,240	10,506
	Halogen free plastic case	PBT	26062-94-2	0,265	0,327	0,616	1,986	3,970	3,958
		Glass Fiber	65997-17-3	0,050	0,061	0,116	0,372	0,992	0,989
		Organic phosphorous compound FR	-	0,015	0,018	0,035	0,112	-	-
		Tetrahydrofuran	109-99-9	0,002	0,002	0,004	0,012	-	-
Homogeneous Level Weight				0,731	1,497	3,173	6,616	17,202	15,453
Termination	Core Metal	Iron (*)	7439-89-6	-	0,129	-	-	-	-
	Core Metal	Nickel (*)	7440-02-0	-	-	-	-	0,001	0,003
	Core Metal	Copper	7440-50-8	0,138	0,035	0,382	0,479	0,231	0,661
	Finish plating	Tin	7440-31-5	0,016	0,006	0,010	0,013	0,003	0,007
Homogeneous Level Weight				0,154	0,170	0,393	0,492	0,235	0,671
Total Weight				1,153	2,168	5,584	11,913	28,500	27,300

(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

PHE844 Series Metallized Polypropylene Film, 440 VAC/ 480 VAC, 105°C



Voltage Range : 440/480 VAC
Capacitance Range : 0.1 – 2.2µF
Lead Spacing : 22.5 -37.5 mm

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3108_PHE844_X1_440-480.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	see Annex 9	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	Epoxy Resin		EP	-
	Plastic Case	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
		Further Additives		-	-
	Core Metal	Iron (*)		Fe	7439-89-6
	Core Metal	Copper		Cu	7440-50-8
Termination	Finish plating	Tin		Sn	7440-31-5

(*) version available for some PNs
Remark: Material declaration of special part number will be individually released

Annex 9

Material Declaration Radial Plastic Film Capacitor



PHE844 Series Metallized Polypropylene Film, 440 VAC/ 480 VAC, 105°C

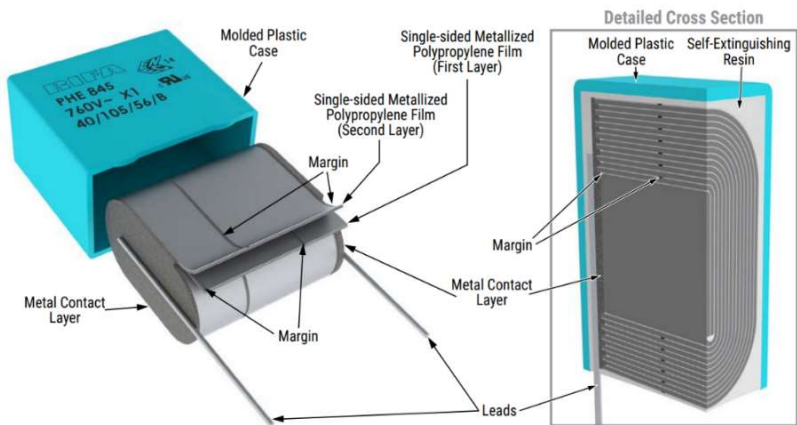
Pitch mm				22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.47uF Box dimension 15.5x24.5x26 mm	MAXIMUM size Cap 1.0uF Box dimension 21x30x31.5 mm	MAXIMUM size Cap 2.2uF Box dimension 21x38x41 mm
				Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	4,539	9,240	18,595
	Metal	Al	7429-90-5	0,001	0,002	0,008
	Metal	Sn	7440-31-5	0,203	0,331	0,297
	Metal	Zn	7440-66-6	0,919	1,509	2,835
Homogeneous Level Weight				5,662	11,083	21,736
Encapsulation	Thermosetting Resin	Epoxy Resin	-	2,125	8,812	15,702
	Plastic Case	PBT	26062-94-2	2,564	2,896	3,379
		Antimony trioxide	1309-64-4	0,255	0,288	0,493
		Halogenated Flame Ret. Except for PBB and PBDE	-	0,255	0,288	0,845
		Glass Fiber	65997-17-3	0,549	0,621	2,112
		Further Additives	-	0,036	0,041	0,211
Homogeneous Level Weight				5,784	12,945	22,742
Termination	Core Metal	Iron (*)	7439-89-6	0,278	0,399	-
	Core Metal	Copper	7440-50-8	0,073	0,105	0,510
	Finish plating	Tin	7440-31-5	0,035	0,050	0,012
Homogeneous Level Weight				0,387	0,555	0,522
Total Weight				11,833	24,583	45,000

(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

PHE845 Series Metallized Polypropylene Film, 760 VAC, 105°C



Voltage Range :

760 VAC

Capacitance Range :

0.01 – 1.0µF

Lead Spacing :

22.5 -37.5 mm

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3109_PHE845_X1_760.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	see Annex 10	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	Epoxy Resin		EP	-
	Plastic Case	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
		Further Additives		-	-
	Core Metal	Iron (*)		Fe	7439-89-6
Termination	Core Metal	Copper		Cu	7440-50-8
	Finish plating	Tin		Sn	7440-31-5

(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

Annex 10

Material Declaration Radial Plastic Film Capacitor

PHE845 Series [Metallized Polypropylene Film, 760 VAC, 105°C](#)



Pitch mm				22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.22uF Box dimension 15.5x24.5x26 mm	MAXIMUM size Cap 0.47uF Box dimension 21x30x31.5 mm	MAXIMUM size Cap 2.2uF Box dimension 21x38x41 mm
				Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	3,911	8,935	18,236
	Metal	Al	7429-90-5	0,001	0,002	0,008
	Metal	Sn	7440-31-5	0,174	0,319	0,297
	Metal	Zn	7440-66-6	0,788	1,455	2,832
Homogeneous Level Weight				4,875	10,712	21,374
Encapsulation	Thermosetting Resin	Epoxy Resin	-	4,693	6,504	16,065
	Plastic Case	PBT	26062-94-2	2,564	2,896	3,379
		Antimony trioxide	1309-64-4	0,255	0,288	0,493
		Halogenated Flame Ret. Except for PBB and PBDE	-	0,255	0,288	0,845
		Glass Fiber	65997-17-3	0,549	0,621	2,112
		Further Additives	-	0,036	0,041	0,211
Homogeneous Level Weight				8,352	10,637	23,105
Termination	Core Metal	Iron (*)	7439-89-6	0,361	0,399	-
	Core Metal	Copper	7440-50-8	0,095	0,105	0,510
	Finish plating	Tin	7440-31-5	0,045	0,050	0,012
Homogeneous Level Weight				0,501	0,555	0,522
Total Weight				13,727	21,903	45,000

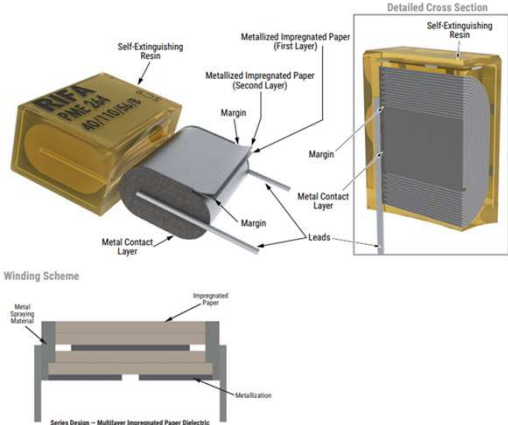
(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

Material Declaration Impregnated Metallized Paper Capacitor

PME264 Series Metallized Impregnated Paper, 660 VAC

Construction



Voltage Range :

660 VAC

Capacitance Range :

0.001 – 0.1µF

Size range:

5.2x10.5x18.5-- 15.3x22x30.5

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3012_PME264_X2_660.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Paper	Capacitor paper	see Annex 11	-	-
		Zinc		Zn	7440-66-6
		Silver		Ag	7440-22-4
	Paper Film	Capacitor paper		-	-
	Aluminium foil	Aluminium		Al	7429-90-5
	Metal Spray	Tin		Sn	7440-31-5
		Copper		Cu	7440-50-8
Encapsulation	Thermosetting Resin	Epoxy resin		Epoxy resin	-
		Halogenated Flame Ret. except for PBB and PBDE		-	-
	Label material	PBT		PBT	26062-94-2
		Aluminum		Al	7429-90-5
Termination	Tin coated CLAD steel wire	Iron		Fe	7439-89-6
		Copper		Cu	7440-50-8
		Nickel		Ni	7440-02-0
		Tin		Sn	7440-31-5

Remark: Material declaration of special part number will be individually released

Annex 11

Material Declaration Paper Capacitor

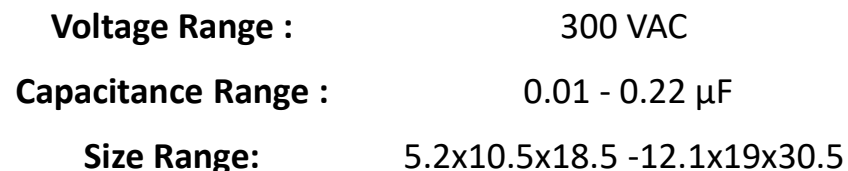
PME264 Series Metallized Impregnated Paper, 660 VAC



Pitch mm				15.2	20.3	25.4
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.010μF Box dimension 7.3x13x18.5 mm	MAXIMUM size Cap 0.033μF Box dimension 11.3x16.5x24 mm	MAXIMUM size Cap 0.1μF Box dimension 15.3x22x30.5 mm
				Weight (gr)	Weight (gr)	Weight (gr)
Element	Capacitor paper	Capacitor paper	-	0,717	2,285	5,817
	Metal	Zn	7440-66-6	0,003	0,011	0,028
	Metal	Ag	7440-22-4	0,00018	0,00057	0,00146
	Metal	Sn	7440-31-5	0,606	1,110	2,270
	Metal	Cu	7440-50-8	0,003	0,006	0,011
Homogeneous Level Weight				1,329	3,411	8,128
Encapsulation	Thermosetting Resin	Epoxy resin	-	0,800	2,044	4,118
	Flame retardant	Halogenated Flame Ret. except for PBB and PBDE	-	0,253	0,646	1,301
	Label material	PBT	26062-94-2	0,121	0,237	0,399
		Al	7429-90-5	0,109	0,203	0,341
Homogeneous Level Weight				1,283	3,000	6,159
Termination	Tin coated CLAD steel wire	Fe	7439-89-6	0,301	0,356	0,555
		Cu	7440-50-8	0,081	0,096	0,149
		Ni	7440-02-0	0,002	0,003	0,003
		Sn	7440-31-5	0,003	0,004	0,005
Homogeneous Level Weight				0,388	0,459	0,713
Total Weight				3,000	7,000	15,000

Remark: Material declaration of special part number will be individually released

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Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Paper	Capacitor paper	see Annex 12	-	-
		Zinc		Zn	7440-66-6
		Silver		Ag	7440-22-4
	Paper Film	Capacitor paper		-	-
	Metal Spray	Tin		Sn	7440-31-5
		Copper		Cu	7440-50-8
Encapsulation	Thermosetting Resin	Epoxy resin		Epoxy resin	-
		Halogenated Flame Ret. except for PBB and PBDE		-	-
	Label material	PBT		PBT	26062-94-2
		Aluminium		Al	7429-90-5
Termination	Tin coated CLAD steel wire	Iron		Fe	7439-89-6
		Copper		Cu	7440-50-8
		Nickel	Ni	7440-02-0	
		Tin	Sn	7440-31-5	

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

Annex 12

Material Declaration Paper Capacitor

PME271E Series Metallized Impregnated Paper, 300 VAC



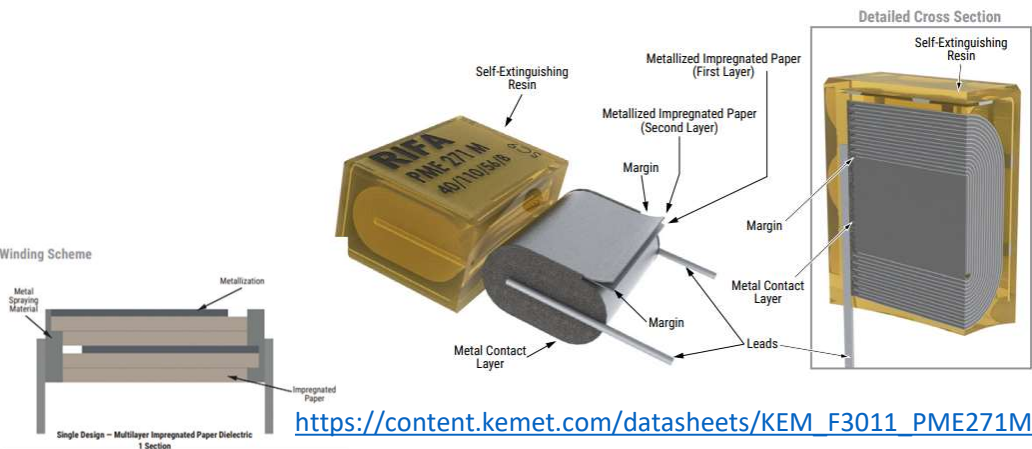
Pitch mm				15.2	20.3	22.5	25.4
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.047μF Box dimension 8.5x14.3x18.5 mm	MAXIMUM size Cap 0.1μF Box dimension 11.3x16.5x24 mm	MAXIMUM size Cap 0.22μF Box dimension 12x22x27 mm	MAXIMUM size Cap 0.22μF Box dimension 12.1x19x30.5 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Capacitor paper	Capacitor paper	-	0,981	2,285	3,263	3,356
	Metal	Zn	7440-66-6	0,005	0,011	0,016	0,016
	Metal	Ag	7440-22-4	0,00025	0,00057	0,00082	0,00084
	Metal	Sn	7440-31-5	0,806	1,110	1,865	1,585
	Metal	Cu	7440-50-8	0,004	0,006	0,009	0,008
Homogeneous Level Weight				1,795	3,411	5,153	4,966
Encapsulation	Thermosetting Resin	Epoxy resin	-	1,017	2,044	2,920	2,848
	Flame retardant	Halogenated Flame Ret. except for PBB and PBDE	-	0,321	0,646	0,922	0,900
	Label material	PBT	26062-94-2	0,149	0,237	0,337	0,330
		Al	7429-90-5	0,131	0,203	0,293	0,300
Homogeneous Level Weight				1,618	3,000	4,472	4,378
Termination	Tin coated CLAD steel wire	Fe	7439-89-6	0,301	0,356	0,291	0,511
		Cu	7440-50-8	0,081	0,096	0,078	0,137
		Ni	7440-02-0	0,002	0,003	0,002	0,003
		Sn	7440-31-5	0,003	0,004	0,003	0,005
Homogeneous Level Weight				0,387	0,459	0,375	0,656
Total Weight				3,800	7,000	10,000	10,000

Remark: Material declaration of special part number will be individually released

Material Declaration Paper Capacitor

PME271M Series Metalized Impregnated Paper, 275 VAC

Construction



Voltage Range : 275 VAC
Capacitance Range : 0.001 - 0.6 μ F
Size Range: 3.9x7.5x13.5 – 15.3x22x30.5

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Paper	Capacitor paper	see Annex 13	-	-
		Zinc		Zn	7440-66-6
		Silver		Ag	7440-22-4
	Paper Film	Capacitor paper		-	-
	Metal Spray	Tin		Sn	7440-31-5
		Copper		Cu	7440-50-8
Encapsulation	Thermosetting Resin	Epoxy resin		Epoxy resin	-
		Halogenated Flame Ret. except for PBB and PBDE		-	-
	Label material	PBT		PBT	26062-94-2
		Aluminium		Al	7429-90-5
Termination	Tin coated CLAD steel wire	Iron		Fe	7439-89-6
		Copper		Cu	7440-50-8
		Nickel		Ni	7440-02-0
		Tin		Sn	7440-31-5

Remark: Material declaration of special part number will be individually released

Annex 13

Material Declaration Impregnated Metallized Paper Capacitor



PME271M Series [Metallized Impregnated Paper, 275 VAC](#)

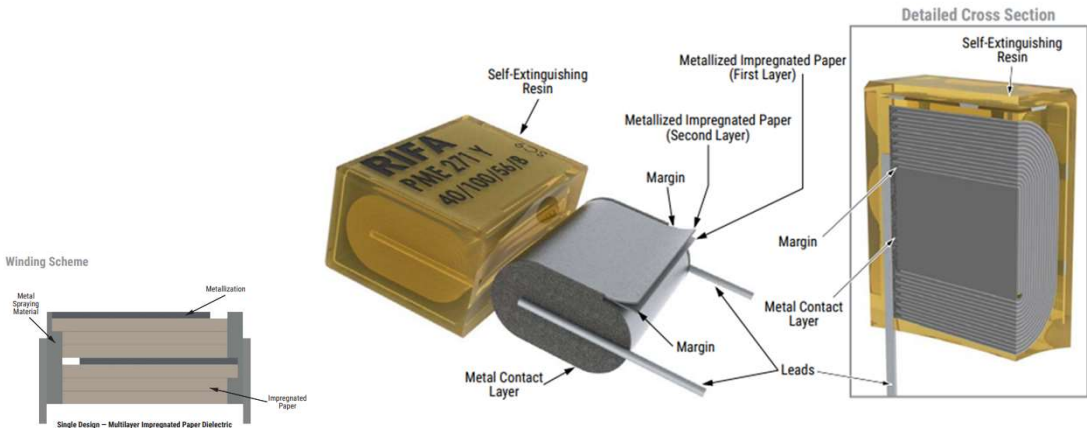
Pitch mm				10.2	15.2	20.3	22.5	25.4
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.0068μF Box dimension 5.1x10.5x13.5 mm	MAXIMUM size Cap 0.1μF Box dimension 8.5x14.3x18.5 mm	MAXIMUM size Cap 0.22μF Box dimension 11.3x16.5x24 mm	MAXIMUM size Cap 0.33μF Box dimension 12x22x27 mm	MAXIMUM size Cap 0.6μF Box dimension 15.3x22x30.5 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Capacitor paper	Capacitor paper	-	0,208	0,981	2,285	3,263	5,817
	Metal	Zn	7440-66-6	0,001	0,005	0,011	0,016	0,028
	Metal	Ag	7440-22-4	0,00005	0,00025	0,00057	0,00082	0,00146
	Metal	Sn	7440-31-5	0,263	0,806	1,110	1,865	2,270
	Metal	Cu	7440-50-8	0,001	0,004	0,006	0,009	0,011
Homogeneous Level Weight				0,473	1,795	3,411	5,153	8,128
Encapsulation	Thermosetting Resin	Epoxy resin	-	0,326	1,017	2,044	2,920	4,118
	Flame retardant	Halogenated Flame Ret. except for PBB and PBDE	-	0,103	0,321	0,646	0,922	1,301
	Label material	PBT	26062-94-2	0,054	0,149	0,237	0,337	0,399
		Al	7429-90-5	0,046	0,131	0,203	0,293	0,341
Homogeneous Level Weight				0,529	1,618	3,129	4,472	6,159
Termination	Tin coated CLAD steel wire	Fe	7439-89-6	0,159	0,301	0,356	0,291	0,555
		Cu	7440-50-8	0,035	0,081	0,096	0,078	0,149
		Ni	7440-02-0	0,001	0,002	0,003	0,002	0,003
		Sn	7440-31-5	0,002	0,003	0,004	0,003	0,005
Homogeneous Level Weight				0,198	0,387	0,459	0,375	0,713
Total Weight				1,200	3,800	7,000	10,000	15,000

Remark: Material declaration of special part number will be individually released

Material Declaration Paper Capacitor

PME271Y Series Metallized Impregnated Paper, 250 VAC

Construction



https://content.kemet.com/datasheets/KEM_F3016_PME271Y_Y2_250.pdf

Voltage Range :

250 VAC

Capacitance Range :

0.001 - 0.1 μ F

Size Range:

3.9x7.5x13.5 – 12.1x19x30.5

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Paper	Capacitor paper	see Annex 14	-	-
		Zinc		Zn	7440-66-6
		Silver		Ag	7440-22-4
	Paper Film	Capacitor paper		-	-
	Metal Spray	Tin		Sn	7440-31-5
		Copper		Cu	7440-50-8
Encapsulation	Thermosetting Resin	Epoxy resin		Epoxy resin	-
		Halogenated Flame Ret. except for PBB and PBDE		-	-
	Label material	PBT		PBT	26062-94-2
		Aluminium		Al	7429-90-5
Termination	Tin coated CLAD steel wire	Iron		Fe	7439-89-6
		Copper		Cu	7440-50-8
		Nickel		Ni	7440-02-0
		Tin		Sn	7440-31-5

Remark: Material declaration of special part number will be individually released

Annex 14

Material Declaration Paper Capacitor

PME271Y Series [Metallized Impregnated Paper, 250 VAC](#)



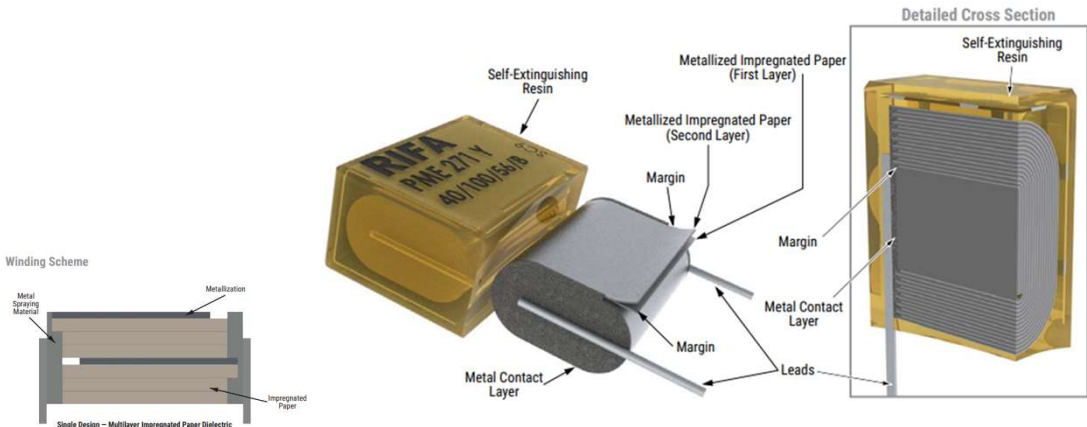
Pitch mm				10.2	15.2	20.3	25.4
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.0047µF Box dimension 5.1x10.5x13.5 mm	MAXIMUM size Cap 0.0220uF Box dimension 7.3x13x18.5 mm	MAXIMUM size Cap 0.0680uF Box dimension 11.3x16.5x24mm	MAXIMUM size Cap 0.1000uF Box dimension 12.1x19x30.5 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Capacitor paper	Capacitor paper	-	0,208	0,717	2,285	3,356
	Metal	Zn	7440-66-6	0,001	0,003	0,011	0,016
	Metal	Ag	7440-22-4	0,00005	0,00018	0,00057	0,00084
	Metal	Sn	7440-31-5	0,263	0,606	1,110	1,585
	Metal	Cu	7440-50-8	0,001	0,003	1,110	1,110
Homogeneous Level Weight				0,473	1,329	4,515	6,067
Encapsulation	Thermosetting Resin	Epoxy resin	-	0,326	0,800	2,044	2,848
	Flame retardant	Halogenated Flame Ret. except for PBB and PBDE	-	0,103	0,253	0,646	0,900
	Label material	PBT	26062-94-2	0,054	0,121	0,237	0,330
		Al	7429-90-5	0,046	0,109	0,203	0,300
Homogeneous Level Weight				0,529	1,283	3,129	4,378
Termination	Tin coated CLAD steel wire	Fe	7439-89-6	0,159	0,301	0,356	0,511
		Cu	7440-50-8	0,035	0,081	0,096	0,137
		Ni	7440-02-0	0,002	0,002	0,003	0,003
		Sn	7440-31-5	0,002	0,003	0,004	0,005
Homogeneous Level Weight				0,198	0,388	0,459	0,656
Total Weight				1,200	3,000	8,104	11,102

Remark: Material declaration of special part number will be individually released

Material Declaration Paper Capacitor

PME271Y A-E Series Metallized Impregnated Paper, 300 VAC, 115°C

Construction



https://content.kemet.com/datasheets/KEM_F3017_PME271YA_Y2_300.pdf

Voltage Range :

Capacitance Range :

Size Range:

300 VAC

0.001 - 0.15 μ F

3.9x7.5x13.5 – 15.3x22x30.5

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Paper	Capacitor paper	see Annex 15	-	-
		Zinc		Zn	7440-66-6
		Silver		Ag	7440-22-4
	Paper Film	Capacitor paper		-	-
	Metal Spray	Tin		Sn	7440-31-5
		Copper		Cu	7440-50-8
Encapsulation	Thermosetting Resin	Epoxy resin		Epoxy resin	-
		Halogenated Flame Ret. except for PBB and PBDE		-	-
	Label material	PBT		PBT	26062-94-2
		Aluminium		Al	7429-90-5
Termination	Tin coated CLAD steel wire	Iron		Fe	7439-89-6
		Copper		Cu	7440-50-8
		Nickel		Ni	7440-02-0
		Tin		Sn	7440-31-5

Annex 15

Material Declaration Paper Capacitor

PME271Y A-E Series Metallized Impregnated Paper, 300 VAC, 115°C



Pitch mm				10.2	15.2	20.3	22.5	25.4
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.0047μF Box dimension 5.1x10.5x13.5 mm	MAXIMUM size Cap 0.0220μF Box dimension 7.3x13x18.5 mm	MAXIMUM size Cap 0.0680μF Box dimension 11.3x16.5x24 mm	MAXIMUM size Cap 0.1000μF Box dimension 12x22x27 mm	MAXIMUM size Cap 0.1500μF Box dimension 15.3x22x30.5 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Capacitor paper	Capacitor paper	-	0,208	0,717	2,285	3,263	5,817
	Metal	Zn	7440-66-6	0,001	0,003	0,011	0,016	0,028
	Metal	Ag	7440-22-4	0,00005	0,00018	0,00057	0,00082	0,00146
	Metal	Sn	7440-31-5	0,263	0,606	1,110	1,865	2,270
	Metal	Cu	7440-50-8	1,110	1,110	0,006	0,009	0,011
Homogeneous Level Weight				1,581	2,436	3,411	5,153	8,128
Encapsulation	Thermosetting Resin	Epoxy resin	-	0,326	0,800	2,044	2,920	4,118
	Flame retardant	Halogenated Flame Ret. except for PBB and PBDE	-	0,103	0,253	0,646	0,922	1,301
	Label material	PBT	26062-94-2	0,054	0,121	0,237	0,337	0,399
		Al	7429-90-5	0,046	0,109	0,203	0,293	0,341
Homogeneous Level Weight				0,529	1,283	3,129	4,472	6,159
Termination	Tin coated CLAD steel wire	Fe	7439-89-6	0,159	0,301	0,356	0,291	0,555
		Cu	7440-50-8	0,035	0,081	0,096	0,078	0,149
		Ni	7440-02-0	0,001	0,002	0,003	0,002	0,003
		Sn	7440-31-5	0,002	0,003	0,004	0,003	0,005
Homogeneous Level Weight				0,198	0,388	0,459	0,375	0,713
Total Weight				2,308	4,107	7,000	10,000	15,000

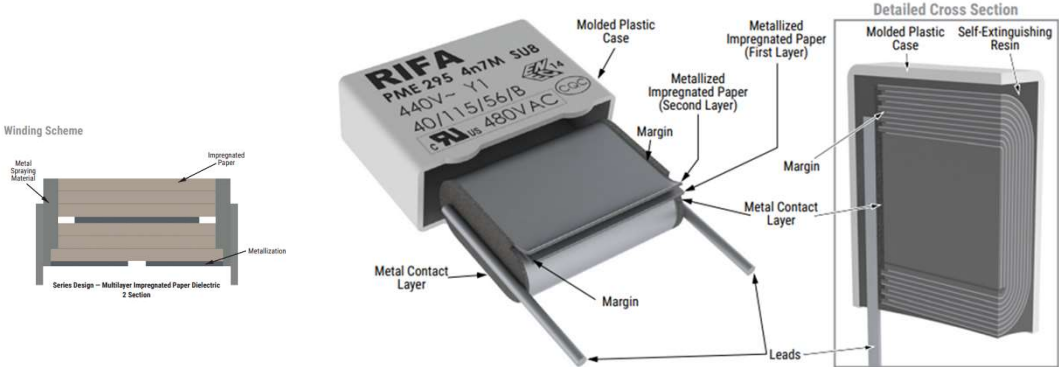
Remark: Material declaration of special part number will be individually released

Material Declaration Paper Capacitor

PME295 Series Metallized Impregnated Paper, 440 VAC/480 VAC



Construction



Voltage Range : 440 VAC/480 VAC
Capacitance Range : 470 – 4.7 pF
Lead spacing: 15 mm

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3064_PME295_Y1_440-480.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Paper	Capacitor paper	see Annex 16	-	-
		Zinc		Zn	7440-66-6
		Silver		Ag	7440-22-4
	Paper Film	Capacitor paper		-	-
	Aluminium foil	Aluminium		Al	7429-90-5
	Metal Spray	Tin		Sn	7440-31-5
		Copper		Cu	7440-50-8
		Encapsulation		Thermosetting Resin	Epoxy resin
Halogenated Flame Ret. except for PBB and PBDE	-				-
Plastic Case	PP			PP	9003-07-0
	Talc			Talc	14807-96-6
Termination	Tin coated CLAD steel wire	Iron		Fe	7439-89-6
		Copper		Cu	7440-50-8
		Nickel		Ni	7440-02-0
		Tin		Sn	7440-31-5

Remark: Material declaration of special part number will be individually released

Annex 16

Material Declaration Impregnated Metallized Paper Capacitor PME295 Series Pitch 15 mm [Metallized Impregnated Paper, 440 VAC/480 VAC](#)

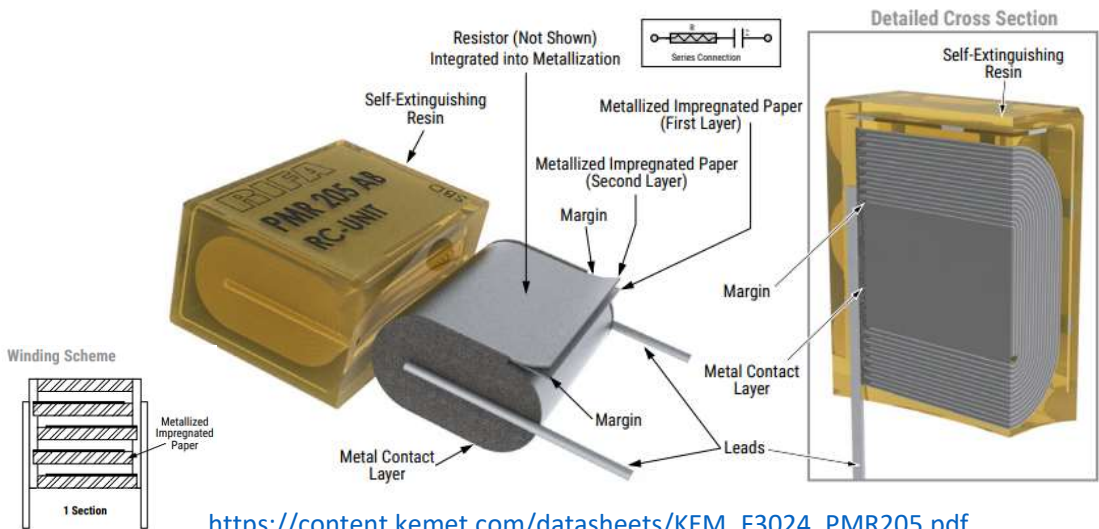


Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size 0.0047µF Box dimension 8.5x16x18 mm
				Weight (gr)
Element	Capacitor paper	Capacitor paper	-	0,709
	Metal	Zn	7440-66-6	0,003
	Metal	Ag	7440-22-4	0,00018
	Metal	Al	7429-90-5	0,036
	Metal	Sn	7440-31-5	1,031
	Metal	Cu	7440-50-8	0,005
Homogeneous Level Weight				1,785
Encapsulation	Thermosetting Resin	Epoxy resin	-	0,613
	Flame retardant	Halogenated Flame Ret. except for PBB and PBDE	-	0,193
	Label material	PP	9003-07-0	0,497
		Talc	14807-96-6	0,124
Homogeneous Level Weight				1,427
Termination	Tin coated lead frame	Fe	7439-89-6	0,223
		Cu	7440-50-8	0,060
		Ni	7440-02-0	0,002
		Sn	7440-31-5	0,003
Homogeneous Level Weight				0,288
Total Weight				3,500

Remark: Material declaration of special part number will be individually released

Material Declaration Paper Capacitor

PMR205 Series Metallized Impregnated Paper, 125 VAC/250 VDC



Voltage Range : 250 VDC, 125 VAC
Capacitance Range : 0.1 - 1.0 μ F
Size Range : 5.2x10.5x18.5 - 10.6x16.1x30.5

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3024_PMR205.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Paper	Capacitor paper	see Annex 17	-	-
		Zinc		Zn	7440-66-6
		Silver		Ag	7440-22-4
	Metal Spray	Tin		Sn	7440-31-5
		Copper		Cu	7440-50-8
Encapsulation	Thermosetting Resin	Epoxy resin		Epoxy resin	-
		Halogenated Flame Ret. except for PBB and PBDE		-	-
	Label material	PBT		PBT	26062-94-2
		Aluminium		Al	7429-90-5
		Iron		Fe	7439-89-6
Termination	Tin coated CLAD steel wire	Copper		Cu	7440-50-8
		Nickel		Ni	7440-02-0
		Tin		Sn	7440-31-5

Remark: Material declaration of special part number will be individually released

Annex 17

Material Declaration Paper Capacitor

PMR205 [Metallized Impregnated Paper, 125 VAC/250 VDC](#)

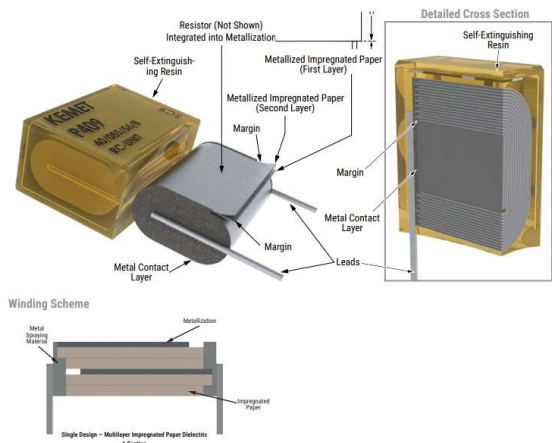


Pitch mm				15.2	20.3	25.4
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.33µF Box dimension 7.8x13.5x18.5 mm	MAXIMUM size Cap 1.0µF Box dimension 11.3x16.5x24 mm	MAXIMUM size Cap 1.0µF Box dimension 10.6x16.1x30.5 mm
				Weight (gr)	Weight (gr)	Weight (gr)
Element	Capacitor paper	Capacitor paper	-	0,873	2,273	2,720
	Metal	Zn	7440-66-6	0,008	0,022	0,026
	Metal	Ag	7440-22-4	0,00044	0,00115	0,00137
	Metal	Sn	7440-31-5	0,696	1,110	1,367
	Metal	Cu	7440-50-8	0,003	0,006	0,007
Homogeneous Level Weight				1,5808	3,4112	4,1208
Encapsulation	Thermosetting Resin	Epoxy resin	-	0,832	2,044	2,456
	Flame retardant	Halogenated Flame Ret. except for PBB and PBDE	-	0,263	0,646	0,776
	Label material	PBT	26062-94-2	0,138	0,237	0,272
		Al	7429-90-5	0,122	0,203	0,248
Homogeneous Level Weight				1,3544	3,130	3,752
Termination	Tin coated CLAD steel wire	Fe	7439-89-6	0,283	0,356	0,566
		Cu	7440-50-8	0,076	0,096	0,152
		Ni	7440-02-0	0,002	0,003	0,003
		Sn	7440-31-5	0,003	0,004	0,005
Homogeneous Level Weight				0,365	0,459	0,727
Total Weight				3,300	7,000	8,600

Remark: Material declaration of special part number will be individually released

Material Declaration Impregnated Metallized Paper Capacitor

P409 Series Integrated Resistor, Metallized Impregnated Paper, 275 VAC



Voltage Range : 275 VAC
Capacitance Range : 0.047 - 0.47 µF
Size Range : 7.3x13x18.5 - 15.3x22x30.5

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3024_PMR205.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Paper	Capacitor paper	see Annex 18	-	-
		Zinc		Zn	7440-66-6
		Silver		Ag	7440-22-4
	Paper film	Capacitor paper		-	-
	Metal Spray	Tin		Sn	7440-31-5
		Copper		Cu	7440-50-8
Encapsulation	Thermosetting Resin	Epoxy resin		Epoxy resin	-
		Halogenated Flame Ret. except for PBB and PBDE		-	-
	Label material	PBT		PBT	26062-94-2
		Aluminium		Al	7429-90-5
Termination	Tin coated CLAD steel wire	Iron		Fe	7439-89-6
		Copper		Cu	7440-50-8
		Nickel		Ni	7440-02-0
		Tin		Sn	7440-31-5

Remark: Material declaration of special part number will be individually released

Annex 18

Material Declaration Paper Capacitor

P409 Series [Integrated Resistor, Metallized Impregnated Paper, 275 VAC](#)

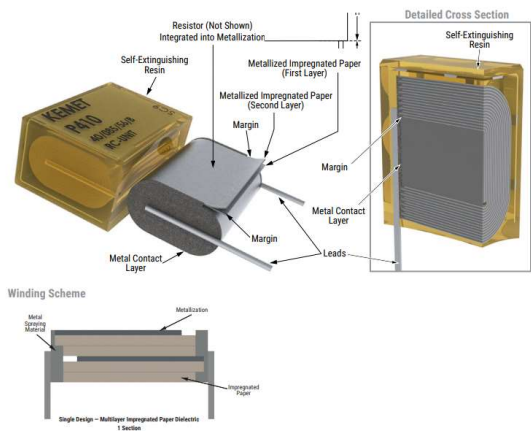


Pitch mm				15.2	20.3	25.4
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.047μF Box dimension 7.3x13x18.5 mm	MAXIMUM size Cap 0.22μF Box dimension 11.3x16.5x24 mm	MAXIMUM size Cap 0.47μF Box dimension 15.3x22.0x30.5 mm
				Weight (gr)	Weight (gr)	Weight (gr)
Element	Capacitor paper	Capacitor paper	-	0.717	2.285	5.817
	Metal	Zn	7440-66-6	0.003	0.011	0.028
	Metal	Ag	7440-22-4	0.00018	0.00057	0.00146
	Metal	Sn	7440-31-5	0.606	1.110	2.270
	Metal	Cu	7440-50-8	0.003	0.006	0.011
Homogeneous Level Weight				1.3296	3.4112	8.1282
Encapsulation	Thermosetting Resin	Epoxy resin	-	0.800	2.044	4.118
	Flame retardant	Halogenated Flame Ret. except for PBB and PBDE	-	0.253	0.646	1.301
	Label material	PBT	26062-94-2	0.121	0.237	0.399
		Al	7429-90-5	0.109	0.203	0.341
Homogeneous Level Weight				1.2826	3.130	6.1588
Termination	Tin coated CLAD steel wire	Fe	7439-89-6	0.301	0.356	0.555
		Cu	7440-50-8	0.081	0.096	0.149
		Ni	7440-02-0	0.002	0.003	0.003
		Sn	7440-31-5	0.003	0.004	0.005
Homogeneous Level Weight				0.388	0.459	0.713
Total Weight				3.000	7.000	15.000

Remark: Material declaration of special part number will be individually released

Material Declaration Paper Capacitor

P410 Series Integrated Resistor, Metallized Impregnated Paper, 300 VAC



Voltage Range : 300 VAC

Capacitance Range : 0.022 - 0.1 μ F

Size Range : 7.3x13x18.5 - 10.6x16.1x30.5

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3090_P410_X1_300.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Paper	Capacitor paper	see Annex 19		-
		Zinc		Zn	7440-66-6
		Silver		Ag	7440-22-4
	Paper film	Capacitor paper		-	-
	Metal Spray	Tin		Sn	7440-31-5
		Copper		Cu	7440-50-8
Encapsulation	Thermosetting Resin	Epoxy resin		Epoxy resin	-
		Halogenated Flame Ret. except for PBB and PBDE		-	-
	Label material	PBT		PBT	26062-94-2
		Aluminium		Al	7429-90-5
	Termination	Tin coated CLAD steel wire		Iron	Fe
Copper				Cu	7440-50-8
Nickel				Ni	7440-02-0
Tin				Sn	7440-31-5

Remark: Material declaration of special part number will be individually released

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

Annex 19

Material Declaration Impregnated Metallized Paper Capacitor

P410 Series [Integrated Resistor, Metallized Impregnated Paper, 300 VAC](#)



Pitch mm				15.2	20.3	25.4
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.033μF Box dimension 8.5x14.3x18.5 mm	MAXIMUM size Cap 0.068μF Box dimension 11.3x16.5x24 mm	MAXIMUM size Cap 0.1μF Box dimension 10.6x16.1x30.5 mm
				Weight (gr)	Weight (gr)	Weight (gr)
Element	Capacitor paper	Capacitor paper	-	0.981	2.285	2.733
	Metal	Zn	7440-66-6	0.005	0.011	0.013
	Metal	Ag	7440-22-4	0.00025	0.00057	0.00069
	Metal	Sn	7440-31-5	0.806	1.110	1.367
	Metal	Cu	7440-50-8	0.004	0.006	0.007
Homogeneous Level Weight				1.795	3.411	4.121
Encapsulation	Thermosetting Resin	Epoxy resin	-	1.017	2.044	2.456
	Flame retardant	Halogenated Flame Ret. except for PBB and PBDE	-	0.321	0.646	0.776
	Label material	PBT	26062-94-2	0.149	0.237	0.272
		Al	7429-90-5	0.131	0.203	0.248
Homogeneous Level Weight				1.618	3.130	3.752
Termination	Tin coated CLAD steel wire	Fe	7439-89-6	0.301	0.356	0.566
		Cu	7440-50-8	0.081	0.096	0.152
Ni		7440-02-0	0.002	0.003	0.003	
Sn		7440-31-5	0.003	0.004	0.005	
Homogeneous Level Weight				0.387	0.459	0.727
Total Weight				3.800	7.000	8.600

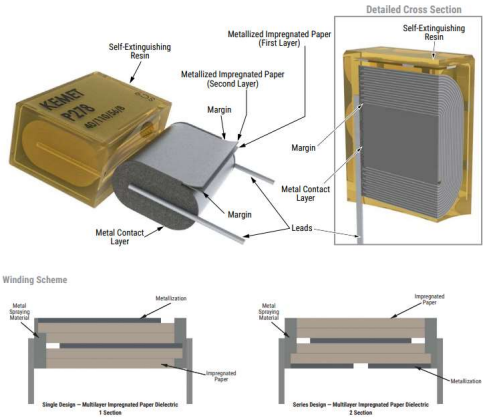
Remark: Material declaration of special part number will be individually released

Material Declaration Paper Capacitor

P278 Series Metallized Impregnated Paper, 480 VAC



Construction



Voltage Range : 480 VAC
Capacitance Range : 0.001 – 0.15 µF
Size Range : 3.9x7.5x13.5 - 15.3x22x30.5

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3087_P278_X1_480.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Paper	Capacitor paper	see Annex 20	-	-
		Zinc		Zn	7440-66-6
		Silver		Ag	7440-22-4
	Paper Film	Capacitor paper		-	-
	Metal Spray	Tin		Sn	7440-31-5
		Copper		Cu	7440-50-8
Encapsulation	Thermosetting Resin	Epoxy resin		Epoxy resin	-
		Halogenated Flame Ret. except for PBB and PBDE		-	-
	Label material	PBT		PBT	26062-94-2
		Aluminium		Al	7429-90-5
Termination	Tin coated CLAD steel wire	Iron		Fe	7439-89-6
		Copper		Cu	7440-50-8
		Nickel		Ni	7440-02-0
		Tin		Sn	7440-31-5

Remark: Material declaration of special part number will be individually released

Annex 20

Material Declaration Paper Capacitor

P278 Series Metallized Impregnated Paper, 480 VAC

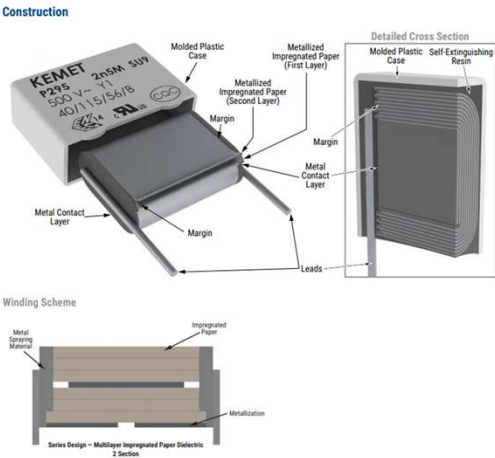


Pitch mm				10.2	15.2	20.3	22.5	25.4
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0.0047µF Box dimension 5.1x10.5x13.5 mm	MAXIMUM size Cap 0.022µF Box dimension 8.5x14.3x18.5 mm	MAXIMUM size Cap 0.068µF Box dimension 11.3x16.5x24 mm	MAXIMUM size Cap 0.1µF Box dimension 12x22x27 mm	MAXIMUM size Cap 0.15µF Box dimension 15.3x22x30.5 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Capacitor paper	Capacitor paper	-	0,208	0,981	2,285	3,263	5,817
	Metal	Zn	7440-66-6	0,001	0,005	0,011	0,016	0,028
	Metal	Ag	7440-22-4	0,00005	0,00025	0,00057	0,00082	0,00146
	Metal	Sn	7440-31-5	0,263	0,806	1,110	1,865	2,270
	Metal	Cu	7440-50-8	0,001	0,004	0,006	0,009	0,011
Homogeneous Level Weight				0,473	1,795	3,411	5,154	8,128
Encapsulation	Thermosetting Resin	Epoxy resin	-	0,326	1,017	2,044	2,920	4,118
	Flame retardant	Halogenated Flame Ret. except for PBB and PBDE	-	0,103	0,321	0,646	0,922	1,301
	Label material	PBT	26062-94-2	0,054	0,149	0,237	0,337	0,399
		Al	7429-90-5	0,046	0,131	0,203	0,293	0,341
Homogeneous Level Weight				0,529	1,618	3,130	4,472	6,159
Termination	Tin coated CLAD steel wire	Fe	7439-89-6	0,159	0,301	0,356	0,291	0,555
		Cu	7440-50-8	0,035	0,081	0,096	0,078	0,149
		Ni	7440-02-0	0,001	0,002	0,003	0,002	0,003
		Sn	7440-31-5	0,002	0,003	0,004	0,003	0,005
Homogeneous Level Weight				0,198	0,387	0,459	0,375	0,713
Total Weight				1,200	3,800	7,000	10,000	15,000

Remark: Material declaration of special part number will be individually released

Material Declaration Paper Capacitor

P295 Series Metallized Impregnated Paper, 500 VAC



Voltage Range :

500 VAC

Capacitance Range :

470 – 4.7 pF

Lead spacing:

15 mm

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3088_P295_Y1_500.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Paper	Capacitor paper	see Annex 21	-	-
		Zinc		Zn	7440-66-6
		Silver		Ag	7440-22-4
	Paper Film	Capacitor paper		-	-
	Aluminium foil	Aluminium		Al	7429-90-5
	Metal Spray	Tin		Sn	7440-31-5
		Copper		Cu	7440-50-8
Encapsulation	Thermosetting Resin	Epoxy resin		Epoxy resin	-
		Halogenated Flame Ret. except for PBB and PBDE		-	-
	Plastic case	PP		PP	9003-07-0
		Talc		Talc	14807-96-6
		Iron		Fe	7439-89-6
Termination	Tin coated CLAD steel wire	Copper		Cu	7440-50-8
		Nickel		Ni	7440-02-0
		Tin		Sn	7440-31-5

Remark: Material declaration of special part number will be individually released

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

Annex 21

Material Declaration Impregnated Metallized Paper Capacitor



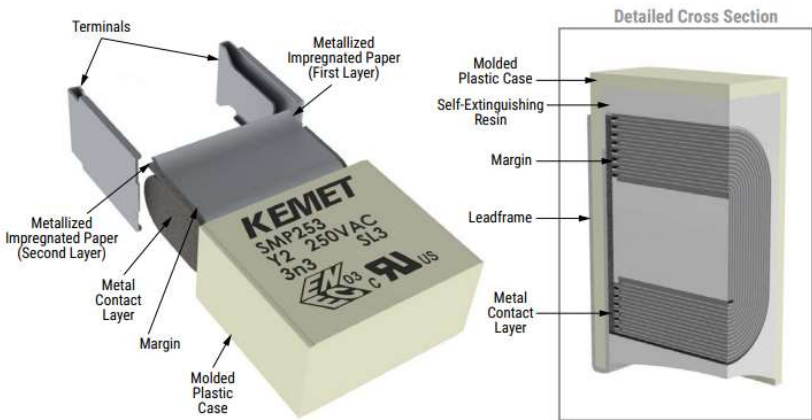
P295 Series Pitch 15 mm [Metallized Impregnated Paper, 500 VAC](#)

Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size 0.0047µF Box dimension 8.5x16x18 mm
				Weight (gr)
Element	Capacitor paper	Capacitor paper	-	0,709
	Metal	Zn	7440-66-6	0,003
	Metal	Ag	7440-22-4	0,00018
	Metal	Al	7429-90-5	0,036
	Metal	Sn	7440-31-5	1,031
	Metal	Cu	7440-50-8	0,005
Homogeneous Level Weight				1,785
Encapsulation	Thermosetting Resin	Epoxy resin	-	0,613
	Flame retardant	Halogenated Flame Ret. except for PBB and PBDE	-	0,193
	Label material	PP	9003-07-0	0,497
		Talc	14807-96-6	0,124
Homogeneous Level Weight				1,427
Termination	Tin coated lead frame	Fe	7439-89-6	0,223
		Cu	7440-50-8	0,060
		Ni	7440-02-0	0,002
		Sn	7440-31-5	0,003
Homogeneous Level Weight				0,288
Total Weight				3,500

Remark: Material declaration of special part number will be individually released

Material Declaration Paper Capacitor

SMP253 Series Pitch 12.7 Metallized Impregnated Paper, 250 VAC



Voltage Range : 250 VAC
Capacitance Range : 0.001 – 0.0047 μ F
Lead Spacing : 12.7mm

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3018_SMP253_Y2_250.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Paper Film	Capacitor paper	see Annex 22	-	-
		Zinc		Zn	7440-66-6
		Silver		Ag	7440-22-4
	Paper Film	Capacitor paper		-	-
	Aluminium foil	Aluminium		Al	7429-90-5
	Metal Spray	Zinc		Zn	7440-66-6
	Metal Spray	Tin		Sn	7440-31-5
		Antimony		Sb	7440-36-0
Encapsulation	Thermosetting Resin	Epoxy resin		Epoxy resin	-
		Halogenated Flame Ret. except for PBB and PBDE		-	-
	Plastic Case	PPS		PPS	9016-75-5
		Glass Fibre		GF	65997-17-3
Termination	Tin coated lead frame	Bronze		CuSn6	-
		Tin		Sn	7440-31-5

Remark: Material declaration of special part number will be individually released

Annex 22

Material Declaration Impregnated Metallized Paper Capacitor

SMP253 Series Pitch 12.7 [Metallized Impregnated Paper, 250 VAC](#)



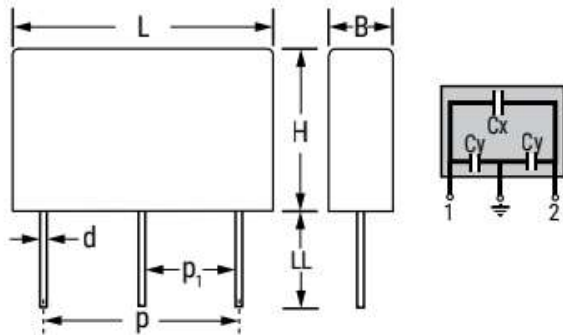
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size - Cap 0.0047μF Box dimension 11.5x6.5x12.7 mm
				Weight (gr)
Element	Capacitor paper	Capacitor paper	-	0.164
	Metal	Zn	7440-66-6	0.113
	Metal	Ag	7440-22-4	0.00004
	Metal	Al	7429-90-5	0.008
	Metal	Sn	7440-31-5	0.033
	Metal	Sb	7440-36-0	0.004
Homogeneous Level Weight				0.322
Encapsulation	Thermosetting Resin	Epoxy resin	-	0.420
	Flame retardant	Halogenated Flame Ret. except for PBB and PBDE	-	0.132
	Plastic Case	PPS	9016-75-5	0.270
		GF	65997-17-3	0.180
Homogeneous Level Weight				1.002
Termination	Tin coated lead frame	CuSn6	-	0.267
		Sn	7440-31-5	0.009
Homogeneous Level Weight				0.276
Total Weight				1.600

Remark: Material declaration of special part number will be individually released

Material Declaration Paper Capacitor

PZB300 Series Pitch 20 mm Metallized Impregnated Paper, 275 VAC Delta Configuration X2 + 2x Y2

Dimensions – Millimeters



Voltage Range :

275 VAC

Capacitance X value :

0.1 μ F and 0.15 μ F

Capacitance Y value :

0.0022 μ F, 0.0033 μ F and 0.0044 μ F

Lead Spacing :

20 mm

https://content.kemet.com/datasheets/KEM_F3019_PZB300X2_2xY2_275.pdf

Environmental Compliance

Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Paper	Capacitor paper	see Annex 23		-
		Zinc		Zn	7440-66-6
		Silver		Ag	7440-22-4
	Paper Film	Capacitor paper			-
	Tin foil	Tin		Sn	7440-31-5
	Metal Spray	Tin		Sn	7440-31-5
		Copper		Cu	7440-50-8
Encapsulation	Thermosetting Resin	Epoxy resin		Epoxy resin	-
		Halogenated Flame Ret. except for PBB and PBDE		-	-
	Label Material	PBT		PBT	26062-94-2
		Aluminium		Al	7429-90-5
Termination	Tin coated CLAD steel wire	Iron		Fe	7439-89-6
		Copper		Cu	7440-50-8
		Nickel		Ni	7440-02-0
		Tin		Sn	7440-31-5

Remark: Material declaration of special part number will be individually released

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

Annex 23

Material Declaration Impregnated Metallized Paper Capacitor

PZB300 Series Pitch 20 mm [Metallized Impregnated Paper, 275 VAC Delta Configuration X2 + 2x Y2](#)

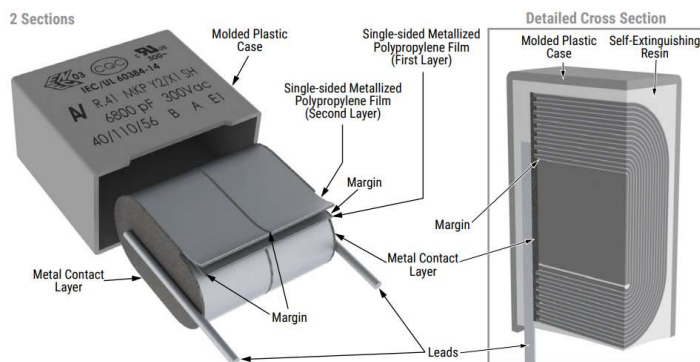
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size - 0.15µF Box dimension 12.5x16x24 mm
				Weight (gr)
Element	Capacitor paper	Capacitor paper	-	2.120
	Metal	Zn	7440-66-6	0.010
	Metal	Ag	7440-22-4	0.00053
	Metal	Sn	7440-31-5	1.432
	Metal	Cu	7440-50-8	0.007
Homogeneous Level Weight				3.569
Encapsulation	Thermosetting Resin	Epoxy resin	-	2.231
	Flame retardant	Halogenated Flame Ret. except for PBB and PBDE	-	0.705
	Label material	PBT	26062-94-2	0.295
		Al	7429-90-5	0.215
Homogeneous Level Weight				3.446
Termination	Tin coated lead frame	Fe	7439-89-6	0.380
		Cu	7440-50-8	0.102
		Ni	7440-02-0	0.003
		Sn	7440-31-5	0.004
Homogeneous Level Weight				0.489
Total Weight				7.504

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

R41 Series Class X1/Y2, 300 VAC, 110°C (Automotive Grade)

Construction



Voltage Range : 300 VAC

Capacitance Range : 0.001 – 1 µF

Lead Spacing : 10 -37.5 mm

Environmental Compliance

Pb Free	YES
RoHS Compliant	YES
Halogen Free	Available for some PNs

https://content.kemet.com/datasheets/KEM_F3100_R41_Y2_300.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized Film	Polypropylene	see Annex 24	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 PU		Polyurethane resin	-
	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		-	-
		Glass Fiber		GF	65997-17-3
		Further Additives		-	-
	Plastic Case (*)	Polybutylene terephthalate		PBT	26062-94-2
		Nitrogen and phosphorus type flame retardants		Phosphinic acid, diethyl-, aluminum salt (9CI)	225789-38-8
				Melamin-polyphosphate	218768-84-4
				Melamine cyanurate	37640-57-6
Termination	Core Metal	Copper (*)		GF	65997-17-3
	Finish plating	Tin (*)		-	-
	Core Metal	Iron		Cu-ETP	7440-50-8
	Finish plating	Copper		EP-Sn	7440-31-5
	Finish plating	Tin		Fe	7439-89-6
				Cu	7440-50-8
				Sn	7440-31-5

(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

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

Annex 24

Material Declaration Radial Plastic Film Capacitor

R41 Series Class X1/Y2, 300 VAC, 110°C (Automotive Grade)



Pitch mm				10	15	22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0,01µF Box dimension 6x12x13 mm	MAXIMUM size Cap 0,068µF Box dimension 11x19x18 mm	MAXIMUM size Cap 0,22µF Box dimension 13x22x26,5 mm	MAXIMUM size Cap 0,68µF Box dimension 18x33x32 mm	MAXIMUM size Cap 1µF Box dimension 20x40x41,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	0,316	1,692	3,288	8,408	13,747
	Metal	Al	7429-90-5	0,000	0,001	0,002	0,004	0,006
	Metal	Sn	7440-31-5	0,019	0,052	0,091	0,243	0,321
	Metal	Zn	7440-66-6	0,170	0,483	0,843	2,255	3,008
Homogeneous Level Weight				0,505	2,227	4,223	10,909	17,082
Encapsulation	Thermosetting Resin	PU	-	0,580	2,268	4,161	13,457	18,212
		EP (*)	-	0,580	2,268	4,161	13,457	18,213
	Plastic Case	PBT	26062-94-2	0,266	0,868	1,638	3,710	6,419
		Antimony trioxide	1309-64-4	0,027	0,087	0,164	0,371	0,642
		Halogenated Flame Ret. except for PBB and PBDE	-	0,027	0,087	0,164	0,371	0,642
		GF	65997-17-3	0,057	0,186	0,351	0,795	1,376
		Further Additives	-	0,004	0,012	0,023	0,053	0,092
	Plastic Case (*)	PBT	26062-94-2	0,243	0,794	1,498	3,392	5,869
		Nitrogen and phosphorus type flame retardants	225789-38-8	0,027	0,087	0,164	0,371	0,642
			218768-84-4	0,027	0,087	0,164	0,371	0,642
			37640-57-6	0,011	0,037	0,070	0,159	0,275
		GF	65997-17-3	0,057	0,186	0,351	0,795	1,376
	Further Additives	-	0,015	0,050	0,094	0,212	0,367	
Homogeneous Level Weight				1,539	5,776	10,661	32,214	45,596
Termination	Core Metal	Cu-ETP (*)	7440-50-8	/	/	/	/	0,524
	Finish plating	EP-Sn (*)	7440-31-5	/	/	/	/	0,012
	Core Metal	Fe	7439-89-6	0,101	0,198	0,207	0,251	/
	Finish plating	Cu	7440-50-8	0,021	0,046	0,049	0,059	/
	Finish plating	Sn	7440-31-5	0,013	0,020	0,021	0,025	/
Homogeneous Level Weight				0,135	0,265	0,277	0,334	0,536
Total Weight				1,600	6,000	11,000	30,000	45,000

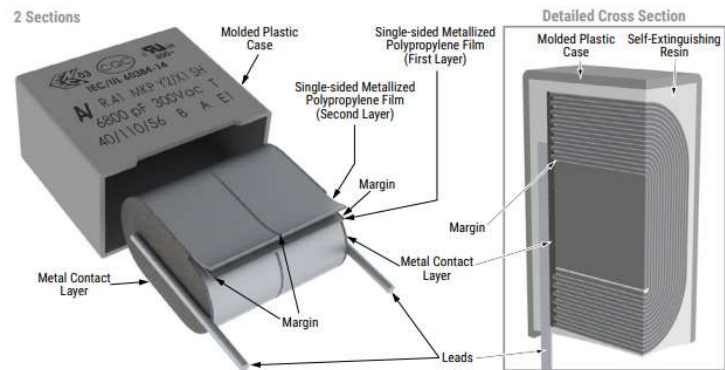
(*) version available for some PN's

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

R41T Series THB, Class X1/Y2, 300 VAC, 125°C(Automotive Grade)

Construction



Voltage Range : 300 VAC
Capacitance Range : 0.001 – 1 µF
Lead Spacing : 7. -37.5 mm

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3120_R41-T_Y2_300.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	see Annex 25	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	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
		Further Additives		-	-
	Core Metal	Copper (*)		Cu-ETP	7440-50-8
Termination	Finish plating	Tin (*)		EP-Sn	7440-31-5
	Core Metal	Iron		Fe	7439-89-6
	Finish plating	Copper		Cu	7440-50-8
	Finish plating	Tin		Sn	7440-31-5

(*) version available for some PN's
Remark: Material declaration of special part number will be individually released

Annex 25

Material Declaration Radial Plastic Film Capacitor

R41T Series [THB, Class X1/Y2, 300 VAC, 125°C\(Automotive Grade\)](#)



Pitch mm				7,5	10	15	22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0,0047µF Box dimension 6x12x10,5 mm	MAXIMUM size Cap 0,0068µF Box dimension 6x12x13 mm	MAXIMUM size Cap 0,068µF Box dimension 11x19x18 mm	MAXIMUM size Cap 0,22µF Box dimension 13x22x26,5 mm	MAXIMUM size Cap 0,68µF Box dimension 18x33x32 mm	MAXIMUM size Cap 1µF Box dimension 20x40x41,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	0,192	0,317	1,522	3,344	9,210	13,747
	Metal	Al	7429-90-5	0,0001	0,0001	0,0007	0,0015	0,0042	0,0062
	Metal	Sn	7440-31-5	0,014	0,019	0,052	0,091	0,242	0,321
	Metal	Zn	7440-66-6	0,129	0,170	0,482	0,843	2,262	3,008
Homogeneous Level Weight				0,335	0,506	2,056	4,279	11,718	17,082
Encapsulation	Thermosetting Resin	EP	-	0,43	0,5792	2,439	4,104	12,648	18,212
	Plastic Case	PBT	26062-94-2	0,21	0,266	0,868	1,638	3,71	6,419
		Antimony trioxide	1309-64-4	0,021	0,0266	0,0868	0,1638	0,371	0,6419
		Halogenated Flame Ret. except for PBB and PBDE	-	0,021	0,027	0,087	0,164	0,371	0,642
		GF	65997-17-3	0,045	0,057	0,186	0,351	0,795	1,3755
		Further Additives	-	0,003	0,004	0,012	0,023	0,053	0,092
Homogeneous Level Weight				0,730	0,959	3,679	6,444	17,948	27,382
Termination	Core Metal	Cu-ETP (*)	7440-50-8	/	/	0,242	0,254	0,308	0,524
	Finish plating	EP-Sn (*)	7440-31-5	/	/	0,022	0,023	0,027	0,012
Termination	Core Metal	Fe	7439-89-6	0,101	0,101	0,198	0,209	0,251	/
	Finish plating	Cu	7440-50-8	0,021	0,021	0,046	0,047	0,059	/
	Finish plating	Sn	7440-31-5	0,013	0,013	0,020	0,021	0,025	/
Homogeneous Level Weight				0,135	0,135	0,264	0,277	0,334	0,536
Total Weight				1,200	1,600	6,000	11,000	30,000	45,000

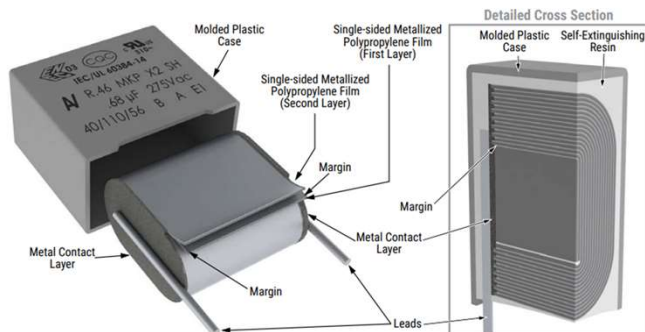
(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

R46 Series (Miniature) Metallized Polypropylene Film, 275 VAC, 110°C

Construction



Voltage Range : 275 VAC

Capacitance Range : 0.01 – 10 µF

Lead Spacing : 10 -37.5 mm

Environmental Compliance

Pb Free	YES
RoHS Compliant	YES
Halogen Free	Available for some PNs

https://content.kemet.com/datasheets/KEM_F3094_R46_X2_275_110C_MIN.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	see Annex 26	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 PU		Polyurethane resin	-
	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		-	-
		Glass Fiber		GF	65997-17-3
		Further Additives		-	-
	Plastic Case (*)	Polybutylene terephthalate		PBT	26062-94-2
		Nitrogen and phosphorus type flame retardants		Phosphinic acid, diethyl-, aluminum salt (9CI)	225789-38-8
		Glass Fiber		Melamin-polyphosphate	218768-84-4
		Further Additives		Melamine cyanurate	37640-57-6
Termination	Core Metal (*)	Copper		GF	65997-17-3
	Finish plating (*)	Tin		-	-
	Core Metal	Iron		Cu-ETP	7440-50-8
	Finish plating	Copper		EP-Sn	7440-31-5
	Finish plating	Tin		Fe	7439-89-6
				Cu	7440-50-8
				Sn	7440-31-5

(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

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

Annex 26

Material Declaration Radial Plastic Film Capacitor



R46 Series (Miniature) Metallized Polypropylene Film, 275 VAC, 110°C

Pitch mm				10	15	22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0,1µF Box dimension 6x12x13 mm	MAXIMUM size Cap 0,6µF Box dimension 11x19x18 mm	MAXIMUM size Cap 1µF Box dimension 11x20x26,5 mm	MAXIMUM size Cap 4,7µF Box dimension 22x37x32 mm	MAXIMUM size Cap 10µF Box dimension 30x45x41,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	0,339	1,659	2,778	11,063	19,469
	Metal	Al	7429-90-5	0,000	0,001	0,001	0,005	0,009
	Metal	Sn	7440-31-5	0,019	0,052	0,068	0,332	0,458
	Metal	Zn	7440-66-6	0,171	0,483	0,631	3,085	4,286
Homogeneous Level Weight				0,529	2,195	3,478	14,486	24,221
Encapsulation	Thermosetting Resin	PU	-	0,556	2,301	3,253	14,860	36,036
	Thermosetting Resin	EP (*)	-	0,556	2,301	3,253	14,860	36,036
	Plastic Case	PBT	26062-94-2	0,266	0,868	1,400	4,410	6,419
		Antimony trioxide	1309-64-4	0,027	0,087	0,140	0,441	0,642
		Halogenated Flame Ret. except for PBB and PBDE	-	0,027	0,087	0,140	0,441	0,642
		GF	65997-17-3	0,057	0,186	0,300	0,945	1,376
		Further Additives	-	0,004	0,012	0,020	0,063	0,092
	Plastic Case (*)	PBT	26062-94-2	0,243	0,794	1,280	4,032	5,869
		Nitrogen and phosphorus type flame retardants	225789-38-8	0,027	0,087	0,140	0,441	0,642
			218768-84-4	0,027	0,087	0,140	0,441	0,642
			37640-57-6	0,011	0,037	0,060	0,189	0,275
		GF	65997-17-3	0,057	0,186	0,300	0,945	1,376
	Further Additives	-	0,015	0,050	0,080	0,252	0,367	
Homogeneous Level Weight				0,936	3,541	5,253	21,160	45,206
Termination	Core Metal	Cu-ETP (*)	7440-50-8	0,124	0,243	0,248	0,326	0,560
	Finish plating	EP-Sn (*)	7440-31-5	0,012	0,022	0,022	0,029	0,013
	Core Metal	Fe	7439-89-6	0,101	0,198	0,202	0,266	/
	Finish plating	Cu	7440-50-8	0,021	0,046	0,047	0,062	/
	Finish plating	Sn	7440-31-5	0,013	0,020	0,020	0,027	/
Homogeneous Level Weight				0,135	0,265	0,270	0,355	0,573
Total Weight				1,600	6,000	9,000	36,000	70,000

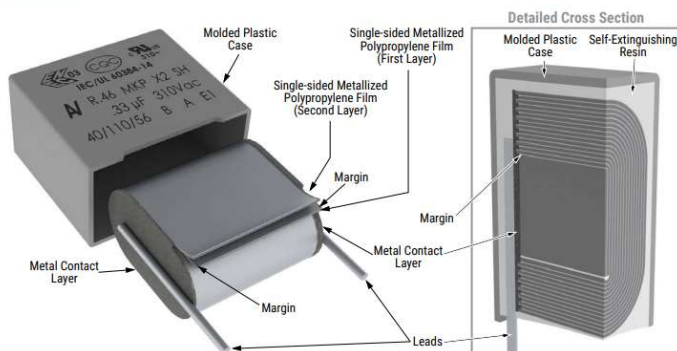
(*) version available for some PN's

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

R46 Series Metallized Polypropylene Film, 310 VAC, 110°C

Construction



Voltage Range : 310 VAC

Capacitance Range : 0.01 – 10µF

Lead Spacing : 10 -37.5 mm

Environmental Compliance

Pb Free	YES
RoHS Compliant	YES
Halogen Free	Available for some PNS

https://content.kemet.com/datasheets/KEM_F3095_R46_X2_310_110C.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	see Annex 27	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 PU		Polyurethane resin	-
	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		-	-
		Glass Fiber		GF	65997-17-3
		Further Additives		-	-
	Plastic Case (*)	Polybutylene terephthalate		PBT	26062-94-2
		Nitrogen and phosphorus type flame retardants		Phosphinic acid, diethyl-, aluminum salt (9CI)	225789-38-8
				Melamin-polyphosphate	218768-84-4
				Melamine cyanurate	37640-57-6
				GF	65997-17-3
				-	-
Termination	Core Metal (*)	Copper		Cu-ETP	7440-50-8
	Finish plating (*)	Tin		EP-Sn	7440-31-5
	Core Metal	Iron		Fe	7439-89-6
	Finish plating	Copper		Cu	7440-50-8
	Finish plating	Tin		Sn	7440-31-5

(*) version available for some PNS

Remark: Material declaration of special part number will be individually released

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

Annex 27

Material Declaration Radial Plastic Film Capacitor

R46 Series Metallized Polypropylene Film, 310 VAC, 110°C



Pitch mm				10	15	22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0,1µF Box dimension 6x12x13 mm	MAXIMUM size Cap 0,6µF Box dimension 11x19x18 mm	MAXIMUM size Cap 1,5µF Box dimension 13x22x26,5 mm	MAXIMUM size Cap 4,7µF Box dimension 22x37x32 mm	MAXIMUM size Cap 10µF Box dimension 30x45x41,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	0,277	1,568	3,461	11,063	24,173
	Metal	Al	7429-90-5	0,0001	0,0007	0,0016	0,0050	0,0110
	Metal	Sn	7440-31-5	0,019	0,052	0,091	0,332	0,458
	Metal	Zn	7440-66-6	0,170	0,482	0,844	3,085	4,326
Homogeneous Level Weight				0,466	2,103	4,397	14,486	28,968
Encapsulation	Thermosetting Resin	PU	-	0,619	2,392	3,986	14,860	31,289
		EP (*9	-	0,619	2,392	3,986	14,860	31,289
		PBT	26062-94-2	0,266	0,868	1,638	4,410	6,419
		Antimony trioxide	1309-64-4	0,027	0,087	0,164	0,441	0,642
	Plastic Case	Halogenated Flame Ret. except for PBB and PBDE	-	0,027	0,087	0,164	0,441	0,642
		GF	65997-17-3	0,057	0,186	0,351	0,945	1,376
		Further Additives	-	0,004	0,012	0,023	0,063	0,092
	Plastic Case	PBT	26062-94-2	0,243	0,794	1,498	4,032	5,869
		Nitrogen and phosphorus type flame retardants	225789-38-8	0,027	0,087	0,164	0,441	0,642
			218768-84-4	0,027	0,087	0,164	0,441	0,642
			37640-57-6	0,011	0,037	0,070	0,189	0,275
		GF	65997-17-3	0,057	0,186	0,351	0,945	1,376
	Further Additives	-	0,015	0,050	0,094	0,252	0,367	
Homogeneous Level Weight				0,999	3,632	6,326	21,160	40,459
Termination	Core Metal	Cu-ETP (*)	7440-50-8	0,124	0,243	0,254	0,326	0,560
	Finish plating	EP-Sn (*)	7440-31-5	0,012	0,022	0,023	0,029	0,013
	Core Metal	Fe	7439-89-6	0,101	0,198	0,207	0,266	/
	Finish plating	Cu	7440-50-8	0,021	0,046	0,049	0,062	/
	Finish plating	Sn	7440-31-5	0,013	0,020	0,021	0,027	/
Homogeneous Level Weight				0,135	0,265	0,277	0,355	0,573
Total Weight				1,600	6,000	11,000	36,000	70,000

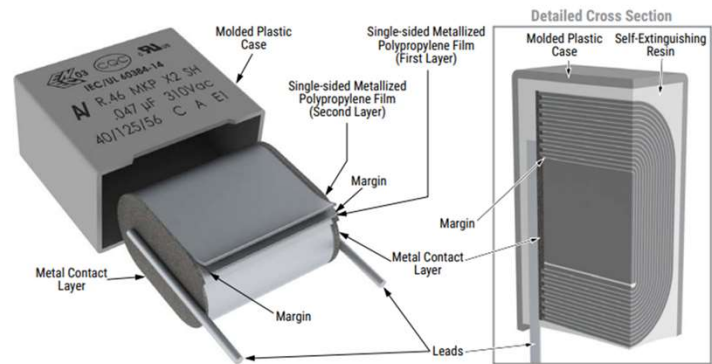
(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

R46 Series 125°C Metallized Polypropylene Film, 310 VAC

Construction



Voltage Range : 310 VAC
Capacitance Range : 0.01 – 15µF
Lead Spacing : 10 -37.5 mm

Environmental Compliance

Pb Free	YES
RoHS Compliant	YES
Halogen Free	Available for some PNs

https://content.kemet.com/datasheets/KEM_F3122_R46_X2_310_125C.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	see Annex 28	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	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
		Further Additives		-	-
	Plastic Case (*)	Polybutylene terephthalate		PBT	26062-94-2
		Nitrogen and phosphorus type flame retardants		Phosphinic acid, diethyl-, aluminum salt (9CI)	225789-38-8
		Glass Fiber		Melamin-polyphosphate	218768-84-4
		Further Additives		Melamine cyanurate	37640-57-6
Termination	Core Metal (*)	Copper		GF	65997-17-3
	Finish plating (*)	Tin		-	-
	Core Metal	Iron		Cu-ETP	7440-50-8
	Finish plating	Copper		EP-Sn	7440-31-5
	Finish plating	Tin		Fe	7439-89-6
				Cu	7440-50-8
				Sn	7440-31-5

(*) version available for some PNs
Remark: Material declaration of special part number will be individually released

Annex 28

Material Declaration Radial Plastic Film Capacitor

R46 Series 125°C Metallized Polypropylene Film, 310 VAC



Pitch mm				10	15	22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0,068µF Box dimension 6x12x13 mm	MAXIMUM size Cap 0,68µF Box dimension 11x19x18 mm	MAXIMUM size Cap 1,5µF Box dimension 13x22x26,5 mm	MAXIMUM size Cap 4,7µF Box dimension 22x37x32 mm	MAXIMUM size Cap 15µF Box dimension 30x45x41,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	0,329	1,531	3,459	11,063	26,462
	Metal	Al	7429-90-5	0,000	0,001	0,002	0,005	0,012
	Metal	Sn	7440-31-5	0,019	0,052	0,091	0,332	0,542
	Metal	Zn	7440-66-6	0,176	0,482	0,844	3,085	5,104
Homogeneous Level Weight				0,524	2,065	4,395	14,486	32,120
Encapsulation	Thermosetting Resin	EP	-	0,561	2,430	3,988	14,860	26,507
	Plastic Case	PBT	26062-94-2	0,266	0,868	1,638	4,410	7,560
		Antimony trioxide	1309-64-4	0,027	0,087	0,164	0,441	0,756
		Halogenated Flame Ret. except for PBB and PBDE	-	0,027	0,087	0,164	0,441	0,756
		GF	65997-17-3	0,057	0,186	0,351	0,945	1,620
		Further Additives	-	0,004	0,012	0,023	0,063	0,108
	Plastic Case (*)	PBT	26062-94-2	0,243	0,794	1,498	4,032	6,912
		Nitrogen and phosphorus type flame retardants	225789-38-8	0,027	0,087	0,164	0,441	0,756
			218768-84-4	0,027	0,087	0,164	0,441	0,756
			37640-57-6	0,011	0,037	0,070	0,189	0,324
		GF	65997-17-3	0,057	0,186	0,351	0,945	1,620
		Further Additives	-	0,015	0,050	0,094	0,252	0,432
Homogeneous Level Weight				0,941	3,670	6,328	21,160	37,307
Termination	Core Metal	Cu-ETP (*)	7440-50-8	/	/	/	/	0,560
	Finish plating	EP-Sn (*)	7440-31-5	/	/	/	/	0,013
	Core Metal	Fe	7439-89-6	0,101	0,198	0,207	0,266	/
	Finish plating	Cu	7440-50-8	0,021	0,046	0,049	0,062	/
	Finish plating	Sn	7440-31-5	0,013	0,020	0,021	0,027	/
Homogeneous Level Weight				0,135	0,265	0,277	0,355	0,573
Total Weight				1,600	6,000	11,000	36,000	70,000

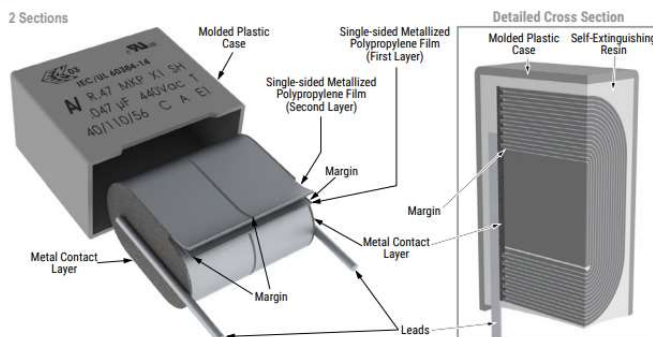
(*) version available for some PN's

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

R47 Series Metallized Polypropylene Film, X1, 440 VAC (Automotive)

Construction



Voltage Range : 440 VAC

Capacitance Range : 0.0047 – 2.2μF

Lead Spacing : 10 -37.5 mm

Environmental Compliance

Pb Free	YES
RoHS Compliant	YES
Halogen Free	Available for some PNS

https://content.kemet.com/datasheets/KEM_F3097_R47_X1_440.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	see Annex 29	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 PU		Polyurethane resin	-
	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		-	-
		Glass Fiber		GF	65997-17-3
		Further Additives		-	-
	Plastic Case(*)	Polybutylene terephthalate		PBT	26062-94-2
		Nitrogen and phosphorus type flame retardants		Phosphinic acid, diethyl-, aluminum salt (9CI)	225789-38-8
				Melamin-polyphosphate	218768-84-4
				Melamine cyanurate	37640-57-6
				GF	65997-17-3
	Termination	Core Metal (*)		Copper	Cu-ETP
Finish plating (*)		Tin		EP-Sn	7440-31-5
Core Metal		Iron		Fe	7439-89-6
Finish plating		Copper		Cu	7440-50-8
Finish plating		Tin		Sn	7440-31-5

(*) version available for some PNS

Remark: Material declaration of special part number will be individually released

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

Annex 29

Material Declaration Radial Plastic Film Capacitor

R47 Series Metallized Polypropylene Film, X1 440 VAC (Automotive)



Pitch mm				10	15	22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0,01µF Box dimension 6x12x13 mm	MAXIMUM size Cap 0,1µF Box dimension 11x19x18 mm	MAXIMUM size Cap 0,33µF Box dimension 13x22x26,5 mm	MAXIMUM size Cap 1,5µF Box dimension 22x37x32 mm	MAXIMUM size Cap 2,2µF Box dimension 20x40x41,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	0,321	1,384	3,141	9,703	12,578
	Metal	Al	7429-90-5	0,000	0,001	0,001	0,004	0,006
	Metal	Sn	7440-31-5	0,019	0,052	0,091	0,332	0,321
	Metal	Zn	7440-66-6	0,171	0,480	0,842	3,074	2,998
Homogeneous Level Weight				0,510	1,917	4,075	13,113	15,902
Encapsulation	Thermosetting Resin	PU	-	0,575	2,578	4,309	16,233	19,392
		EP (*)	-	0,575	2,578	4,309	16,233	19,392
	Plastic Case	PBT	26062-94-2	0,266	0,868	1,638	4,410	6,419
		Antimony trioxide	1309-64-4	0,027	0,087	0,164	0,441	0,642
		Halogenated Flame Ret. except for PBB and PBDE	-	0,027	0,087	0,164	0,441	0,642
		GF	65997-17-3	0,057	0,186	0,351	0,945	1,376
		Further Additives	-	0,004	0,012	0,023	0,063	0,092
	Plastic Case (*)	PBT	26062-94-2	0,243	0,794	1,498	4,032	5,869
		Nitrogen and phosphorus type flame retardants	225789-38-8	0,027	0,087	0,164	0,441	0,642
			218768-84-4	0,027	0,087	0,164	0,441	0,642
			37640-57-6	0,011	0,037	0,070	0,189	0,275
		GF	65997-17-3	0,057	0,186	0,351	0,945	1,376
		Further Additives	-	0,015	0,050	0,094	0,252	0,367
Homogeneous Level Weight				0,955	3,818	6,649	22,533	28,562
Termination	Core Metal	Cu-ETP (*)	7440-50-8	/	0,243	0,254	0,326	0,524
	Finish plating	EP-Sn (*)	7440-31-5	/	0,022	0,023	0,029	0,012
	Core Metal	Fe	7439-89-6	0,101	0,198	0,207	0,266	/
	Finish plating	Cu	7440-50-8	0,021	0,046	0,049	0,062	/
	Finish plating	Sn	7440-31-5	0,013	0,020	0,021	0,027	/
Homogeneous Level Weight				0,135	0,265	0,277	0,355	0,536
Total Weight				1,600	6,000	11,000	36,000	45,000

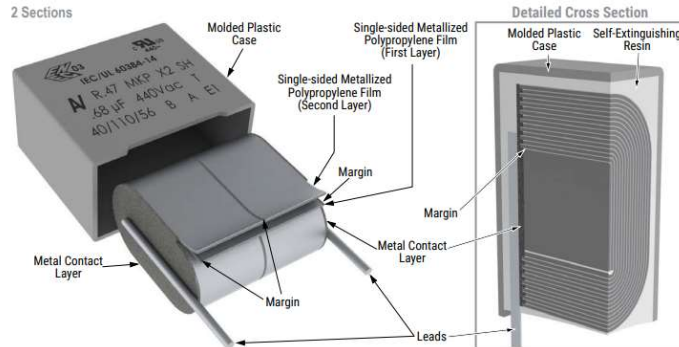
(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

R47 Series X2 Metallized Polypropylene Film, 440 VAC (Automotive)

Construction



Voltage Range : 440 VAC

Capacitance Range : 0.0047 – 2.2µF

Lead Spacing : 10 -37.5 mm

Environmental Compliance

Pb Free	YES
RoHS Compliant	YES
Halogen Free	Available for some PNs

https://content.kemet.com/datasheets/KEM_F3096_R47_X2_440.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	see Annex 30	PP	9003-07-0
		Aluminium		Al	7429-90-5
		Zinc		Zn	7440-66-6
Encapsulation	Metal Spray	Tin		Sn	7440-31-5
		Zinc		Zn	7440-66-6
	Thermosetting Resin	Modified cured PU		Polyurethane resin	-
	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		-	-
		Glass Fiber		GF	65997-17-3
		Further Additives		-	-
	Plastic Case(*)	Polybutylene terephthalate		PBT	26062-94-2
		Nitrogen and phosphorus type flame retardants		Phosphinic acid, diethyl-, aluminum salt (9CI)	225789-38-8
		Glass Fiber		Melamin-polyposphate	218768-84-4
		Further Additives		Melamine cyanurate	37640-57-6
Termination	Core Metal (*)	Copper		GF	65997-17-3
	Finish plating (*)	Tin		-	-
	Core Metal	Iron		Cu-ETP	7440-50-8
	Finish plating	Copper		EP-Sn	7440-31-5
	Finish plating	Tin		Fe	7439-89-6
				Cu	7440-50-8
				Sn	7440-31-5

(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

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

Annex 30

Material Declaration Radial Plastic Film Capacitor

R47 Series X2 Metallized Polypropylene Film, 440 VAC (Automotive)

Pitch mm				10	15	22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0,01µF Box dimension 6x12x13 mm	MAXIMUM size Cap 0,1µF Box dimension 11x19x18 mm	MAXIMUM size Cap 0,33µF Box dimension 13x22x26,5 mm	MAXIMUM size Cap 1,5µF Box dimension 22x37x32 mm	MAXIMUM size Cap 2,2µF Box dimension 20x40x41,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	0,321	1,471	3,315	10,035	13,309
	Metal	Al	7429-90-5	0,000	0,001	0,002	0,005	0,006
	Metal	Sn	7440-31-5	0,019	0,052	0,091	0,332	0,321
	Metal	Zn	7440-66-6	0,171	0,481	0,843	3,076	3,004
Homogeneous Level Weight				0,510	2,005	4,250	13,448	16,640
Encapsulation	Thermosetting Resin	PU	-	0,575	2,491	4,133	15,898	18,654
		EP (*)	-	0,575	2,491	4,133	15,898	18,654
	Plastic Case	PBT	26062-94-2	0,266	0,868	1,638	4,410	6,419
		Antimony trioxide	1309-64-4	0,027	0,087	0,164	0,441	0,642
		Halogenated Flame Ret. except for PBB and PBDE	-	0,027	0,087	0,164	0,441	0,642
		GF	65997-17-3	0,057	0,186	0,351	0,945	1,376
		Further Additives	-	0,004	0,012	0,023	0,063	0,092
	Plastic Case (*)	PBT	26062-94-2	0,243	0,794	1,498	4,032	5,869
		Nitrogen and phosphorus type flame retardants	225789-38-8	0,027	0,087	0,164	0,441	0,642
			218768-84-4	0,027	0,087	0,164	0,441	0,642
			37640-57-6	0,011	0,037	0,070	0,189	0,275
		GF	65997-17-3	0,057	0,186	0,351	0,945	1,376
	Further Additives	-	0,015	0,050	0,094	0,252	0,367	
Homogeneous Level Weight				0,955	3,731	6,473	22,198	27,824
Termination	Core Metal	Cu-ETP (*)	7440-50-8	/	0,243	0,254	0,326	0,524
	Finish plating	EP-Sn (*)	7440-31-5	/	0,022	0,023	0,029	0,012
	Core Metal	Fe	7439-89-6	0,101	0,198	0,207	0,266	/
	Finish plating	Cu	7440-50-8	0,021	0,046	0,049	0,062	/
	Finish plating	Sn	7440-31-5	0,013	0,020	0,021	0,027	/
Homogeneous Level Weight				0,135	0,265	0,277	0,355	0,536
Total Weight				1,600	6,000	11,000	36,000	45,000

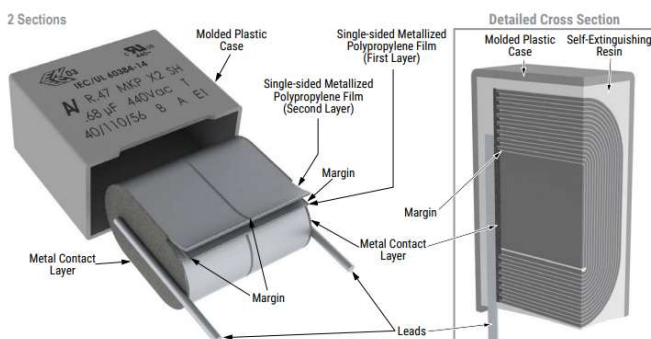
(*) version available for some PN's

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

R47 Series X2 Metallized Polypropylene Film, 520 VAC (Automotive)

Construction



Voltage Range : 520VAC

Capacitance Range : 0.0047 – 2.2μF

Lead Spacing : 10 -37.5 mm

Environmental Compliance

Pb Free	YES
RoHS Compliant	YES
Halogen Free	Available for some PNs

https://content.kemet.com/datasheets/KEM_F3008_R47_X2_520.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #	
Element	Metallized MKP Film	Polypropylene	see Annex 31	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 PU		Polyurethane resin	-	
	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		-	-	
		Glass Fiber		GF	65997-17-3	
	Plastic Case(*)	Further Additives		-	-	
		Polybutylene terephthalate		PBT	26062-94-2	
		Nitrogen and phosphorus type flame retardants		Phosphinic acid, diethyl-, aluminum salt (9CI)	225789-38-8	
		Glass Fiber		Melamin-polyphosphate	218768-84-4	
		Further Additives		Melamine cyanurate	37640-57-6	
				GF	65997-17-3	
	Termination	Core Metal (*)		Copper	-	-
		Finish plating (*)		Tin	Cu-ETP	7440-50-8
Core Metal		Iron		EP-Sn	7440-31-5	
Finish plating		Copper		Fe	7439-89-6	
Finish plating		Tin	Cu	7440-50-8		
			Sn	7440-31-5		

(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

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

Annex 31

Material Declaration Radial Plastic Film Capacitor

R47 Series X2 Metallized Polypropylene Film, 520 VAC (Automotive)



Pitch mm				10	15	22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0,01µF Box dimension 6x12x13 mm	MAXIMUM size Cap 0,1µF Box dimension 11x19x18 mm	MAXIMUM size Cap 0,33µF Box dimension 13x22x26,5 mm	MAXIMUM size Cap 1,5µF Box dimension 22x37x32 mm	MAXIMUM size Cap 2,2µF Box dimension 20x40x41,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	7429-90-5	0,301	1,446	3,141	10,035	15,704
	Metal	Al	7429-90-5	0,000	0,001	0,001	0,005	0,007
	Metal	Sn	7440-31-5	0,019	0,059	0,091	0,332	0,321
	Metal	Zn	7440-66-6	0,170	0,542	0,842	3,076	3,025
Homogeneous Level Weight				0,490	2,047	4,075	13,448	19,057
Encapsulation	Thermosetting Resin	PU	-	0,595	2,448	4,309	15,898	16,237
		EP (*)	-	0,595	2,448	4,309	15,898	16,237
	Plastic Case	PBT	26062-94-2	0,266	0,868	1,638	4,410	6,419
		Antimony trioxide	1309-64-4	0,027	0,087	0,164	0,441	0,642
		Halogenated Flame Ret. except for PBB and PBDE	-	0,027	0,087	0,164	0,441	0,642
		GF	65997-17-3	0,057	0,186	0,351	0,945	1,376
		Further Additives	-	0,004	0,012	0,023	0,063	0,092
	Plastic Case(*)	PBT	26062-94-2	0,243	0,794	1,498	4,032	5,869
		Nitrogen and phosphorus type	225789-38-8	0,027	0,087	0,164	0,441	0,642
		flame retardants	218768-84-4	0,027	0,087	0,164	0,441	0,642
		GF	65997-17-3	0,057	0,186	0,351	0,945	1,376
		Further Additives	-	0,015	0,050	0,094	0,252	0,367
	Homogeneous Level Weight				0,975	3,688	6,649	22,198
Termination	Core Metal	Cu-ETP (*)	7440-50-8	/	0,243	0,254	0,326	0,524
	Finish plating	EP-Sn (*)	7440-31-5	/	0,022	0,023	0,029	0,012
	Core Metal	Fe	7439-89-6	0,101	0,198	0,207	0,266	/
	Finish plating	Cu	7440-50-8	0,021	0,046	0,049	0,062	/
	Finish plating	Sn	7440-31-5	0,013	0,020	0,021	0,027	/
Homogeneous Level Weight				0,135	0,265	0,277	0,355	0,536
Total Weight				1.600	6.000	11.000	36.000	45.000

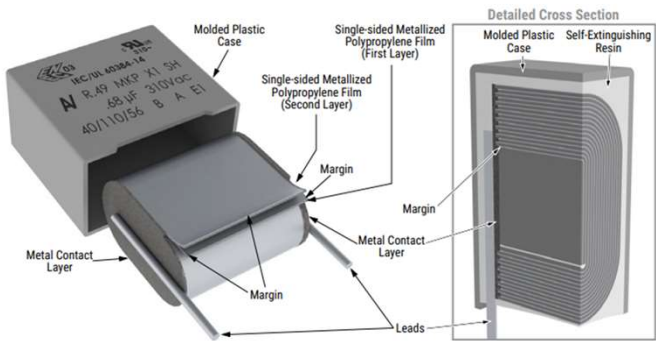
(*) version available for some PN's

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

R49 Series Metallized Polypropylene Film 310 VAC, 110°C

Construction



Voltage Range : 310VAC
Capacitance Range : 0.01 – 2.2µF
Lead Spacing : 10 -27.5 mm

Environmental Compliance

Pb Free	YES
RoHS Compliant	YES
Halogen Free	Available for some PNs

https://content.kemet.com/datasheets/KEM_F3098_R49_X1_310.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	see Annex 32	PP	9003-07-0
		Aluminium		Al	7429-90-5
		Zinc		Zn	7440-66-6
Encapsulation	Metal Spray	Tin		Sn	7440-31-5
		Zinc		Zn	7440-66-6
	Thermosetting Resin	Modified cured PU		Polyurethane resin	-
	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		-	-
		Glass Fiber		GF	65997-17-3
		Further Additives		-	-
	Plastic Case(*)	Polybutylene terephthalate		PBT	26062-94-2
		Nitrogen and phosphorus type flame retardants		Phosphinic acid, diethyl-, aluminum salt (9CI)	225789-38-8
		Glass Fiber		Melamin-polyphosphate	218768-84-4
		Further Additives		Melamine cyanurate	37640-57-6
Termination	Core Metal (*)	Copper		GF	65997-17-3
	Finish plating (*)	Tin		-	-
	Core Metal	Iron		Cu-ETP	7440-50-8
	Finish plating	Copper		EP-Sn	7440-31-5
	Finish plating	Tin		Fe	7439-89-6
				Cu	7440-50-8
				Sn	7440-31-5

(*) version available for some PNs
Remark: Material declaration of special part number will be individually released

Annex 32

Material Declaration Radial Plastic Film Capacitor

R49 Series Metallized Polypropylene Film 310 VAC, 110°C



Pitch mm				10	15	22,5	27,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0,033µF Box dimension 6x12x13 mm	MAXIMUM size Cap 0,15µF Box dimension 10x16x18 mm	MAXIMUM size Cap 0,47µF Box dimension 11x20x26,5 mm	MAXIMUM size Cap 2,2µF Box dimension 22x37x32 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	7429-90-5	0,315	1,212	2,242	10,519
	Metal	Al	7429-90-5	0,0001	0,0006	0,0010	0,0048
	Metal	Sn	7440-31-5	0,019	0,056	0,068	0,332
	Metal	Zn	7440-66-6	0,170	0,516	0,627	3,080
Homogeneous Level Weight				0,504	1,785	2,938	13,937
Encapsulation	Thermosetting Resin	PU	-	0,581	1,914	2,793	15,369
		EP (*)	-	0,581	1,914	2,793	15,369
	Plastic Case	PBT	26062-94-2	0,266	0,735	1,400	4,410
		Antimony trioxide	1309-64-4	0,027	0,074	0,140	0,441
		Halogenated Flame Ret. except for PBB and PBDE	-	0,027	0,074	0,140	0,441
		GF	65997-17-3	0,057	0,158	0,300	0,945
		Further Additives	-	0,004	0,011	0,020	0,063
	Plastic Case	PBT	26062-94-2	0,243	0,672	1,280	4,032
		Nitrogen and phosphorus type flame retardants	225789-38-8	0,027	0,074	0,140	0,441
			218768-84-4	0,027	0,074	0,140	0,441
			37640-57-6	0,011	0,032	0,060	0,189
		GF	65997-17-3	0,057	0,158	0,300	0,945
		Further Additives	-	0,015	0,042	0,080	0,252
Homogeneous Level Weight				0,961	2,964	4,793	21,669
Termination	Core Metal	Cu-ETP (*)	7440-50-8	/	0,231	0,248	0,362
	Finish plating	EP-Sn 8*)	7440-31-5	/	0,021	0,022	0,032
	Core Metal	Fe	7439-89-6	0,101	0,188	0,202	0,295
	Finish plating	Cu	7440-50-8	0,021	0,044	0,047	0,069
	Finish plating	Sn	7440-31-5	0,013	0,019	0,020	0,030
Homogeneous Level Weight				0,135	0,251	0,270	0,394
Total Weight				1,600	5,000	8,000	36,000

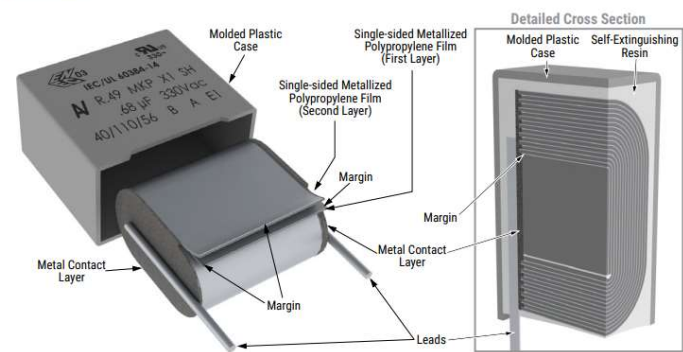
(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

R49 Series Metallized Polypropylene Film, 330 VAC, 110°C

Construction



https://content.kemet.com/datasheets/KEM_F3099_R49_X1_330.pdf

Voltage Range : 330VAC
Capacitance Range : 0.047– 6.8µF
Lead Spacing : 15 -37.5 mm

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	Available for some PNs

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #	
Element	Metallized MKP Film	Polypropylene	see Annex 33	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 PU		Polyurethane resin	-	
	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		-	-	
		Glass Fiber		GF	65997-17-3	
		Further Additives		-	-	
	Plastic Case(*)	Polybutylene terephthalate		PBT	26062-94-2	
		Nitrogen and phosphorus type flame retardants		Phosphinic acid, diethyl-, aluminum salt (9CI)	225789-38-8	
				Melamin-polyphosphate	218768-84-4	
				Melamine cyanurate	37640-57-6	
				GF	65997-17-3	
	Termination			Further Additives	-	-
		Core Metal (*)		Copper	Cu-ETP	7440-50-8
		Finish plating (*)		Tin	EP-Sn	7440-31-5
Core Metal		Iron		Fe	7439-89-6	
Finish plating		Copper		Cu	7440-50-8	
	Tin	Sn		7440-31-5		

(*) version available for some PNs
Remark: Material declaration of special part number will be individually released

Annex 33

Material Declaration Radial Plastic Film Capacitor

R49 Series Metallized Polypropylene Film, 330 VAC, 110°C



Pitch mm				15	22,5	27,5	27,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0,22µF Box dimension 11x19x18 mm	MAXIMUM size Cap 0,68µF Box dimension 13x22x26,5 mm	MAXIMUM size Cap 3,3µF Box dimension 22x37x32 mm	MAXIMUM size Cap 2,2µF Box dimension 22x37x32 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	1,324	3,103	10,493	25,771
	Metal	Al	7429-90-5	0,001	0,001	0,005	0,012
	Metal	Sn	7440-31-5	0,073	0,091	0,332	0,458
	Metal	Zn	7440-66-6	0,666	0,841	3,080	4,340
Homogeneous Level Weight				2,062	4,036	13,911	30,580
Encapsulation	Thermosetting Resin	PU	-	2,433	4,347	15,435	28,047
		EP (*)	-	2,433	4,347	15,435	28,047
	Plastic Case	PBT	26062-94-2	0,868	1,638	4,410	7,560
		Antimony trioxide	1309-64-4	0,087	0,164	0,441	0,756
		Halogenated Flame Ret. except for PBB and PBDE	-	0,087	0,164	0,441	0,756
		GF	65997-17-3	0,186	0,351	0,945	1,620
		Further Additives	-	0,012	0,023	0,063	0,108
	Plastic Case (*)	PBT	26062-94-2	0,794	1,498	4,032	6,912
		Nitrogen and phosphorus type flame retardants	225789-38-8	0,087	0,164	0,441	0,756
			218768-84-4	0,087	0,164	0,441	0,756
			37640-57-6	0,037	0,070	0,189	0,324
		GF	65997-17-3	0,186	0,351	0,945	1,620
		Further Additives	-	0,050	0,094	0,252	0,432
Homogeneous Level Weight				3,673	6,687	21,735	38,847
Termination	Core Metal	Cu-ETP (*)	7440-50-8	0,243	0,254	0,326	0,560
	Finish plating	EP-Sn (*)	7440-31-5	0,022	0,023	0,029	0,013
	Core Metal	Fe	7439-89-6	0,198	0,207	0,266	/
	Finish plating	Cu	7440-50-8	0,046	0,049	0,062	/
	Finish plating	Sn	7440-31-5	0,020	0,021	0,027	/
Homogeneous Level Weight				0,265	0,277	0,355	0,573
Total Weight				6,000	11,000	36,000	70,000

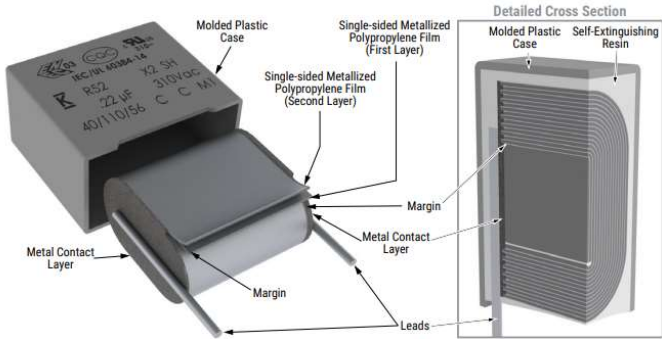
(*) version available for some PNs

Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

R52 Series (Miniature), Class X2 310 VAC 110° C (Automotive Grade)

Construction



Voltage Range : 310VAC
Capacitance Range : 0.047– 22µF
Lead Spacing : 10 -37.5 mm

Environmental Compliance

Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3123_R52_X2_310_110C_MIN.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	see Annex 34	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
		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		-	-
		Glass Fiber		GF	65997-17-3
	Plastic Case (*)	PPS		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		GF	25212-74-2
		Calcium Carbonate		CaCO3	65997-17-3
		Others		-	471-34-1
Termination	Core Metal	Copper		Cu-ETP	7440-50-8
	Finish plating	Tin		EP-Sn	7440-31-5

(*) version available for some PN's
Remark: Material declaration of special part number will be individually released

Annex 34

Material Declaration Radial Plastic Film Capacitor

R52 Series (Miniature), Class X2 310 VAC 110° C (Automotive Grade)



Pitch mm				10	15	22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0,1µF Box dimension 6x12x13 mm	MAXIMUM size Cap 1µF Box dimension 12x20x18 mm	MAXIMUM size Cap 2,2µF Box dimension 13x22x26,5 mm	MAXIMUM size Cap 6.8µF Box dimension 22x37x32 mm	MAXIMUM size Cap 22µF Box dimension 30x45x41,5 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	0,221	1,678	2,921	10,692	22,520
	Metal	Al	7429-90-5	0,000	0,001	0,001	0,005	0,010
	Metal	Sn	7440-31-5	0,099	0,312	0,458	1,673	2,729
	Metal	Zn	7440-66-6	0,148	0,473	0,698	2,547	4,199
	Metal	Cu	7440-50-8	0,003	0,010	0,015	0,054	0,089
Homogeneous Level Weight				0,471	2,474	4,094	14,970	29,547
Encapsulation	Thermosetting Resin	Epoxy Resin	-	0,542	3,204	4,257	14,336	29,080
	Plastic Case	PBT	26062-94-2	/	0,714	1,638	4,410	7,560
		Antimony trioxide	1309-64-4	/	0,071	0,164	0,441	0,756
		Halogenated Flame Ret. except for PBB and PBDE		/	0,071	0,164	0,441	0,756
		GF	65997-17-3	/	0,153	0,351	0,945	1,620
	Plastic Case (*)	PPS	26125-40-6	0,108	0,010	0,023	0,063	0,108
			25212-74-2	0,108	/	/	/	/
		GF	65997-17-3	0,216	/	/	/	/
		CaCO3	471-34-1	0,105	/	/	/	/
		C	1333-86-4	0,003	/	/	/	/
	Plastic Case (*)	PPS	25212-74-2	0,216	/	/	/	/
		GF	65997-17-3	0,162	/	/	/	/
		CaCO3	471-34-1	0,140	/	/	/	/
		Others	-	0,022	/	/	/	/
	Homogeneous Level Weight				1,082	4,224	6,597	20,636
Termination	Core Metal	Cu-ETP	7440-50-8	0,135	0,277	0,284	0,362	0,560
	Finish plating	EP-Sn	7440-31-5	0,013	0,025	0,025	0,032	0,013
Homogeneous Level Weight				0,147	0,302	0,310	0,394	0,573
Total Weight				1,700	7,000	11,000	36,000	70,000

(*) version available for some PNs

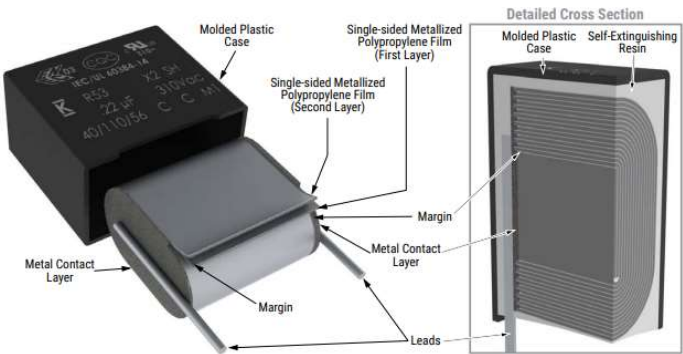
Remark: Material declaration of special part number will be individually released

Material Declaration Radial Plastic Film Capacitor

R53 Series X2 Automotive Grade EMI Suppression Film Capacitor for Harsh Environment



Construction



Voltage Range : 310VAC
Capacitance Range : 0.1– 22µF
Lead Spacing : 15 -37.5 mm

Environmental Compliance	
Pb Free	YES
RoHS Compliant	YES
Halogen Free	NO

https://content.kemet.com/datasheets/KEM_F3124_R53_X2_310_110C_MIN.pdf

Homogeneous Level	Construction Element	Substance	Weight (gr)	Common Name	CAS #
Element	Metallized MKP Film	Polypropylene	see Annex 35	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
		Copper		Cu	7440-50-8
Encapsulation	Thermosetting Resin	Epoxy Resin		Epoxy resin	-
	Plastic Case	PPS		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

(*) version available for some PN's
Remark: Material declaration of special part number will be individually released

Annex 35

Material Declaration Radial Plastic Film Capacitor



R53 Series X2 Automotive Grade EMI Suppression Film Capacitor for Harsh Environment

Pitch mm				15	22,5	27,5	37,5
Homogeneous Level	Material	Substance	CAS No.	MAXIMUM size Cap 0,82µF Box dimension 11x19x18 mm	MAXIMUM size Cap 2,2µF Box dimension 13x22x26,5 mm	MAXIMUM size Cap 8,2µF Box dimension 22x37x32 mm	MAXIMUM size Cap 22µF Box dimension 30x45x42 mm
				Weight (gr)	Weight (gr)	Weight (gr)	Weight (gr)
Element	Thermoplastics	PP	9003-07-0	1,280	3,039	14,685	23,981
	Metal	Al	7429-90-5	0,001	0,001	0,007	0,011
	Metal	Sn	7440-31-5	0,272	0,458	1,673	2,729
	Metal	Zn	7440-66-6	0,410	0,699	2,581	4,212
	Metal	Cu	7440-50-8	0,009	0,015	0,054	0,089
Homogeneous Level Weight				1,972	4,213	19,000	31,021
Encapsulation	Thermosetting Resin	Epoxy Resin	-	2,542	4,428	15,586	30,966
	Plastic Case	PPS	26125-40-6	0,338	0,610	2,004	3,488
			25212-74-2	0,338	0,610	2,004	3,488
		GF	65997-17-3	0,676	1,220	4,008	6,976
		CaCO3	471-34-1	0,330	0,595	1,954	3,401
		C	1333-86-4	0,009	0,015	0,050	0,087
	Plastic Case	PPS	25212-74-2	0,676	1,220	4,008	6,976
		GF	65997-17-3	0,507	0,915	3,006	5,232
		CaCO3	471-34-1	0,439	0,793	2,605	4,534
		Others	-	0,068	0,122	0,401	0,698
Homogeneous Level Weight				4,232	7,478	25,606	48,406
Termination	Core Metal	Cu-ETP	7440-50-8	0,272	0,284	0,362	0,560
	Finish plating	EP-Sn	7440-31-5	0,024	0,025	0,032	0,013
Homogeneous Level Weight				0,296	0,310	0,394	0,573
Total Weight				6,500	12,000	45,000	80,000

(*) version available for some PN's

Remark: Material declaration of special part number will be individually released