METALLIZED POLYESTER FILM CAPACITOR

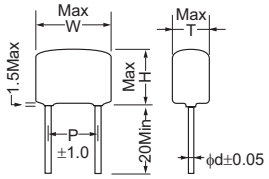
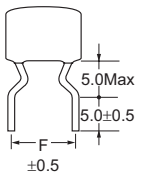
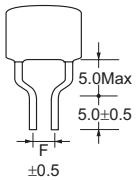
Type MML

Features

- Very small size, achieved by our manufacturing method.
- Ideal for use as interference suppression capacitors because a flame-retardant epoxy resin (UL94 V-0 recognized resin) is used as an outer coating.

Specifications

Temp Range	-40 to +105°C	
Rated Voltage	125V.a.c, 250V.a.c	
Capacitance	125V.a.c 0.010 to 4.7μF(E-12) 250V.a.c 0.010 to 1.0μF(E-12)	
Cap. tolerance	125V.a.c ±10%(K), ±20%(M) 250V.a.c ±10%(K)	
Tangent of loss angle	0.01 or less (at 1kHz)	
Voltage proof	Between terminals	125V.a.c 288V.a.c 1min 250V.a.c 575V.a.c 1min
	Between terminals and case	125V.a.c 1000V.a.c 1min 250V.a.c 1500V.a.c 1min
Insulation resistance	C≤0.47μF 2,000MΩ or more (at 500V.d.c) C>0.47μF 3,000ΩF or more (at 100V.d.c)	
Endurance	105°C W.V. ×120%, a.c.1000hr △C/C ±7% within tanδ 0.011 or less IR C≤0.47μF 1,000MΩ or more C>0.47μF 1,500ΩF or more	
Damp heat	40°C 90 to 95%RH W.V.×√2d.c 1000hr △C/C ±10% within tanδ 0.011 or less IR C≤0.47μF 1,000MΩ or more C>0.47μF 1,500ΩF or more	

Style	Straight lead type		Single formed lead type	
				
Cap range	125V.a.c	103 to 475	103 to 684 335 to 475	274 to 475
	250V.a.c	103 to 105	103 to 104 824 ,105	393 to 105

For a pitch space(F) of the taping specification, refer to "**TAPAING DEMENSIONS**"

- When using these capacitors as an across-the-line capacitor, it shall be required to follow to either item 1. or item 2 condition.
  1. Capacitors shall be connected in parallel with varistor (below 250V for 125V.a.c and 470V for 250V.a.c)
  2. Voltage applied for capacitor shall not exceed 250Vo-p for 125V.a.c and 630Vo-p for 250V.a.c.

Dimensions (mm)

Capacitors Code	Cap(μF)	MML 125V.dc						MML 250V.dc					
		W	H	T	P	F	φd	W	H	T	P	F	φd
103	0.010	9.8	5.6	4.2	7.5	5.0/7.5	0.6	9.8	7.3	4.2	7.5	5.0/7.5	0.6
123	0.012	9.8	5.6	4.2	7.5	5.0/7.5	0.6	9.8	7.3	4.2	7.5	5.0/7.5	0.6
153	0.015	9.8	5.6	4.2	7.5	5.0/7.5	0.6	9.8	7.5	4.2	7.5	5.0/7.5	0.6
183	0.018	9.8	5.9	4.2	7.5	5.0/7.5	0.6	9.8	7.5	4.2	7.5	5.0/7.5	0.6
223	0.022	9.8	5.9	4.2	7.5	5.0/7.5	0.6	9.8	7.7	4.5	7.5	5.0/7.5	0.6
273	0.027	9.8	5.9	4.2	7.5	5.0/7.5	0.6	9.8	8.0	4.8	7.5	5.0/7.5	0.6
333	0.033	9.8	6.0	4.2	7.5	5.0/7.5	0.6	9.8	8.2	5.2	7.5	5.0/7.5	0.6
393	0.039	9.8	6.0	4.2	7.5	5.0/7.5	0.6	12.5	7.6	4.5	10.0	5.0/7.5/10.0	0.6
473	0.047	9.8	6.2	4.3	7.5	5.0/7.5	0.6	12.5	7.8	4.7	10.0	5.0/7.5/10.0	0.6
563	0.056	9.8	6.4	4.5	7.5	5.0/7.5	0.6	12.5	9.5	4.8	10.0	5.0/7.5/10.0	0.6
683	0.068	9.8	6.7	4.8	7.5	5.0/7.5	0.6	12.5	9.8	5.2	10.0	5.0/7.5/10.0	0.6
823	0.082	9.8	7.7	4.1	7.5	5.0/7.5	0.6	12.5	10.3	5.3	10.0	5.0/7.5/10.0	0.6
104	0.10	9.8	7.7	4.3	7.5	5.0/7.5	0.6	12.5	11.7	5.2	10.0	5.0/7.5/10.0	0.6
124	0.12	9.8	7.7	5.0	7.5	5.0/7.5	0.6	17.8	10.0	5.0	15.0	5.0/7.5/10.0	0.6
154	0.15	9.8	8.6	5.5	7.5	5.0/7.5	0.6	17.8	11.3	4.8	15.0	5.0/7.5/10.0	0.6
184	0.18	9.8	11.2	5.0	7.5	5.0/7.5	0.6	17.8	11.5	5.5	15.0	5.0/7.5/10.0	0.6
224	0.22	9.8	11.8	5.5	7.5	5.0/7.5	0.6	17.8	12.0	6.0	15.0	5.0/7.5/10.0	0.6
274	0.27	12.5	11.3	5.0	10.0	5.0/7.5/10.0	0.6	17.8	12.7	6.3	15.0	5.0/7.5/10.0	0.6
334	0.33	12.5	10.8	6.0	10.0	5.0/7.5/10.0	0.6	17.8	13.2	6.8	15.0	5.0/7.5/10.0	0.8
394	0.39	12.5	11.2	6.5	10.0	5.0/7.5/10.0	0.6	17.8	14.0	7.3	15.0	5.0/7.5/10.0	0.8
474	0.47	12.5	11.7	7.0	10.0	5.0/7.5/10.0	0.6	17.8	15.5	7.3	15.0	5.0/7.5/10.0	0.8
564	0.56	12.5	13.3	7.0	10.0	5.0/7.5/10.0	0.6	17.8	16.3	8.5	15.0	5.0/7.5/10.0	0.8
684	0.68	12.5	14.0	7.7	10.0	5.0/7.5/10.0	0.6	17.8	17.3	9.3	15.0	5.0/7.5/10.0	0.8
824	0.82	17.8	12.8	5.6	15.0	5.0/7.5/10.0	0.8	25.5	17.3	9.3	22.5	15.0/22.5	0.8
105	1.0	17.8	13.4	6.2	15.0	5.0/7.5/10.0	0.8	25.5	18.2	10.2	22.5	15.0/22.5	0.8
125	1.2	17.8	14.5	7.3	15.0	5.0/7.5/10.0	0.8						
155	1.5	17.8	15.5	8.5	15.0	5.0/7.5/10.0	0.8						
185	1.8	17.8	16.5	9.3	15.0	5.0/7.5/10.0	0.8						
225	2.2	17.8	17.5	10.3	15.0	5.0/7.5/10.0	0.8						
275	2.7	17.8	18.5	11.5	15.0	5.0/7.5/10.0	0.8						
335	3.3	25.5	18.5	9.3	22.5	15.0/22.5	0.8						
395	3.9	25.5	19.5	10.3	22.5	15.0/22.5	0.8						
475	4.7	25.5	20.7	11.3	22.5	15.0/22.5	0.8						

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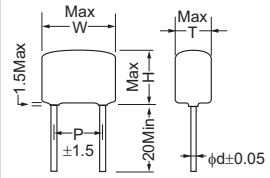
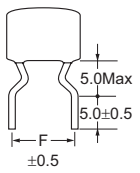
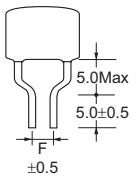
METALLIZED POLYESTER FILM CAPACITOR Type MMD

Features

- Ideal for use as interference suppression capacitors because a flame-retardant epoxy resin (UL94 V-0 recognized resin) is used as an outer coating.
- High reliability

Specifications

Temp range	-40 to +105°C	
Voltage	125V.a.c, 250V.a.c	
Capacitance	125V.a.c 0.010 to 1.0μF(E-12) 250V.a.c 0.010 to 0.47μF(E-12)	
Cap. tolerance	125V.a.c ±5%(J),±10%(K), ±20%(M) 250V.a.c ±10%(K), ±20%(M)	
Tangent of loss angle	0.0035 or less (at 50 or 60Hz)	
Voltage proof	Between terminals	125V.a.c 288V.a.c 1min 250V.a.c 575V.a.c 1min
	Between terminals and case	125V.a.c 1000V.a.c 1min 250V.a.c 1500V.a.c 1min
Insulation resistance	2,000MΩ or more (500V.d.c 1min)	
Endurance	105°C W.V. ×120%, a.c.1000hr △C/C ±7%within tanδ 0.0047 or less IR 1,000MΩ or more	
Damp heat	40°C 90 to 95%RH W.V.×√2 d.c 500hr △C/C ±10%within tanδ 0.0041 or less IR 1,000MΩ or more	

Style	Straight lead type	Single formed lead type	
			
Cap range 125V.a.c	103 to 105	103 to 224	823 to 105
Cap range 250V.a.c	103 to 474	103 to 473	563 to 474

For a pitch space(F) of the taping specification, refer to "**TAPAING DEMENSIONS**"

- When using these capacitors as an across-the-line capacitor, it shall be required to follow to either item 1. or item 2 condition.
  1. Capacitors shall be connected in parallel with varistor (below 250V for 125V.a.c and 470V for 250V.a.c)
  2. Voltage applied for capacitor shall not exceed 250Vo-p for 125V.a.c and 630Vo-p for 250V.a.c.

Dimensions(mm)

Capacitors Code	Cap(μF)	MMD 125V.ac						MMD 250V.ac					
		W	H	T	P	F	φd	W	H	T	P	F	φd
103	0.010	11.0	8.2	5.0	7.5	5.0/7.5	0.6	13.0	10.0	5.5	10.0	10.0	0.6
123	0.012	11.0	8.2	5.0	7.5	5.0/7.5	0.6	13.0	10.5	6.0	10.0	10.0	0.6
153	0.015	11.0	8.2	5.0	7.5	5.0/7.5	0.6	13.0	10.5	6.0	10.0	10.0	0.6
183	0.018	11.0	8.2	5.0	7.5	5.0/7.5	0.6	13.0	10.5	6.0	10.0	10.0	0.6
223	0.022	11.0	8.2	5.0	7.5	5.0/7.5	0.6	13.0	10.8	6.0	10.0	10.0	0.6
273	0.027	11.0	8.2	5.0	7.5	5.0/7.5	0.6	13.0	10.8	6.0	10.0	10.0	0.6
333	0.033	11.0	8.2	5.0	7.5	5.0/7.5	0.6	13.0	11.3	6.3	10.0	10.0	0.6
393	0.039	11.0	8.2	5.0	7.5	5.0/7.5	0.6	13.0	12.8	6.3	10.0	10.0	0.6
473	0.047	11.0	8.2	5.5	7.5	5.0/7.5	0.6	13.0	14.5	6.3	10.0	10.0	0.6
563	0.056	11.0	8.7	6.0	7.5	5.0/7.5	0.6	18.5	10.8	6.0	15.0	10.0	0.6
683	0.068	11.0	9.2	6.0	7.5	5.0/7.5	0.6	18.5	11.3	6.3	15.0	10.0	0.6
823	0.082	14.0	9.2	5.5	10.0	5.0/7.5/10.0	0.6	18.5	11.5	6.5	15.0	10.0	0.6
104	0.10	14.0	10.5	5.5	10.0	5.0/7.5/10.0	0.6	18.5	13.3	6.5	15.0	10.0	0.6
124	0.12	14.0	11.0	6.0	10.0	5.0/7.5/10.0	0.6	18.5	13.8	7.0	15.0	10.0	0.8
154	0.15	14.0	11.5	6.0	10.0	5.0/7.5/10.0	0.6	18.5	14.5	7.8	15.0	10.0	0.8
184	0.18	14.0	12.0	6.5	10.0	5.0/7.5/10.0	0.6	18.5	15.3	8.5	15.0	10.0	0.8
224	0.22	14.0	12.5	7.3	10.0	5.0/7.5/10.0	0.6	18.5	16.0	9.5	15.0	10.0	0.8
274	0.27	19.0	11.5	6.0	15.0	5.0/7.5/10.0	0.6	26.0	17.0	7.0	22.5	15.0	0.8
334	0.33	19.0	13.0	6.0	15.0	5.0/7.5/10.0	0.6	26.0	16.5	8.0	22.5	15.0	0.8
394	0.39	19.0	13.5	6.5	15.0	5.0/7.5/10.0	0.6	26.0	17.3	8.8	22.5	15.0	0.8
474	0.47	19.0	14.0	7.0	15.0	5.0/7.5/10.0	0.6	26.0	18.0	9.5	22.5	15.0	0.8
564	0.56	19.0	16.0	7.0	15.0	5.0/7.5/10.0	0.6						
684	0.68	19.0	16.5	8.0	15.0	5.0/7.5/10.0	0.8						
824	0.82	25.5	16.0	7.0	22.5	15.0	0.8						
105	1.0	25.5	16.5	7.5	22.5	15.0	0.8						

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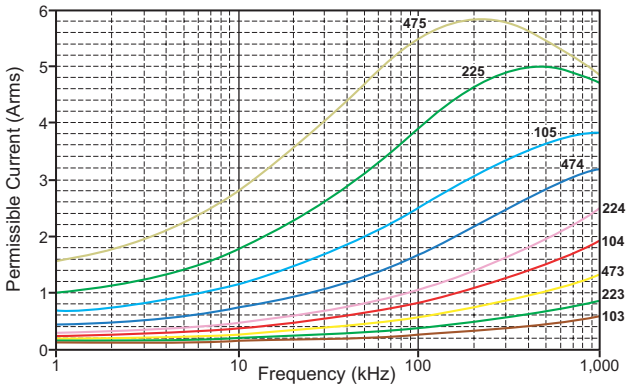
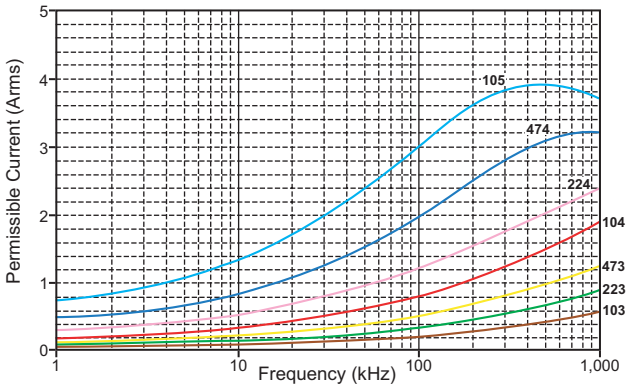
METALLIZED POLYESTER FILM CAPACITOR Type MML/MMD

Characteristics of permissible current to frequency

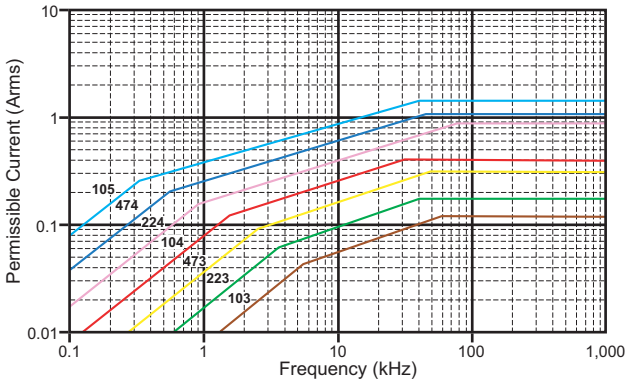
MML 125V



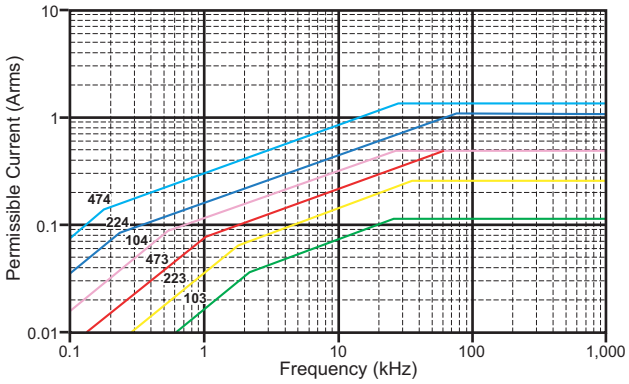
MML 125V



MMD 125V



MMD 250V



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Standard quantity packed in a box