

DATA SHEET

MKT 370/371/372/373 **Metallized polyester film capacitors**

Product specification
Supersedes data of April 1999
File under BCcomponents, BC05

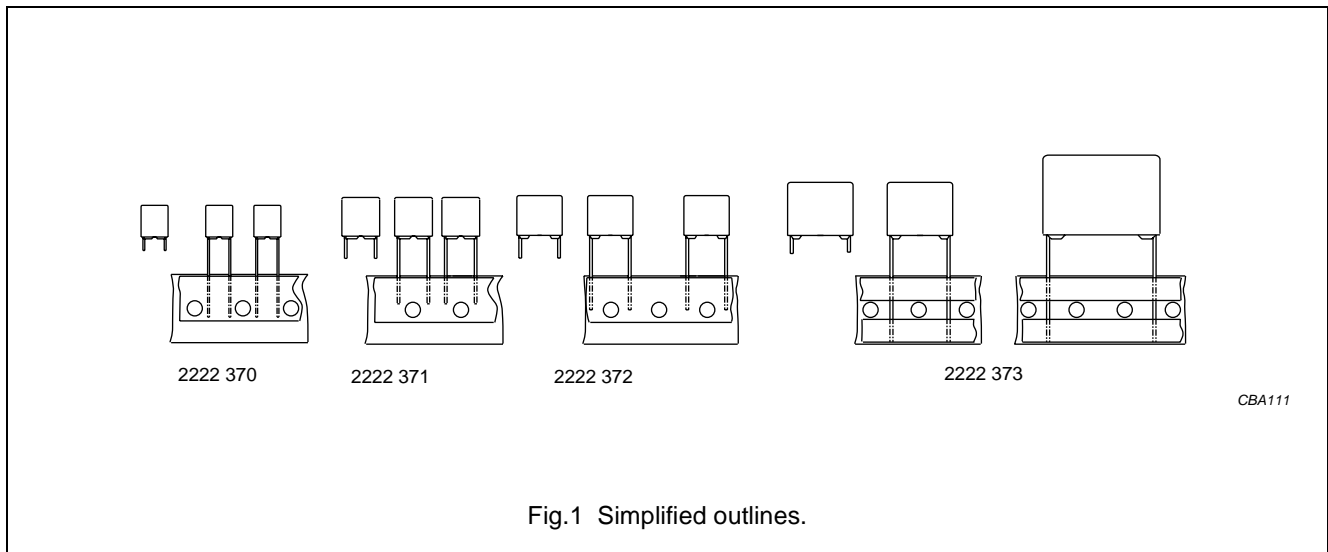
2000 Feb 01

Metallized polyester film capacitors

MKT 370/371/372/373

MKT RADIAL POTTED CAPACITORS

PITCH 5/7.5/10/15/22.5/27.5 mm



FEATURES

- Low-inductive wound cell of metallized (PETP) film
- Potted with epoxy resin in a blue flame-retardant case
- Radial leads of solder-coated wire
- Withstands solvents and rinsing liquids
- Small stand-off pips to allow removal of solder flux
- Suitable for high density packaging.

APPLICATIONS

- Blocking and coupling
- Bypass and energy reservoir.

DETAIL SPECIFICATION

For more detailed data and test requirements see "Type detail specification HQN-384-02/103".

QUICK REFERENCE DATA

DESCRIPTION	VALUE
Capacitance range (E12 series)	0.001 to 15 μ F
Capacitance tolerance	$\pm 10\%$; $\pm 5\%$
Rated (DC) voltage	63 V; 100 V; 250 V; 400 V
Climatic category	55/100/56
Maximum application temperature	100 °C
Rated temperature	85 °C
Tangent of loss angle at 10 kHz	100×10^{-4}
Reference specification	IEC 60384-2
Performance grade	grade 1 (long life)

Metallized polyester film capacitors

MKT 370

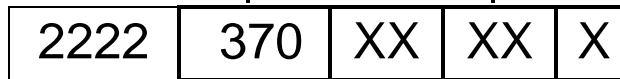
COMPOSITION OF CATALOGUE NUMBER

TYPE AND PITCHES	
370	5.08 mm

MULTIPLIER (nF)	
0.1	2
1	3
10	4
100	5

CAPACITANCE (numerically)

Example:
104 = 10 x 10 = 100 nF



TYPE	PACKAGING	LEAD CONFIGURATION	C-TOL	63 V	100 V	250 V	400 V	
370	loose in box	lead length 4.0 mm	±10%	11	21	41	51	
			±5%	12	22	42	52	
		lead length 26.0 mm	±10%	15	25	45	55	
			±5%	16	26	46	56	
	taped on reel	H = 18.5 mm; P ₀ = 12.7 mm	±10%	18	28	48	58	
			±5%	19	29	49	59	
		ammopack	H = 18.5 mm; P ₀ = 12.7 mm	±10%	75	85	35	65
				±5%	76	86	36	66

Metallized polyester film capacitors

MKT 371/372/373

TYPE AND PITCHES	
371	7.5 mm
372	10.0 mm
373	15.0 mm
	22.5 mm
	27.5 mm

CAPACITANCE
(numerically)

MULTIPLIER (nF)	
0.1	2
1	3
10	4
100	5

Example:
104 = 10 x 10 = 100 nF

2222 37. XX XX X

TYPE	PACKAGING	LEAD CONFIGURATION	C-TOL	63 V	100 V	250 V	400 V
371	loose in box	lead length 4.0 mm	±10%	11	21	41	51
			±5%	12	22	42	52
		lead length 26.0 mm	±10%	15	25	45	55
			±5%	16	26	46	56
	taped on reel	H = 18.5 mm; P ₀ = 12.7 mm	±10%	35	65	75	85
			±5%	36	66	76	86
ammopack	H = 18.5 mm; P ₀ = 12.7 mm	±10%	38	68	78	88	
		±5%	39	69	79	89	
372	loose in box	lead length 4.0 mm	±10%	–	21	41	51
			±5%	–	22	42	52
	taped on reel	H = 18.5 mm; P ₀ = 12.7 mm	±10%	–	25	45	55
			±5%	–	26	46	56
	ammopack	H = 18.5 mm; P ₀ = 12.7 mm	±10%	–	28	48	58
			±5%	–	29	49	59
373	loose in box	lead length 5.0 mm	±10%	–	23	43	53
			±5%	–	24	44	54
	taped on reel	H = 18.5 mm; P ₀ = 12.7 mm	±10%	–	27	47	57
			±5%	–	28	48	58

Metallized polyester film capacitors

MKT 370

MKT 370 GENERAL DATA

PITCH 5 mm

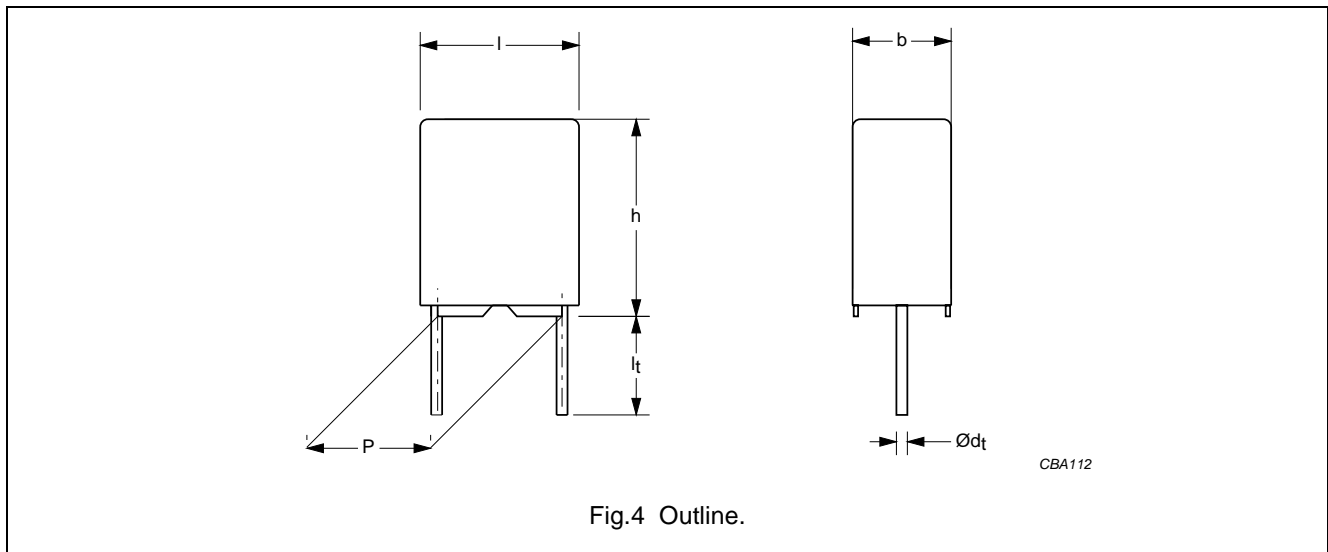


Fig.4 Outline.

Specific reference data for the 63 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: $C \leq 0.1 \mu\text{F}$ $0.1 \mu\text{F} < C \leq 0.47 \mu\text{F}$ $0.47 \mu\text{F} < C \leq 1.5 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 300 \times 10^{-4}$
	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	–
Rated voltage pulse slope $(dU/dt)_R$ at 63 V (DC)	60 V/ μs		
R between leads, for $C \leq 0.33 \mu\text{F}$ at 10 V; 1 minute	>15000 M Ω		
RC between leads, for $C > 0.33 \mu\text{F}$ at 10 V; 1 minute	>5000 s		
R between interconnected leads and case (foil method)	>30000 M Ω		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	100 V; 1 minute		
Withstanding (DC) voltage between leads and case	200 V; 1 minute		

Available 63 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Ammopack	H = 18.5 mm; note 2	$\pm 10\%$	2222 370 75...	preferred
		$\pm 5\%$	2222 370 76...	preferred
Loose in box	$l_t = 4.0 + 1.0/-0.5$ mm	$\pm 10\%$	2222 370 11...	on request
		$\pm 5\%$	2222 370 12...	on request
	$l_t = 26.0 \pm 2.0$ mm	$\pm 10\%$	2222 370 15...	on request
		$\pm 5\%$	2222 370 16...	on request
Taped on reel	H = 18.5 mm; note 2	$\pm 10\%$	2222 370 18...	on request
		$\pm 5\%$	2222 370 19...	on request

Notes

- For SPQ refer to this handbook, chapter "Packaging information".
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 370

 $U_{Rdc} = 63 \text{ V}$; $U_{Rac} = 40 \text{ V}$

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER	
			AMMOPACK	
			H = 18.5 mm	
			C-tol = $\pm 10\%$	C-tol = $\pm 5\%$
			catalogue number ⁽¹⁾	last 5 digits ⁽¹⁾
Pitch = $5.08 \pm 0.30 \text{ mm}$; $d_t = 0.50 \pm 0.05 \text{ mm}$				
0.056	2.5 × 6.5 × 7.2	0.25	2222 370 75563	.. 76563
0.068			2222 370 75683	.. 76683
0.082			2222 370 75823	.. 76823
0.1			2222 370 75104	.. 76104
0.12			2222 370 75124	.. 76124
0.15			2222 370 75154	.. 76154
0.18			2222 370 75184	.. 76184
0.22	3.5 × 8.0 × 7.2	0.35	2222 370 75224	.. 76224
0.27			2222 370 75274	.. 76274
0.33			2222 370 75334	.. 76334
0.39			2222 370 75394	.. 76394
0.47			2222 370 75474	.. 76474
0.56	4.5 × 9.0 × 7.2	0.45	2222 370 75564	.. 76564
0.68			2222 370 75684	.. 76684
0.82	6.0 × 11.0 × 7.2	0.60	2222 370 75824	.. 76824
1			2222 370 75105	.. 76105
1.2 ⁽²⁾			2222 370 75125	.. 76125
1.5 ⁽²⁾			2222 370 75155	.. 76155

Notes

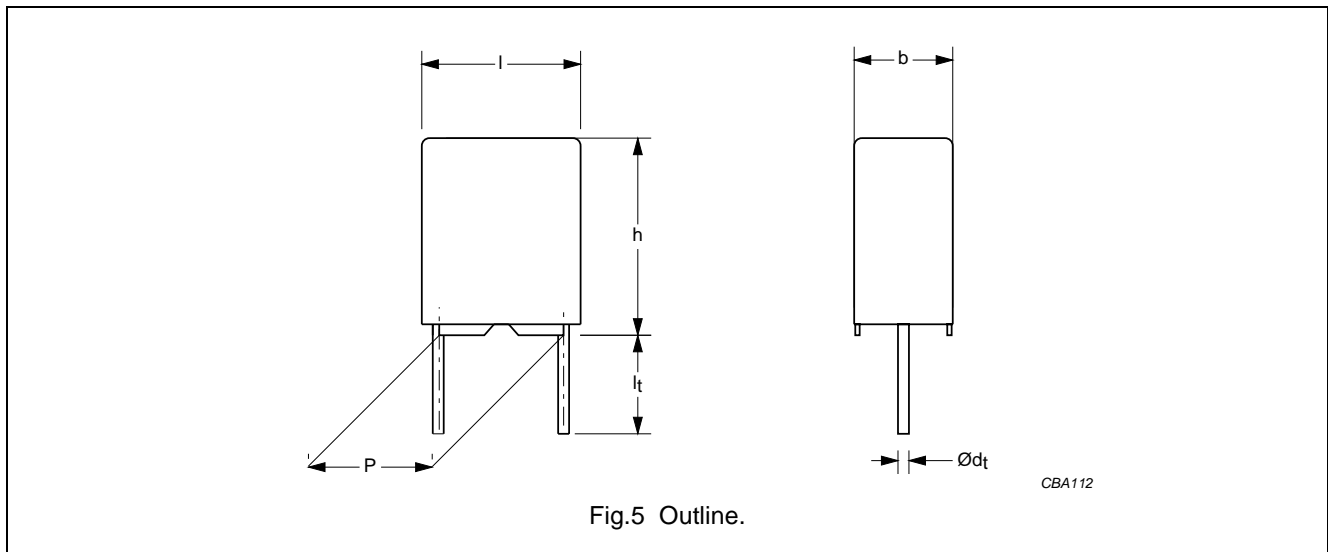
1. The shading indicates preferred types.
2. For C = 1.2 μF and C = 1.5 μF : $U_{Rdc} = 50 \text{ V}$ and $U_{Rac} = 32 \text{ V}$.

Metallized polyester film capacitors

MKT 370

MKT 370 GENERAL DATA

PITCH 5 mm



Specific reference data for the 100 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: C ≤ 0.1 μF 0.1 μF < C ≤ 0.47 μF	≤75 × 10 ⁻⁴ ≤75 × 10 ⁻⁴	≤130 × 10 ⁻⁴ ≤130 × 10 ⁻⁴	≤250 × 10 ⁻⁴ ≤300 × 10 ⁻⁴
Rated voltage pulse slope (dU/dt) _R at 100 V (DC)	110 V/μs		
R between leads, for C ≤ 0.33 μF at 100 V; 1 minute	>15000 MΩ		
RC between leads, for C > 0.33 μF at 100 V; 1 minute	>5000 s		
R between interconnected leads and case (foil method)	>30000 MΩ		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	160 V; 1 minute		
Withstanding (DC) voltage between leads and case	200 V; 1 minute		

Available 100 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Ammopack	H = 18.5 mm; note 2	±10%	2222 370 85...	preferred
		±5%	2222 370 86...	preferred
Loose in box	l _t = 4.0 +1.0/-0.5 mm	±10%	2222 370 21...	on request
		±5%	2222 370 22...	on request
	l _t = 26.0 ±2.0 mm	±10%	2222 370 25...	on request
		±5%	2222 370 26...	on request
Taped on reel	H = 18.5 mm; note 2	±10%	2222 370 28...	on request
		±5%	2222 370 29...	on request

Notes

- For SPQ refer to this handbook, chapter "Packaging information".
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 370

 $U_{Rdc} = 100 \text{ V}$; $U_{Rac} = 63 \text{ V}$

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER	
			AMMOPACK	
			H = 18.5 mm	
			C-tol = $\pm 10\%$	C-tol = $\pm 5\%$
			catalogue number ⁽¹⁾	last 5 digits ⁽¹⁾
Pitch = $5.08 \pm 0.30 \text{ mm}$; $d_t = 0.50 \pm 0.05 \text{ mm}$				
0.012	$2.5 \times 6.5 \times 7.2$	0.25	2222 370 85123	.. 86123
0.015			2222 370 85153	.. 86153
0.018			2222 370 85183	.. 86183
0.022			2222 370 85223	.. 86223
0.027			2222 370 85273	.. 86273
0.033			2222 370 85333	.. 86333
0.039			2222 370 85393	.. 86393
0.047			2222 370 85473	.. 86473
0.056			2222 370 85563	.. 86563
0.068			2222 370 85683	.. 86683
0.082	2222 370 85823	.. 86823		
0.10	$3.5 \times 8.0 \times 7.2$	0.35	2222 370 85104	.. 86104
0.12			2222 370 85124	.. 86124
0.15			2222 370 85154	.. 86154
0.18			2222 370 85184	.. 86184
0.22	$4.5 \times 9.0 \times 7.2$	0.45	2222 370 85224	.. 86224
0.27			2222 370 85274	.. 86274
0.33			2222 370 85334	.. 86334
0.39	$6.0 \times 11.0 \times 7.2$	0.65	2222 370 85394	.. 86394
0.47			2222 370 85474	.. 86474

Note

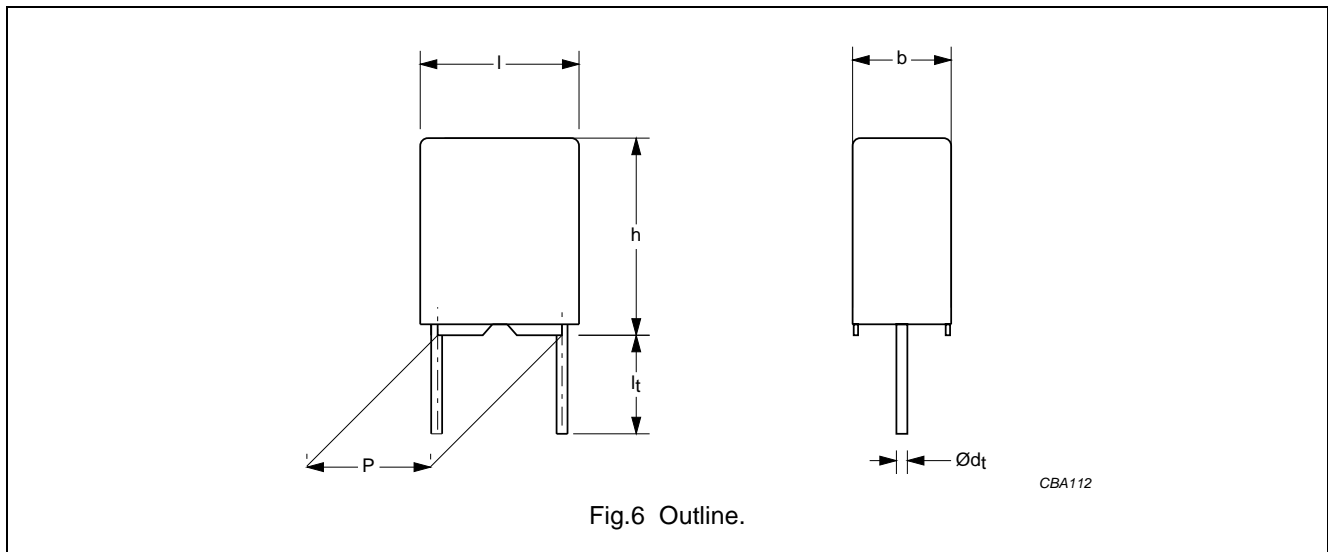
1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 370

MKT 370 GENERAL DATA

PITCH 5 mm



Specific reference data for the 250 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
Rated voltage pulse slope $(dU/dt)_R$ at 250 V (DC)	330 V/ μ s		
R between leads at 100 V; 1 minute	>30000 M Ω		
R between interconnected leads and case (foil method)	>30000 M Ω		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	400 V; 1 minute		
Withstanding (DC) voltage between leads and case	500 V; 1 minute		

Available 250 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Ammopack	H = 18.5 mm; note 2	$\pm 10\%$	2222 370 35...	preferred
		$\pm 5\%$	2222 370 36...	preferred
Loose in box	$l_t = 4.0 +1.0/-0.5$ mm	$\pm 10\%$	2222 370 41...	on request
		$\pm 5\%$	2222 370 42...	on request
	$l_t = 26.0 \pm 2.0$ mm	$\pm 10\%$	2222 370 45...	on request
		$\pm 5\%$	2222 370 46...	on request
Taped on reel	H = 18.5 mm; note 2	$\pm 10\%$	2222 370 48...	on request
		$\pm 5\%$	2222 370 49...	on request

Notes

- For SPQ refer to this handbook, chapter "Packaging information".
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 370

 $U_{Rdc} = 250 \text{ V}$; $U_{Rac} = 160 \text{ V}$

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER	
			AMMOPACK	
			H = 18.5 mm	
			C-tol = $\pm 10\%$	C-tol = $\pm 5\%$
			catalogue number ⁽¹⁾	last 5 digits ⁽¹⁾
Pitch = $5.08 \pm 0.30 \text{ mm}$; $d_t = 0.50 \pm 0.05 \text{ mm}$				
0.0039	2.5 × 6.5 × 7.2	0.25	2222 370 35392	.. 36392
0.0047			2222 370 35472	.. 36472
0.0056			2222 370 35562	.. 36562
0.0068			2222 370 35682	.. 36682
0.0082			2222 370 35822	.. 36822
0.01			2222 370 35103	.. 36103
0.012			2222 370 35123	.. 36123
0.015			2222 370 35153	.. 36153
0.018			2222 370 35183	.. 36183
0.022	3.5 × 8.0 × 7.2	0.35	2222 370 35223	.. 36223
0.027			2222 370 35273	.. 36273
0.033			2222 370 35333	.. 36333
0.039	4.5 × 9.0 × 7.2	0.45	2222 370 35393	.. 36393
0.047			2222 370 35473	.. 36473
0.056			2222 370 35563	.. 36563
0.068	6.0 × 11.0 × 7.2	0.60	2222 370 35683	.. 36683
0.082			2222 370 35823	.. 36823
0.1			2222 370 35104	.. 36104

Note

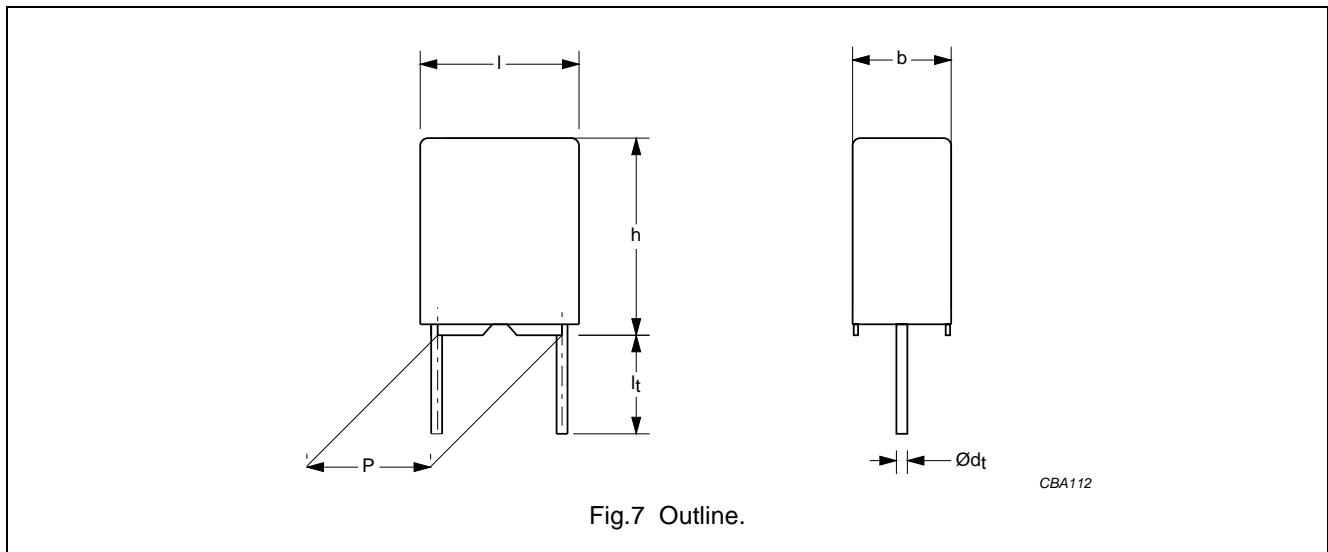
1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 370

MKT 370 GENERAL DATA

PITCH 5 mm



Specific reference data for the 400 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
Rated voltage pulse slope $(dU/dt)_R$ at 400 V (DC)	630 V/ μ s		
R between leads at 100 V; 1 minute	>30000 M Ω		
R between interconnected leads and case (foil method)	>30000 M Ω		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	640 V; 1 minute		
Withstanding (DC) voltage between leads and case	800 V; 1 minute		

Available 400 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Ammopack	H = 18.5 mm; note 2	$\pm 10\%$	2222 370 65...	preferred
		$\pm 5\%$	2222 370 66...	preferred
Loose in box	$l_t = 4.0 +1.0/-0.5$ mm	$\pm 10\%$	2222 370 51...	on request
		$\pm 5\%$	2222 370 52...	on request
	$l_t = 26.0 \pm 2.0$ mm	$\pm 10\%$	2222 370 55...	on request
		$\pm 5\%$	2222 370 56...	on request
Taped on reel	H = 18.5 mm; note 2	$\pm 10\%$	2222 370 58...	on request
		$\pm 5\%$	2222 370 59...	on request

Notes

- For SPQ refer to this handbook, chapter "Packaging information".
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 370

 $U_{Rdc} = 400 \text{ V}$; $U_{Rac} = 220 \text{ V}$

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER	
			AMMOPACK	
			H = 18.5 mm	
			C-tol = $\pm 10\%$	C-tol = $\pm 5\%$
			catalogue number ⁽¹⁾	last 5 digits ⁽¹⁾
Pitch = $5.08 \pm 0.30 \text{ mm}$; $d_t = 0.50 \pm 0.05 \text{ mm}$				
0.001	2.5 × 6.5 × 7.2	0.25	2222 370 65 102	.. 66 102
0.0012			2222 370 65 122	.. 66 122
0.0015			2222 370 65 152	.. 66 152
0.0018			2222 370 65 182	.. 66 182
0.0022			2222 370 65 222	.. 66 222
0.0027			2222 370 65 272	.. 66 272
0.0033			2222 370 65 332	.. 66 332
0.0039			2222 370 65 392	.. 66 392
0.0047			2222 370 65 472	.. 66 472
0.0056			2222 370 65 562	.. 66 562
0.0068			2222 370 65 682	.. 66 682
0.0082			2222 370 65 822	.. 66 822
0.01	3.5 × 8.0 × 7.2	0.35	2222 370 65 103	.. 66 103
0.012			2222 370 65 123	.. 66 123
0.015			2222 370 65 153	.. 66 153
0.018	4.5 × 9.0 × 7.2	0.45	2222 370 65 183	.. 66 183
0.022			2222 370 65 223	.. 66 223
0.027			2222 370 65 273	.. 66 273
0.033	6.0 × 11.0 × 7.2	0.60	2222 370 65 333	.. 66 333
0.039			2222 370 65 393	.. 66 393
0.047			2222 370 65 473	.. 66 473

Note

1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 371

MKT 371 GENERAL DATA

PITCH 7.5mm

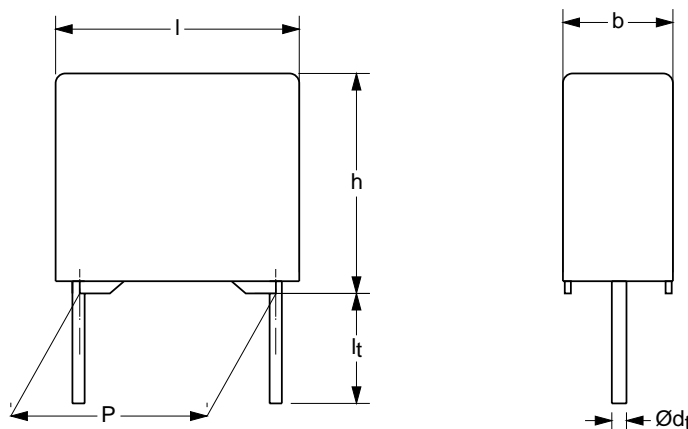


Fig.8 Outline.

CBA113

Specific reference data for the 63 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: $C \leq 0.1 \mu\text{F}$ $0.1 \mu\text{F} < C \leq 0.47 \mu\text{F}$ $0.47 \mu\text{F} < C \leq 1.0 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 300 \times 10^{-4}$
	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	–
Rated voltage pulse slope $(dU/dt)_R$ at 63 V (DC)	18 V/ μs		
R between leads, for $C \leq 0.33 \mu\text{F}$ at 10 V; 1 minute	>15000 M Ω		
RC between leads, for $C > 0.33 \mu\text{F}$ at 10 V; 1 minute	>5000 s		
R between interconnected leads and case (foil method)	>30000 M Ω		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	100 V; 1 minute		
Withstanding (DC) voltage between leads and case	200 V; 1 minute		

Available 63 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	$l_t = 4.0 +1.0/-0.5 \text{ mm}$	$\pm 10\%$	2222 371 11...	preferred
		$\pm 5\%$	2222 371 12...	preferred
Ammopack	H = 18.5 mm; note 2	$\pm 10\%$	2222 371 38...	preferred
		$\pm 5\%$	2222 371 39...	preferred
Loose in box	$l_t = 26.0 \pm 2.0 \text{ mm}$	$\pm 10\%$	2222 371 15...	on request
		$\pm 5\%$	2222 371 16...	on request
Taped on reel	H = 18.5 mm; note 2	$\pm 10\%$	2222 371 35...	on request
		$\pm 5\%$	2222 371 36...	on request

Notes

- For SPQ refer to this handbook, chapter "Packaging information".
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 371

 $U_{Rdc} = 63 \text{ V}$; $U_{Rac} = 40 \text{ V}$

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER			
			LOOSE IN BOX		AMMOPACK	
			$l_t = 4.0 +1.0/-0.5 \text{ mm}$		H = 18.5 mm	
			C-tol = $\pm 10\%$	C-tol = $\pm 5\%$	C-tol = $\pm 10\%$	C-tol = $\pm 5\%$
			catalogue number ⁽¹⁾	last 5 digits ⁽¹⁾	last 5 digits ⁽¹⁾	
Pitch = $7.62 +0.30/-0.40 \text{ mm}$; $d_t = 0.50 \pm 0.05 \text{ mm}$						
0.056	2.5 × 6.5 × 10.0	0.3	2222 371 11563	.. 12563	.. 38563	.. 39563
0.068			2222 371 11683	.. 12683	.. 38683	.. 39683
0.082			2222 371 11823	.. 12823	.. 38823	.. 39823
0.1			2222 371 11104	.. 12104	.. 38104	.. 39104
0.12	3.0 × 8.0 × 10.0	0.4	2222 371 11124	.. 12124	.. 38124	.. 39124
0.15			2222 371 11154	.. 12154	.. 38154	.. 39154
0.18			2222 371 11184	.. 12184	.. 38184	.. 39184
0.22			2222 371 11224	.. 12224	.. 38224	.. 39224
0.27	4.0 × 9.0 × 10.0	0.5	2222 371 11274	.. 12274	.. 38274	.. 39274
0.33			2222 371 11334	.. 12334	.. 38334	.. 39334
0.39			2222 371 11394	.. 12394	.. 38394	.. 39394
0.47			2222 371 11474	.. 12474	.. 38474	.. 39474
0.56			2222 371 11564	.. 12564	.. 38564	.. 39564
0.68			2222 371 11684	.. 12684	.. 38684	.. 39684
0.82	5.0 × 10.5 × 10.0	0.7	2222 371 11824	.. 12824	.. 38824	.. 39824
1.0			2222 371 11105	.. 12105	.. 38105	.. 39105

Note

1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 371

MKT 371 GENERAL DATA

PITCH 7.5 mm

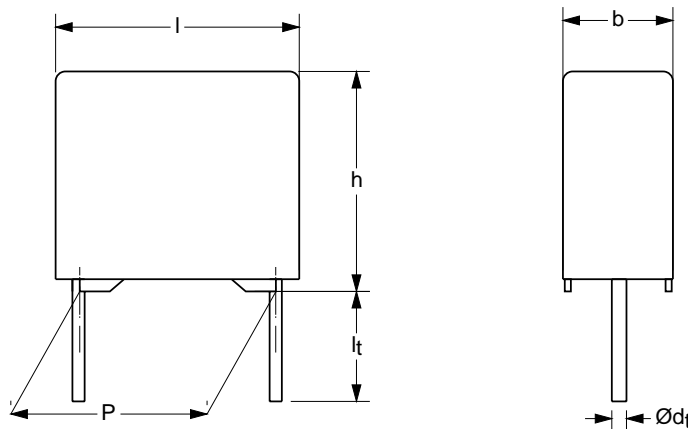


Fig.9 Outline.

CBA113

Specific reference data for the 100 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: $C \leq 0.1 \mu\text{F}$ $0.1 \mu\text{F} < C \leq 0.47 \mu\text{F}$	$\leq 75 \times 10^{-4}$ $\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$ $\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$ $\leq 300 \times 10^{-4}$
Rated voltage pulse slope $(dU/dt)_R$ at 100 V (DC)	36 V/ μs		
R between leads, for $C \leq 0.33 \mu\text{F}$ at 100 V; 1 minute	>15000 M Ω		
RC between leads, for $C > 0.33 \mu\text{F}$ at 100 V; 1 minute	>5000 s		
R between interconnected leads and case (foil method)	>30000 M Ω		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	160 V; 1 minute		
Withstanding (DC) voltage between leads and case	200 V; 1 minute		

Available 100 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	$l_t = 4.0 +1.0/-0.5 \text{ mm}$	$\pm 10\%$	2222 371 21...	preferred
		$\pm 5\%$	2222 371 22...	preferred
Ammopack	H = 18.5 mm; note 2	$\pm 10\%$	2222 371 68...	preferred
		$\pm 5\%$	2222 371 69...	preferred
Loose in box	$l_t = 26.0 \pm 2.0 \text{ mm}$	$\pm 10\%$	2222 371 25...	on request
		$\pm 5\%$	2222 371 26...	on request
Taped on reel	H = 18.5 mm; note 2	$\pm 10\%$	2222 371 65...	on request
		$\pm 5\%$	2222 371 66...	on request

Notes

- For SPQ refer to this handbook, chapter "Packaging information".
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 371

 $U_{Rdc} = 100 \text{ V}$; $U_{Rac} = 63 \text{ V}$

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER			
			LOOSE IN BOX		AMMOPACK	
			$l_t = 4.0 +1.0/-0.5 \text{ mm}$		H = 18.5 mm	
			C-tol = $\pm 10\%$	C-tol = $\pm 5\%$	C-tol = $\pm 10\%$	C-tol = $\pm 5\%$
			catalogue number ⁽¹⁾	last 5 digits ⁽¹⁾	last 5 digits ⁽¹⁾	
Pitch = $7.62 +0.30/-0.40 \text{ mm}$; $d_t = 0.50 \pm 0.05 \text{ mm}$						
0.018	2.5 × 6.5 × 10.0	0.3	2222 371 21183	.. 22183	.. 68183	.. 69183
0.022			2222 371 21223	.. 22223	.. 68223	.. 69223
0.027			2222 371 21273	.. 22273	.. 68273	.. 69273
0.033			2222 371 21333	.. 22333	.. 68333	.. 69333
0.039			2222 371 21393	.. 22393	.. 68393	.. 69393
0.047			2222 371 21473	.. 22473	.. 68473	.. 69473
0.056	3.0 × 8.0 × 10.0	0.4	2222 371 21563	.. 22563	.. 68563	.. 69563
0.068			2222 371 21683	.. 22683	.. 68683	.. 69683
0.082			2222 371 21823	.. 22823	.. 68823	.. 69823
0.1			2222 371 21104	.. 22104	.. 68104	.. 69104
0.12	4.0 × 9.0 × 10.0	0.5	2222 371 21124	.. 22124	.. 68124	.. 69124
0.15			2222 371 21154	.. 22154	.. 68154	.. 69154
0.18			2222 371 21184	.. 22184	.. 68184	.. 69184
0.22			2222 371 21224	.. 22224	.. 68224	.. 69224
0.27	5.0 × 10.5 × 10.0	0.7	2222 371 21274	.. 22274	.. 68274	.. 69274
0.33			2222 371 21334	.. 22334	.. 68334	.. 69334
0.39			2222 371 21394	.. 22394	.. 68394	.. 69394
0.47			2222 371 21474	.. 22474	.. 68474	.. 69474

Note

1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 371

MKT 371 GENERAL DATA

PITCH 7.5 mm

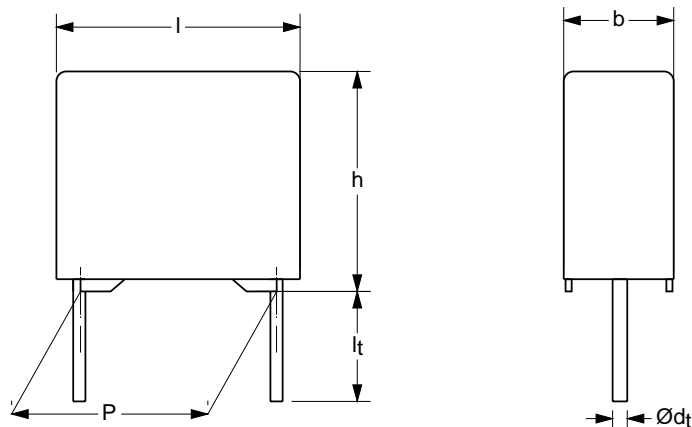


Fig.10 Outline.

CBA113

Specific reference data for the 250 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
Rated voltage pulse slope $(dU/dt)_R$ at 250 V (DC)	70 V/ μ s		
R between leads at 100 V; 1 minute	>30000 M Ω		
R between interconnected leads and case (foil method)	>30000 M Ω		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	400 V; 1 minute		
Withstanding (DC) voltage between leads and case	500 V; 1 minute		

Available 250 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	$l_t = 4.0 +1.0/-0.5$ mm	$\pm 10\%$	2222 371 41...	preferred
		$\pm 5\%$	2222 371 42...	preferred
Ammopack	H = 18.5 mm; note 2	$\pm 10\%$	2222 371 78...	preferred
		$\pm 5\%$	2222 371 79...	preferred
Loose in box	$l_t = 26.0 \pm 2.0$ mm	$\pm 10\%$	2222 371 45...	on request
		$\pm 5\%$	2222 371 46...	on request
Taped on reel	H = 18.5 mm; note 2	$\pm 10\%$	2222 371 75...	on request
		$\pm 5\%$	2222 371 76...	on request

Notes

- For SPQ refer to this handbook, chapter "Packaging information".
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 371

 $U_{Rdc} = 250 \text{ V}$; $U_{Rac} = 160 \text{ V}$

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER			
			LOOSE IN BOX		AMMOPACK	
			$l_t = 4.0 +1.0/-0.5 \text{ mm}$		H = 18.5 mm	
			C-tol = $\pm 10\%$	C-tol = $\pm 5\%$	C-tol = $\pm 10\%$	C-tol = $\pm 5\%$
			catalogue number ⁽¹⁾	last 5 digits ⁽¹⁾	last 5 digits ⁽¹⁾	
Pitch = $7.62 +0.30/-0.40 \text{ mm}$; $d_t = 0.50 \pm 0.05 \text{ mm}$						
0.0082	2.5 × 6.5 × 10.0	0.3	2222 371 41822	.. 42822	.. 78822	.. 79822
0.01			2222 371 41103	.. 42103	.. 78103	.. 79103
0.012			2222 371 41123	.. 42123	.. 78123	.. 79123
0.015			2222 371 41153	.. 42153	.. 78153	.. 79153
0.018	3.0 × 8.0 × 10.0	0.4	2222 371 41183	.. 42183	.. 78183	.. 79183
0.022			2222 371 41223	.. 42223	.. 78223	.. 79223
0.027			2222 371 41273	.. 42273	.. 78273	.. 79273
0.033			2222 371 41333	.. 42333	.. 78333	.. 79333
0.039			2222 371 41393	.. 42393	.. 78393	.. 79393
0.047			2222 371 41473	.. 42473	.. 78473	.. 79473
0.056	4.0 × 9.0 × 10.0	0.5	2222 371 41563	.. 42563	.. 78563	.. 79563
0.068			2222 371 41683	.. 42683	.. 78683	.. 79683
0.082			2222 371 41823	.. 42823	.. 78823	.. 79823
0.1			2222 371 41104	.. 42104	.. 78104	.. 79104

Note

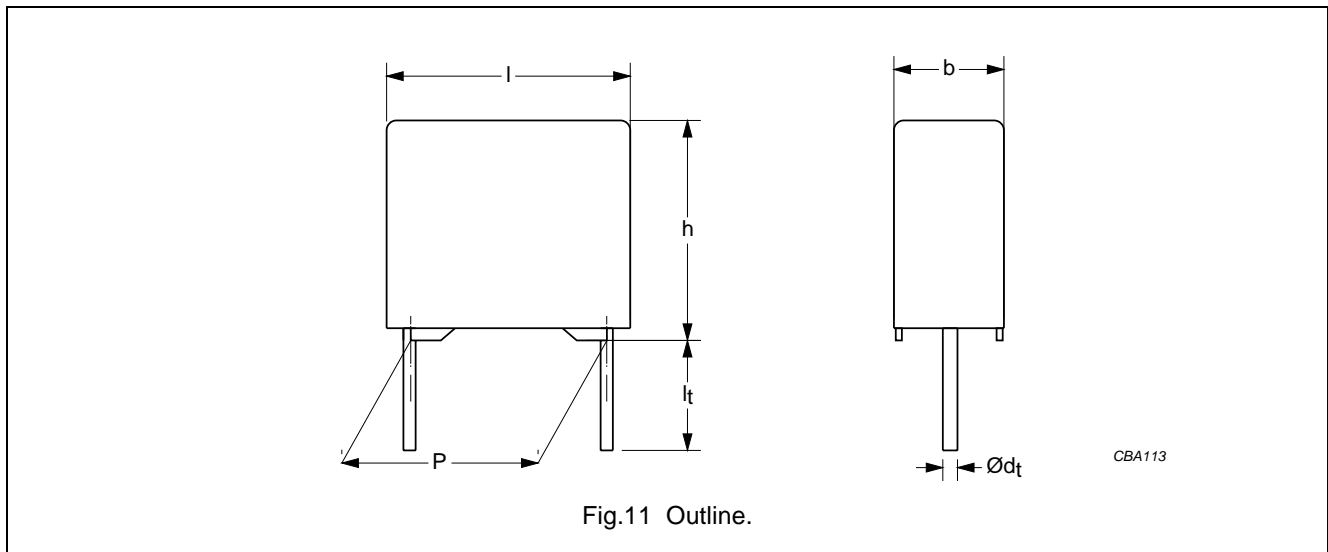
1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 371

MKT 371 GENERAL DATA

PITCH 7.5 mm



Specific reference data for the 400 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
Rated voltage pulse slope $(dU/dt)_R$ at 400 V (DC)	190 V/ μ s		
R between leads at 100 V; 1 minute	>30000 M Ω		
R between interconnected leads and case (foil method)	>30000 M Ω		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	640 V; 1 minute		
Withstanding (DC) voltage between leads and case	800 V; 1 minute		

Available 400 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	$l_t = 4.0 +1.0/-0.5$ mm	$\pm 10\%$	2222 371 51...	preferred
		$\pm 5\%$	2222 371 52...	preferred
Ammopack	H = 18.5 mm; note 2	$\pm 10\%$	2222 371 88...	preferred
		$\pm 5\%$	2222 371 89...	preferred
Loose in box	$l_t = 26.0 \pm 2.0$ mm	$\pm 10\%$	2222 371 55...	on request
		$\pm 5\%$	2222 371 56...	on request
Taped on reel	H = 18.5 mm; note 2	$\pm 10\%$	2222 371 85...	on request
		$\pm 5\%$	2222 371 86...	on request

Notes

- For SPQ refer to this handbook, chapter "Packaging information".
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 371

 $U_{Rdc} = 400 \text{ V}$; $U_{Rac} = 220 \text{ V}$

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER			
			LOOSE IN BOX		AMMOPACK	
			$l_t = 4.0 +1.0/-0.5 \text{ mm}$		H = 18.5 mm	
			C-tol = $\pm 10\%$	C-tol = $\pm 5\%$	C-tol = $\pm 10\%$	C-tol = $\pm 5\%$
			catalogue number ⁽¹⁾	last 5 digits ⁽¹⁾	last 5 digits ⁽¹⁾	
Pitch = $7.62 +0.30/-0.40 \text{ mm}$; $d_t = 0.50 \pm 0.05 \text{ mm}$						
0.0039	2.5 × 6.5 × 10.0	0.3	2222 371 51 392	.. 52 392	.. 88 392	.. 89 392
0.0047			2222 371 51 472	.. 52 472	.. 88 472	.. 89 472
0.0056			2222 371 51 562	.. 52 562	.. 88 562	.. 89 562
0.0068			2222 371 51 682	.. 52 682	.. 88 682	.. 89 682
0.0082	3.0 × 8.0 × 10.0	0.4	2222 371 51 822	.. 52 822	.. 88 822	.. 89 822
0.01			2222 371 51 103	.. 52 103	.. 88 103	.. 89 103
0.012	4.0 × 9.0 × 10.0	0.5	2222 371 51 123	.. 52 123	.. 88 123	.. 89 123
0.015			2222 371 51 153	.. 52 153	.. 88 153	.. 89 153

Note

1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 372

MKT 372 GENERAL DATA

PITCH 10 mm

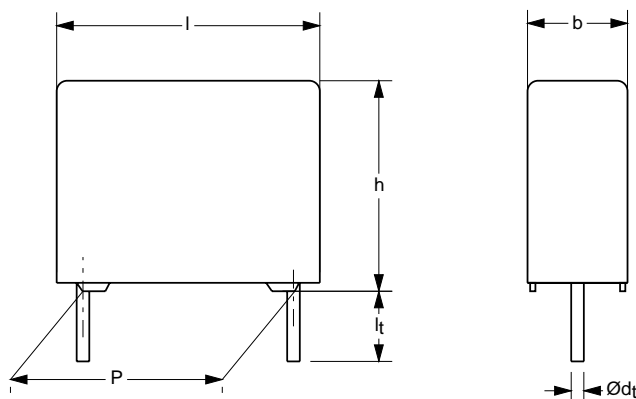


Fig.12 Outline.

CBA114

Specific reference data for the 100 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle:			
$C \leq 0.1 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
$0.1 \mu\text{F} < C \leq 0.47 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 300 \times 10^{-4}$
Rated voltage pulse slope $(dU/dt)_R$ at 100 V (DC)	34 V/ μs		
R between leads, for $C \leq 0.33 \mu\text{F}$ at 100 V; 1 minute	>15000 M Ω		
RC between leads, for $C > 0.33 \mu\text{F}$ at 100 V; 1 minute	>5000 s		
R between interconnected leads and case (foil method)	>30000 M Ω		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	160 V; 1 minute		
Withstanding (DC) voltage between leads and case	200 V; 1 minute		

Available 100 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	$l_t = 4.0 + 1.0/-0.5$ mm	$\pm 10\%$	2222 372 21...	preferred
		$\pm 5\%$	2222 372 22...	on request
Taped on reel	H = 18.5 mm; note 2	$\pm 10\%$	2222 372 25...	on request
		$\pm 5\%$	2222 372 26...	on request
Ammopack	H = 18.5 mm; note 2	$\pm 10\%$	2222 372 28...	on request
		$\pm 5\%$	2222 372 29...	on request

Notes

1. For SPQ refer to this handbook, chapter "Packaging information".
2. H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 372

 $U_{Rdc} = 100V$; $U_{Rac} = 63 V$

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER ⁽¹⁾
			LOOSE IN BOX
			$l_t = 4.0 +1.0/-0.5$ mm
			C-tol = $\pm 10\%$
Pitch = 10.0 ± 0.4 mm; $d_t = 0.60 \pm 0.06$ mm			
0.1	4.0 × 9.0 × 12.5	0.6	2222 372 21104
0.12			2222 372 21124
0.15			2222 372 21154
0.18			2222 372 21184
0.22			2222 372 21224
0.27	4.0 × 10.0 × 12.5	0.7	2222 372 21274
0.33			2222 372 21334
0.39	5.0 × 11.0 × 12.5	0.9	2222 372 21394
0.47			2222 372 21474

Note

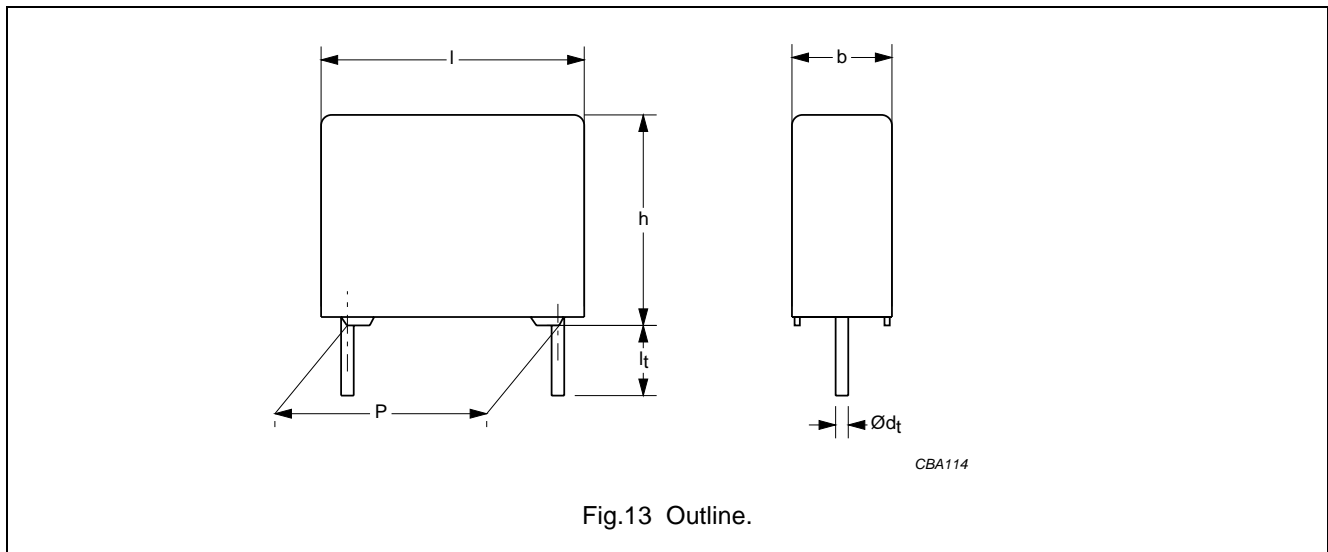
1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 372

MKT 372 GENERAL DATA

PITCH 10 mm



Specific reference data for the 250 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: C ≤ 0.1 μF 0.1 μF < C ≤ 0.47 μF	≤75 × 10 ⁻⁴ ≤75 × 10 ⁻⁴	≤130 × 10 ⁻⁴ ≤130 × 10 ⁻⁴	≤250 × 10 ⁻⁴ ≤300 × 10 ⁻⁴
Rated voltage pulse slope (dU/dt) _R at 250 V (DC)	50 V/μs		
R between leads at 100 V; 1 minute	>30000 MΩ		
R between interconnected leads and case (foil method)	>30000 MΩ		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	400 V; 1 minute		
Withstanding (DC) voltage between leads and case	500 V; 1 minute		

Available 250 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	l _t = 4.0 +1.0/-0.5 mm	±10%	2222 372 41...	preferred
		±5%	2222 372 42...	on request
Taped on reel	H = 18.5 mm; note 2	±10%	2222 372 45...	on request
		±5%	2222 372 46...	on request
Ammopack	H = 18.5 mm; note 2	±10%	2222 372 48...	on request
		±5%	2222 372 49...	on request

Notes

1. For SPQ refer to this handbook, chapter "Packaging information".
2. H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 372

 $U_{Rdc} = 250 \text{ V}$; $U_{Rac} = 160 \text{ V}$

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER ⁽¹⁾
			LOOSE IN BOX
			$l_t = 4.0 +1.0/-0.5 \text{ mm}$
			C-tol = $\pm 10\%$
Pitch = $10.0 \pm 0.4 \text{ mm}$; $d_t = 0.60 \pm 0.06 \text{ mm}$			
0.047	4.0 × 9.0 × 12.5	0.6	2222 372 41473
0.056			2222 372 41563
0.068			2222 372 41683
0.082	4.0 × 10.0 × 12.5	0.7	2222 372 41823
0.1			2222 372 41104
0.12	5.0 × 11.0 × 12.5	0.9	2222 372 41124
0.15			2222 372 41154

Note

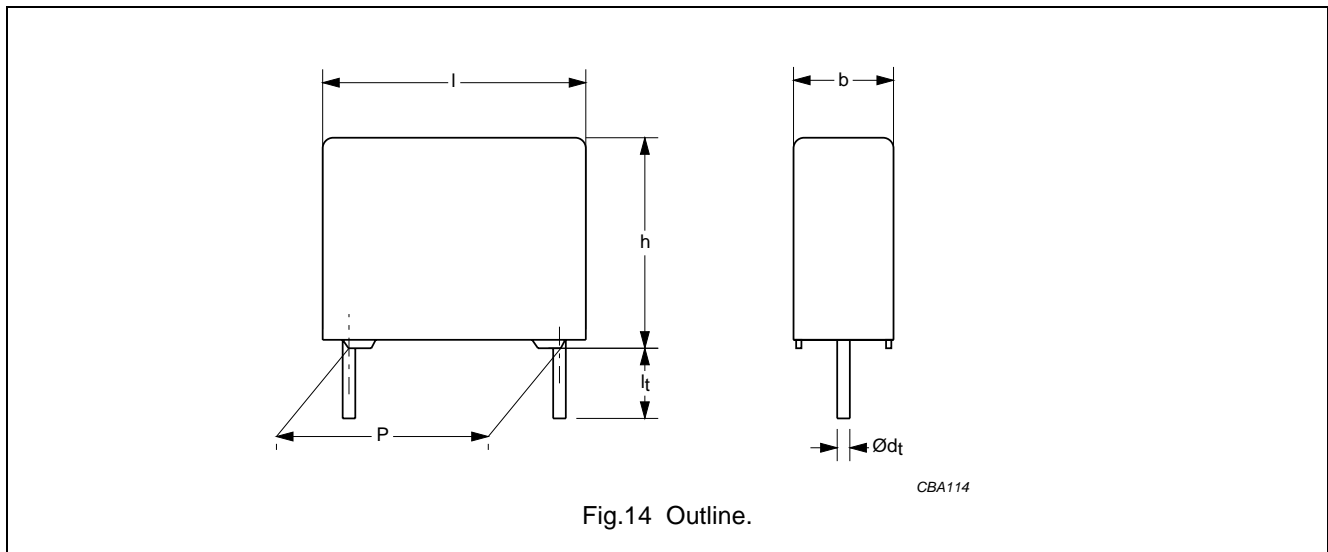
1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 372

MKT 372 GENERAL DATA

PITCH 10 mm



Specific reference data for the 400 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
Rated voltage pulse slope $(dU/dt)_R$ at 400 V (DC)	80 V/ μ s		
R between leads at 100 V; 1 minute	>30000 M Ω		
R between interconnected leads and case (foil method)	>30000 M Ω		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	640 V; 1 minute		
Withstanding (DC) voltage between leads and case	800 V; 1 minute		

Available 400 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	$l_t = 4.0 +1.0/-0.5$ mm	$\pm 10\%$	2222 372 51...	preferred
		$\pm 5\%$	2222 372 52...	on request
Taped on reel	H = 18.5 mm; note 2	$\pm 10\%$	2222 372 55...	on request
		$\pm 5\%$	2222 372 56...	on request
Ammopack	H = 18.5 mm; note 2	$\pm 10\%$	2222 372 58...	on request
		$\pm 5\%$	2222 372 59...	on request

Notes

1. For SPQ refer to this handbook, chapter "Packaging information".
2. H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 372

 $U_{Rdc} = 400 \text{ V}$; $U_{Rac} = 220 \text{ V}$

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER ⁽¹⁾
			LOOSE IN BOX
			$l_t = 4.0 +1.0/-0.5 \text{ mm}$
			C-tol = $\pm 10\%$
Pitch = $10.0 \pm 0.4 \text{ mm}$; $d_t = 0.60 \pm 0.06 \text{ mm}$			
0.0047	4.0 × 9.0 × 12.5	0.6	2222 372 51472
0.0056			2222 372 51562
0.0068			2222 372 51682
0.0082			2222 372 51822
0.01			2222 372 51103
0.012			2222 372 51123
0.015			2222 372 51153
0.018			2222 372 51183
0.022			2222 372 51223
0.027	4.0 × 10.0 × 12.5	0.7	2222 372 51273
0.033			2222 372 51333
0.039	5.0 × 11.0 × 12.5	0.9	2222 372 51393
0.047			2222 372 51473

Note

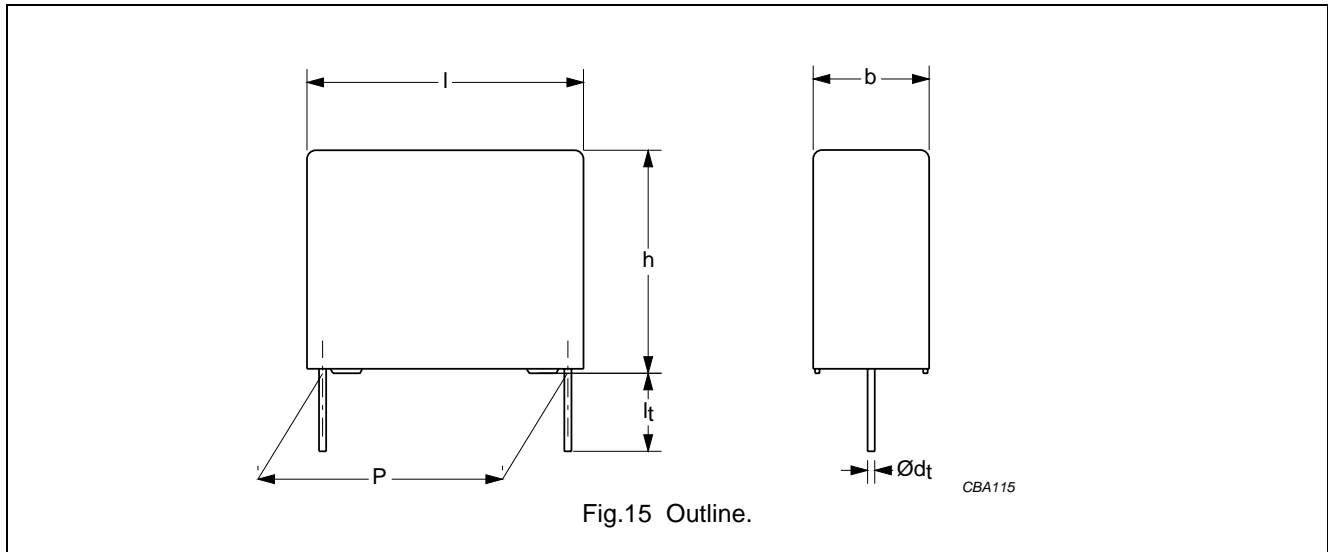
1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 373

MKT 373 GENERAL DATA

PITCH 15/22.5/27.5 mm (NEW)



Specific reference data for the 100 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: 0.33 µF < C ≤ 0.47 µF 0.47 µF < C ≤ 1.0 µF 1.0 µF < C ≤ 10 µF C > 10 µF	≤75 × 10 ⁻⁴ ≤75 × 10 ⁻⁴ ≤75 × 10 ⁻⁴ ≤75 × 10 ⁻⁴	≤130 × 10 ⁻⁴ ≤130 × 10 ⁻⁴ ≤150 × 10 ⁻⁴ -	≤300 × 10 ⁻⁴ - - -
Rated voltage pulse slope (dU/dt) _R at 100 V (DC): P = 15 mm P = 22.5 mm P = 27.5 mm	14 V/µs 5 V/µs 4 V/µs		
R between leads, for C ≤ 0.33 µF at 100 V; 1 minute	>15000 MΩ		
RC between leads, for C > 0.33 µF at 100 V; 1 minute	>5000 s		
R between interconnected leads and case (foil method)	>30000 MΩ		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	160 V; 1 minute		
Withstanding (DC) voltage between leads and case	200 V; 1 minute		

Available 100 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	l _t = 5.0 ± 1.0 mm	±10%	2222 373 23...	preferred
		±5%	2222 373 24...	on request
Taped on reel	H = 18.5 mm; note 2	±10%	2222 373 27...	on request
		±5%	2222 373 28...	on request

Notes

- For SPQ refer to this handbook, chapter "Packaging information"; taped on reel pitch = 27.5 mm is not available.
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 373

 $U_{Rdc} = 100 \text{ V}$; $U_{Rac} = 63 \text{ V}$

(NEW)

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER ⁽¹⁾
			LOOSE IN BOX
			$l_t = 5.0 \pm 1.0 \text{ mm}$
			C-tol = $\pm 10\%$
Pitch = $15.0 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$			
0.33	5.0 × 11.0 × 17.5	1.1	2222 373 23334
0.39			2222 373 23394
0.47			2222 373 23474
0.56			2222 373 23564
0.68			2222 373 23684
0.82			2222 373 23824
1			2222 373 23105
1.2			2222 373 23125
1.5			2222 373 23155
1.8	2222 373 23185		
2.2	6.0 × 12.0 × 17.5	1.4	2222 373 23225
2.7	7.0 × 13.5 × 17.5	1.9	2222 373 23275
3.3			2222 373 23335
3.9	8.5 × 15.0 × 17.5	2.6	2222 373 23395
4.7			2222 373 23475
5.6	10.0 × 16.5 × 17.5	3.1	2222 373 23565
6.8			2222 373 23685
Pitch = $22.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$			
8.2	8.5 × 18.0 × 26.0	4.4	2222 373 23825
10			2222 373 23106
12	10.0 × 19.5 × 26.0	5.5	2222 373 23126
Pitch = $27.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$			
15	11.0 × 21.0 × 31.0	7.8	2222 373 23156

Note

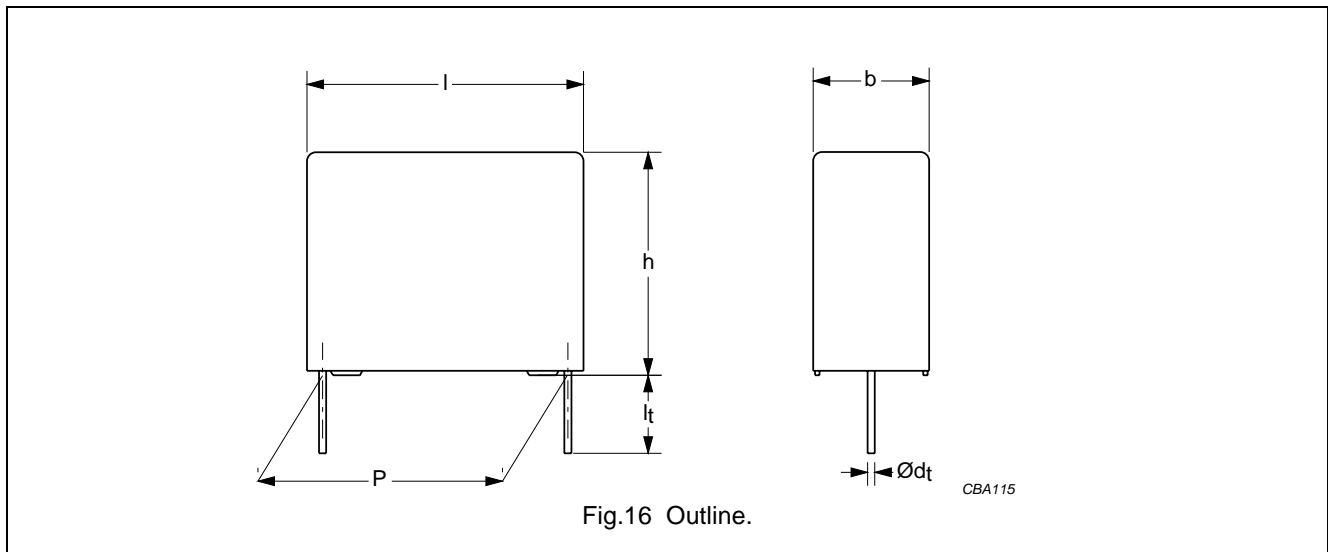
1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 373

MKT 373 GENERAL DATA

PITCH 15/22.5/27.5 mm (NEW)



Specific reference data for the 250 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: 0.15 μF < C \leq 0.47 μF 0.47 μF < C \leq 1.0 μF 1.0 μF < C \leq 4.7 μF	$\leq 75 \times 10^{-4}$ $\leq 75 \times 10^{-4}$ $\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$ $\leq 130 \times 10^{-4}$ $\leq 150 \times 10^{-4}$	$\leq 300 \times 10^{-4}$ – –
Rated voltage pulse slope $(dU/dt)_R$ at 250 V (DC): P = 15 mm P = 22.5 mm P = 27.5 mm	16 V/ μs 7 V/ μs 6 V/ μs		
R between leads, for C \leq 0.33 μF at 100 V; 1 minute	>30000 M Ω		
RC between leads, for C > 0.33 μF at 100 V; 1 minute	>10000 s		
R between interconnected leads and case (foil method)	>30000 M Ω		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	400 V; 1 minute		
Withstanding (DC) voltage between leads and case	500 V; 1 minute		

Available 250 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	$l_t = 5.0 \pm 1.0$ mm	$\pm 10\%$	2222 373 43...	preferred
		$\pm 5\%$	2222 373 44...	on request
Taped on reel	H = 18.5 mm; note 2	$\pm 10\%$	2222 373 47...	on request
		$\pm 5\%$	2222 373 48...	on request

Notes

- For SPQ refer to this handbook, chapter "Packaging information"; taped on reel pitch = 27.5 mm is not available.
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 373

 $U_{Rdc} = 250 \text{ V}$; $U_{Rac} = 160 \text{ V}$

(NEW)

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER ⁽¹⁾
			LOOSE IN BOX
			$l_t = 5.0 \pm 1.0 \text{ mm}$
			C-tol = $\pm 10\%$
Pitch = $15.0 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$			
0.15	5.0 × 11.0 × 17.5	1.1	2222 373 43154
0.18			2222 373 43184
0.22			2222 373 43224
0.27			2222 373 43274
0.33			2222 373 43334
0.39	6.0 × 12.0 × 17.5	1.4	2222 373 43394
0.47			2222 373 43474
0.56	7.0 × 13.5 × 17.5	1.9	2222 373 43564
0.68			2222 373 43684
0.82	8.5 × 15.0 × 17.5	2.6	2222 373 43824
1.0			2222 373 43105
1.2	10.0 × 16.5 × 17.5	3.1	2222 373 43125
Pitch = $22.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$			
1.5	8.5 × 18.0 × 26.0	4.4	2222 373 43155
1.8			2222 373 43185
2.2	10.0 × 19.5 × 26.0	5.5	2222 373 43225
2.7			2222 373 43275
Pitch = $27.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$			
3.3	11.0 × 21.0 × 31.0	7.8	2222 373 43335
3.9	13.0 × 23.0 × 31.0	10.4	2222 373 43395
4.7			2222 373 43475

Note

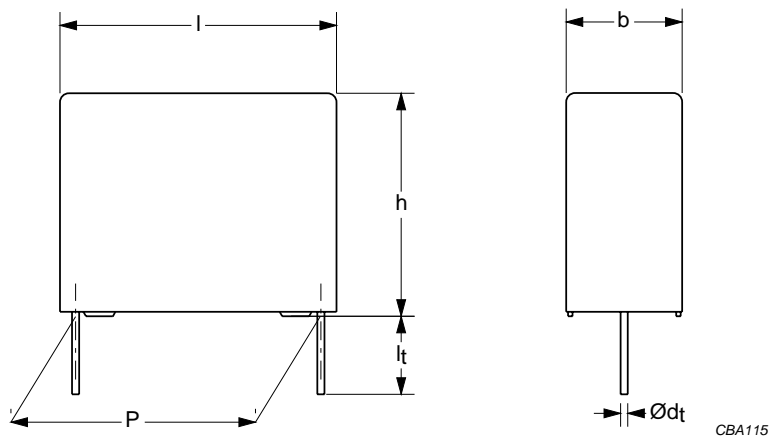
1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 373

MKT 373 GENERAL DATA

PITCH 15/22.5/27.5 mm (NEW)



Specific reference data for the 400 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle:			
$C \leq 0.1 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
$0.1 \mu\text{F} < C \leq 0.47 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 300 \times 10^{-4}$
$0.47 \mu\text{F} < C \leq 1.0 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	–
$1.0 \mu\text{F} < C \leq 1.5 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 150 \times 10^{-4}$	–
Rated voltage pulse slope $(dU/dt)_R$ at 400 V (DC):			
P = 15 mm			34 V/ μs
P = 22.5 mm			14 V/ μs
P = 27.5 mm			12 V/ μs
R between leads, for $C \leq 0.33 \mu\text{F}$ at 100 V; 1 minute			>30000 M Ω
RC between leads, for $C > 0.33 \mu\text{F}$ at 100 V; 1 minute			>10000 s
R between interconnected leads and case (foil method)			>30000 M Ω
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s			640 V; 1 minute
Withstanding (DC) voltage between leads and case			800 V; 1 minute

Available 400 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	$l_t = 5.0 \pm 1.0 \text{ mm}$	$\pm 10\%$	2222 373 53...	preferred
		$\pm 5\%$	2222 373 54...	on request
Taped on reel	H = 18.5 mm; note 2	$\pm 10\%$	2222 373 57...	on request
		$\pm 5\%$	2222 373 58...	on request

Notes

- For SPQ refer to this handbook, chapter "Packaging information"; taped on reel pitch = 27.5 mm is not available.
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 373

 $U_{Rdc} = 400 \text{ V}$; $U_{Rac} = 220 \text{ V}$

(NEW)

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER ⁽¹⁾
			LOOSE IN BOX
			$l_t = 5.0 \pm 1.0 \text{ mm}$
			C-tol = $\pm 10\%$
Pitch = $15.0 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$			
0.047	5.0 × 11.0 × 17.5	1.1	2222 373 53473
0.056			2222 373 53563
0.068			2222 373 53683
0.082			2222 373 53823
0.1			2222 373 53104
0.12			2222 373 53124
0.15			2222 373 53154
0.18	6.0 × 12.0 × 17.5	1.4	2222 373 53184
0.22			2222 373 53224
0.27	7.0 × 13.5 × 17.5	1.9	2222 373 53274
0.33			2222 373 53334
0.39	8.5 × 15.0 × 17.5	2.6	2222 373 53394
0.47			2222 373 53474
0.56	10.0 × 16.5 × 17.5	3.2	2222 373 53564
Pitch = $22.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$			
0.68	8.5 × 18.0 × 26.0	4.4	2222 373 53684
0.82			2222 373 53824
1	10.0 × 19.5 × 26.0	5.5	2222 373 53105
1.2			2222 373 53125
Pitch = $27.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$			
1.5	11.0 × 21.0 × 31.0	7.8	2222 373 53155

Note

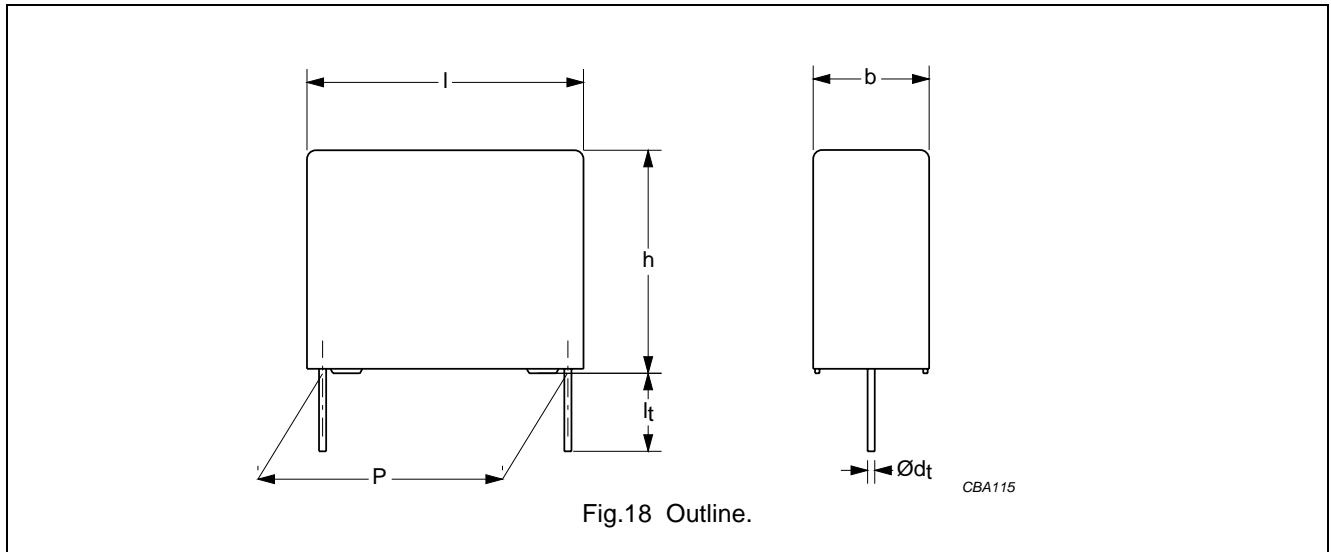
1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 373

MKT 373 GENERAL DATA

PITCH 15/22.5/27.5 mm (MAINTENANCE)



Specific reference data for the 100 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: 0.33 μF < C \leq 0.47 μF 0.47 μF < C \leq 1.0 μF 1.0 μF < C \leq 10 μF C > 10 μF	$\leq 75 \times 10^{-4}$ $\leq 75 \times 10^{-4}$ $\leq 75 \times 10^{-4}$ $\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$ $\leq 130 \times 10^{-4}$ $\leq 150 \times 10^{-4}$ -	$\leq 300 \times 10^{-4}$ - - -
Rated voltage pulse slope (dU/dt) _R at 100 V (DC): P = 15 mm P = 22.5 mm P = 27.5 mm	14 V/ μs 5 V/ μs 4 V/ μs		
R between leads, for C \leq 0.33 μF at 100 V; 1 minute	>15000 M Ω		
RC between leads, for C > 0.33 μF at 100 V; 1 minute	>5000 s		
R between interconnected leads and case (foil method)	>30000 M Ω		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	160 V; 1 minute		
Withstanding (DC) voltage between leads and case	200 V; 1 minute		

Available 100 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	$l_t = 5.0 \pm 1.0$ mm	$\pm 10\%$	2222 373 21...	on request
		$\pm 5\%$	2222 373 22...	on request
Taped on reel	H = 18.5 mm; note 2	$\pm 10\%$	2222 373 25...	on request
		$\pm 5\%$	2222 373 26...	on request

Notes

- For SPQ refer to this handbook, chapter "Packaging information"; taped on reel pitch = 27.5 mm is not available.
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 373

 $U_{Rdc} = 100 \text{ V}$; $U_{Rac} = 63 \text{ V}$

(MAINTENANCE)

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER			
			LOOSE IN BOX			
			$l_t = 5.0 \pm 1.0 \text{ mm}$			
			C-tol = $\pm 10\%$			
Pitch = $15.0 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$						
0.33 0.39 0.47 0.56 0.68	5.0 × 11.0 × 17.5	1.1	2222 373 21334			
2222 373 21394						
2222 373 21474						
2222 373 21564						
2222 373 21684						
0.82 1	6.0 × 12.0 × 17.5	1.4	2222 373 21824			
2222 373 21105						
1.2 1.5	7.0 × 13.5 × 17.5	1.9	2222 373 21125			
2222 373 21155						
1.8 2.2	8.5 × 15.0 × 17.5	2.6	2222 373 21185			
2222 373 21225						
Pitch = $22.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$						
2.7 3.3	8.5 × 18.0 × 26.0	4.4	2222 373 21275			
2222 373 21335						
3.9 4.7	10.0 × 19.5 × 26.0	5.5	2222 373 21395			
2222 373 21475						
Pitch = $27.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$						
5.6 6.8	11.0 × 21.0 × 31.0	8.0	2222 373 21565			
2222 373 21685						
8.2 10	13.0 × 23.0 × 31.0	10.5	2222 373 21825			
2222 373 21106						
12 15	18.0 × 28.0 × 31.0	17.5	2222 373 21126			
2222 373 21156						

Available on request

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER			
			loose in box; $l_t = 5.0 \pm 1.0 \text{ mm}^{(1)}$		taped on reel; $H = 18.5 \text{ mm}^{(1)(2)}$	
			C-tol = $\pm 10\%$		C-tol = $\pm 5\%$	
			catalogue number	last 5 digits	last 5 digits	
Pitch = $22.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$						
1.5	6.0 × 15.5 × 26.0	2.5	2222 373 90012	.. 90013	.. 90018	.. 90019
1.8			2222 373 90022	.. 90023	.. 90028	.. 90029
2.2	7.0 × 16.5 × 26.0	3.2	2222 373 90002	.. 90003	.. 90008	.. 90009
Pitch = $27.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$						
4.7	9.0 × 19.0 × 31.0	5.8	2222 373 90032	.. 90033	not available	

Notes

- For SPQ refer to this handbook, chapter "Packaging information"; taped on reel pitch = 27.5 mm is not available.
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 373

MKT 373 GENERAL DATA

PITCH 15/22.5/27.5 mm (MAINTENANCE)

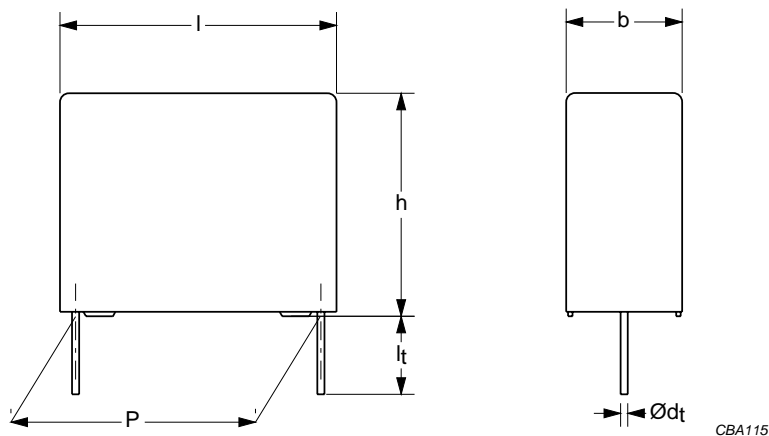


Fig.19 Outline.

Specific reference data for the 250 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: 0.15 μF < C \leq 0.47 μF 0.47 μF < C \leq 1.0 μF 1.0 μF < C \leq 4.7 μF	$\leq 75 \times 10^{-4}$ $\leq 75 \times 10^{-4}$ $\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$ $\leq 130 \times 10^{-4}$ $\leq 150 \times 10^{-4}$	$\leq 300 \times 10^{-4}$ – –
Rated voltage pulse slope $(dU/dt)_R$ at 250 V (DC): P = 15 mm P = 22.5 mm P = 27.5 mm	16 V/ μs 7 V/ μs 6 V/ μs		
R between leads, for C \leq 0.33 μF at 100 V; 1 minute	>30000 M Ω		
RC between leads, for C > 0.33 μF at 100 V; 1 minute	>10000 s		
R between interconnected leads and case (foil method)	>30000 M Ω		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	400 V; 1 minute		
Withstanding (DC) voltage between leads and case	500 V; 1 minute		

Available 250 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	$l_t = 5.0 \pm 1.0$ mm	$\pm 10\%$	2222 373 41...	on request
		$\pm 5\%$	2222 373 42...	on request
Taped on reel	H = 18.5 mm; note 2	$\pm 10\%$	2222 373 45...	on request
		$\pm 5\%$	2222 373 46...	on request

Notes

- For SPQ refer to this handbook, chapter "Packaging information"; taped on reel pitch = 27.5 mm is not available.
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 373

 $U_{Rdc} = 250 \text{ V}$; $U_{Rac} = 160 \text{ V}$

(MAINTENANCE)

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER	
			LOOSE IN BOX	
			$l_t = 5.0 \pm 1.0 \text{ mm}$	
			C-tol = $\pm 10\%$	
Pitch = $15.0 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$				
0.15 0.18 0.22	5.0 × 11.0 × 17.5	1.1	2222 373 41154 2222 373 41184 2222 373 41224	
0.27 0.33 0.39 0.47	6.0 × 12.0 × 17.5	1.4	2222 373 41274 2222 373 41334 2222 373 41394 2222 373 41474	
0.56 0.68	7.0 × 13.5 × 17.5	1.9	2222 373 41564 2222 373 41684	
0.82 1.0	8.5 × 15.0 × 17.5	2.6	2222 373 41824 2222 373 41105	
Pitch = $22.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$				
1.2 1.5	8.5 × 18.0 × 26.0	4.4	2222 373 41125 2222 373 41155	
1.8 2.2	10.0 × 19.5 × 26.0	5.5	2222 373 41185 2222 373 41225	
Pitch = $27.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$				
2.7 3.3	13.0 × 23.0 × 31.0	10.4	2222 373 41275 2222 373 41335	
3.9 4.7	15.0 × 25.0 × 31.0	12.5	2222 373 41395 2222 373 41475	

Available on request

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER			
			loose in box; $l_t = 5.0 \pm 1.0 \text{ mm}^{(1)}$		taped on reel; $H = 18.5 \text{ mm}^{(1)(2)}$	
			C-tol = $\pm 10\%$		C-tol = $\pm 5\%$	
			catalogue number	last 5 digits	last 5 digits	
Pitch = $22.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$						
0.47 0.56 0.68	6.0 × 15.5 × 26.0	2.5	2222 373 90042 2222 373 90052 2222 373 90062	.. 90043 .. 90053 .. 90063	.. 90048 .. 90058 .. 90068	.. 90049 .. 90059 .. 90069
0.82 1	7.0 × 16.5 × 26.0	3.2	2222 373 90072 2222 373 90082	.. 90073 .. 90083	.. 90078 .. 90088	.. 90079 .. 90089
Pitch = $27.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$						
1.2 1.5	9.0 × 19.0 × 31.0	5.8	2222 373 90172 2222 373 90092	.. 90173 .. 90093	not available	
1.8 2.2	11.0 × 21.0 × 31.0	7.8	2222 373 90102 2222 373 90112	.. 90103 .. 90113		

Notes

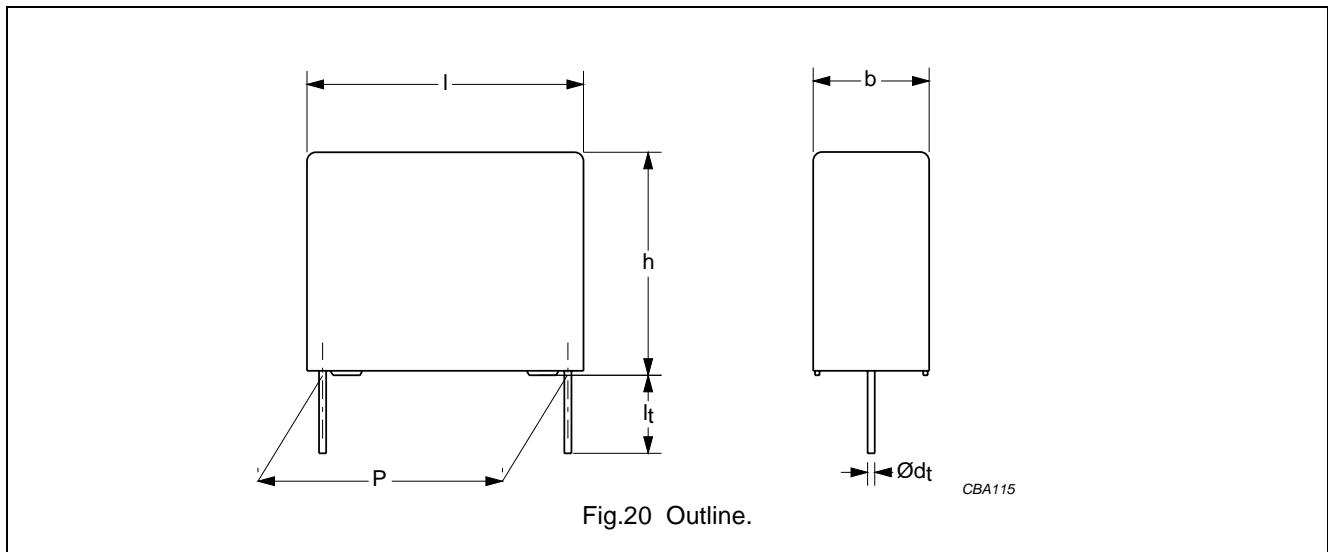
- For SPQ refer to this handbook, chapter "Packaging information"; taped on reel pitch = 27.5 mm is not available.
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 373

MKT 373 GENERAL DATA

PITCH 15/22.5/27.5 mm (MAINTENANCE)



Specific reference data for the 400 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: $C \leq 0.1 \mu\text{F}$ $0.1 \mu\text{F} < C \leq 0.47 \mu\text{F}$ $0.47 \mu\text{F} < C \leq 1.0 \mu\text{F}$ $1.0 \mu\text{F} < C \leq 1.5 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 300 \times 10^{-4}$
	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	–
	$\leq 75 \times 10^{-4}$	$\leq 150 \times 10^{-4}$	–
Rated voltage pulse slope $(dU/dt)_R$ at 400 V (DC): $P = 15 \text{ mm}$ $P = 22.5 \text{ mm}$ $P = 27.5 \text{ mm}$		34 V/ μs 14 V/ μs 12 V/ μs	
R between leads, for $C \leq 0.33 \mu\text{F}$ at 100 V; 1 minute		>30000 M Ω	
RC between leads, for $C > 0.33 \mu\text{F}$ at 100 V; 1 minute		>10000 s	
R between interconnected leads and case (foil method)		>30000 M Ω	
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s		640 V; 1 minute	
Withstanding (DC) voltage between leads and case		800 V; 1 minute	

Available 400 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	$l_t = 5.0 \pm 1.0 \text{ mm}$	$\pm 10\%$	2222 373 51...	on request
		$\pm 5\%$	2222 373 52...	on request
Taped on reel	$H = 18.5 \text{ mm}$; note 2	$\pm 10\%$	2222 373 55...	on request
		$\pm 5\%$	2222 373 56...	on request

Notes

- For SPQ refer to this handbook, chapter "Packaging information"; taped on reel pitch = 27.5 mm is not available.
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

Metallized polyester film capacitors

MKT 373

 $U_{Rdc} = 400 \text{ V}$; $U_{Rac} = 220 \text{ V}$

(MAINTENANCE)

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER	
			LOOSE IN BOX	
			$l_t = 5.0 \pm 1.0 \text{ mm}$	
			C-tol = $\pm 10\%$	
Pitch = $15.0 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$				
0.047 0.056 0.068 0.082 0.1	5.0 × 11.0 × 17.5	1.1	2222 373 51473 2222 373 51563 2222 373 51683 2222 373 51823 2222 373 51104	
0.12 0.15	6.0 × 12.0 × 17.5	1.4	2222 373 51124 2222 373 51154	
0.18 0.22	7.0 × 13.5 × 17.5	1.9	2222 373 51184 2222 373 51224	
0.27 0.33	8.5 × 15.0 × 17.5	2.6	2222 373 51274 2222 373 51334	
Pitch = $22.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$				
0.39 0.47	8.5 × 18.0 × 26.0	4.4	2222 373 51394 2222 373 51474	
0.56 0.68	10.0 × 19.5 × 26.0	4.4 5.5	2222 373 51564 2222 373 51684	
Pitch = $27.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$				
0.82 1	11.0 × 21.0 × 31.0	7.8	2222 373 51824 2222 373 51105	
1.2 1.5	15.0 × 25.0 × 31.0	12.8	2222 373 51125 2222 373 51155	

Available on request

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER			
			loose in box; $l_t = 5.0 \pm 1.0 \text{ mm}^{(1)}$		taped on reel; = $18.5 \text{ mm}^{(1)(2)}$	
			C-tol = $\pm 10\%$		C-tol = $\pm 5\%$	
			catalogue number	last 5 digits	last 5 digits	
Pitch = $22.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$						
0.22	6.0 × 15.5 × 26.0	2.5	2222 373 90122	.. 90123	.. 90128	.. 90129
0.27 0.33	7.0 × 16.5 × 26.0	3.2	2222 373 90132 2222 373 90142	.. 90133 .. 90143	.. 90138 .. 90148	.. 90139 .. 90149
Pitch = $27.5 \pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$						
0.68	9.0 × 19.0 × 31.0	5.8	2222 373 90152	.. 90153	not available	

Notes

- For SPQ refer to this handbook, chapter "Packaging information"; taped on reel pitch = 27.5 mm is not available.
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

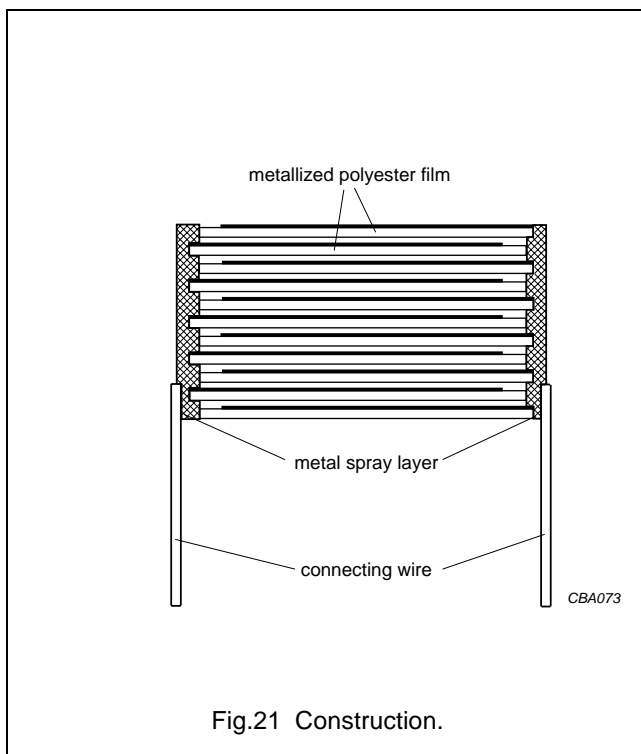
Metallized polyester film capacitors

MKT 370/371/372/373

CONSTRUCTION

Description

- Low-inductive wound cell of metallized polyethylene terephthalate (PETP) film, potted with epoxy resin in a blue flame-retardant case
- Radial leads, solder-coated:
 - Copper clad steel wire ($d_t = 0.5$ or 0.6 mm)
 - Copper wire ($d_t = 0.8$ mm)
- Small stand-off pips allow removal of solder flux etc. during cleaning of the printed-circuit board.



Mounting

NORMAL USE

The capacitors are designed for mounting on printed-circuit boards. The capacitors packed in bandoliers are designed for mounting on printed-circuit boards by automatic insertion machines. For detailed tape specifications refer to this handbook, chapter "Packaging information".

SPECIFIC METHOD OF MOUNTING TO WITHSTAND VIBRATION AND SHOCK

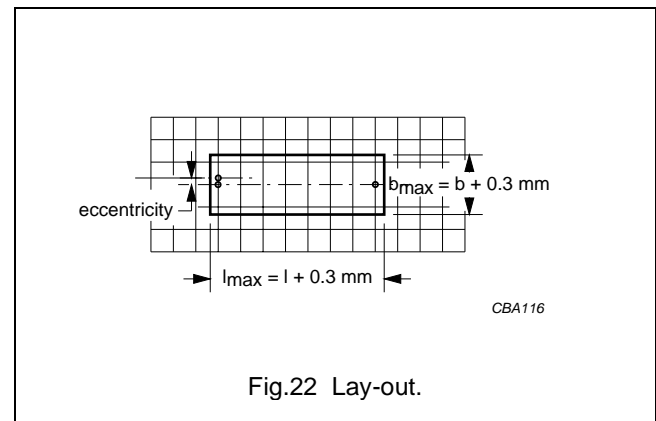
In order to withstand vibration and shock tests, it must be ensured that the stand-off pips are in good contact with the printed-circuit board:

- For pitches of ≤ 15 mm capacitors shall be mechanically fixed by the leads.
- For larger pitches the capacitors shall be mounted in the same way and the body clamped.

SPACE REQUIREMENTS ON PRINTED-CIRCUIT BOARD

The maximum length and width of film capacitors is shown in Fig.22:

- Eccentricity see Fig.22. The maximum eccentricity is smaller than or equal to the wire diameter of the product concerned.
- Product height with seating plane as given by "IEC 60717" as reference: $h_{\max} \leq h + 0.3$ mm.



Storage temperature

- Storage temperature: $T_{stg} = -25$ to $+40$ °C with RH maximum 80% without condensation.

RATINGS AND CHARACTERISTICS REFERENCE CONDITIONS

Unless otherwise specified, all electrical values apply to an ambient free air temperature of 23 ± 1 °C, an atmospheric pressure of 86 to 106 kPa and a relative humidity of $50 \pm 2\%$.

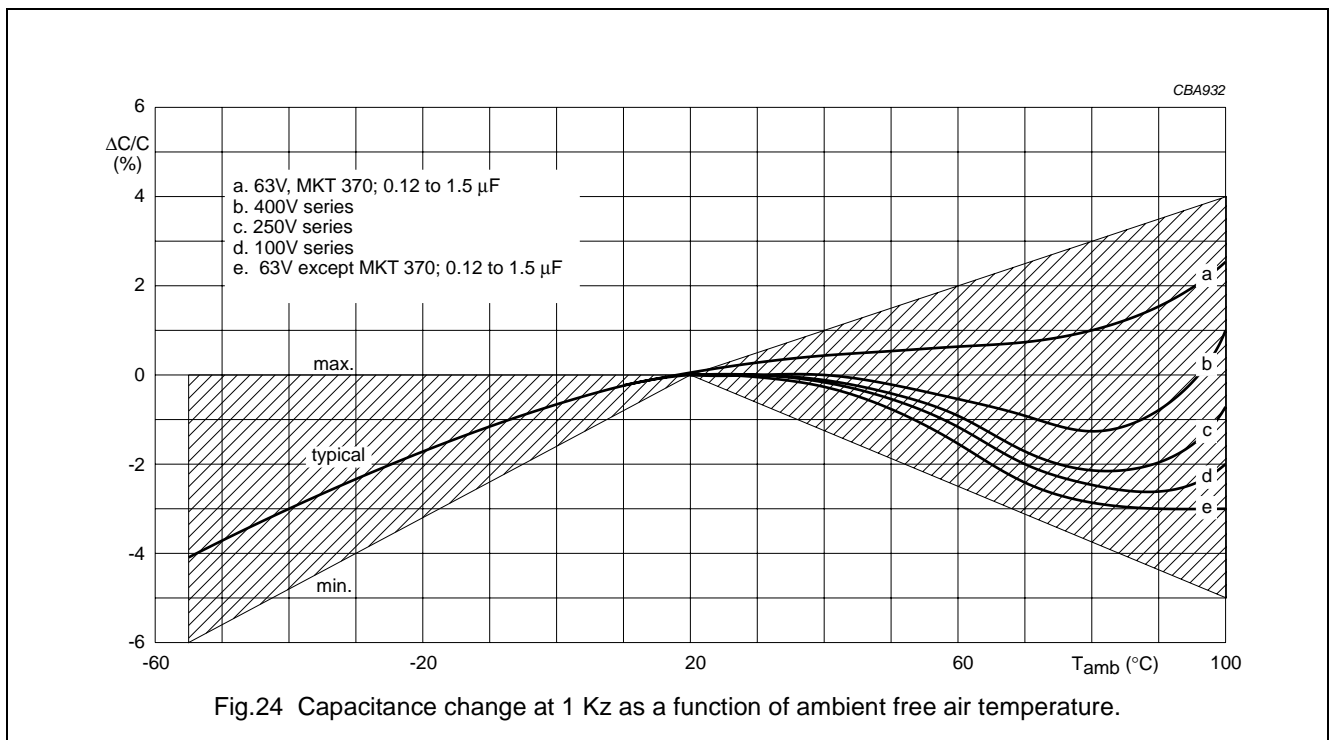
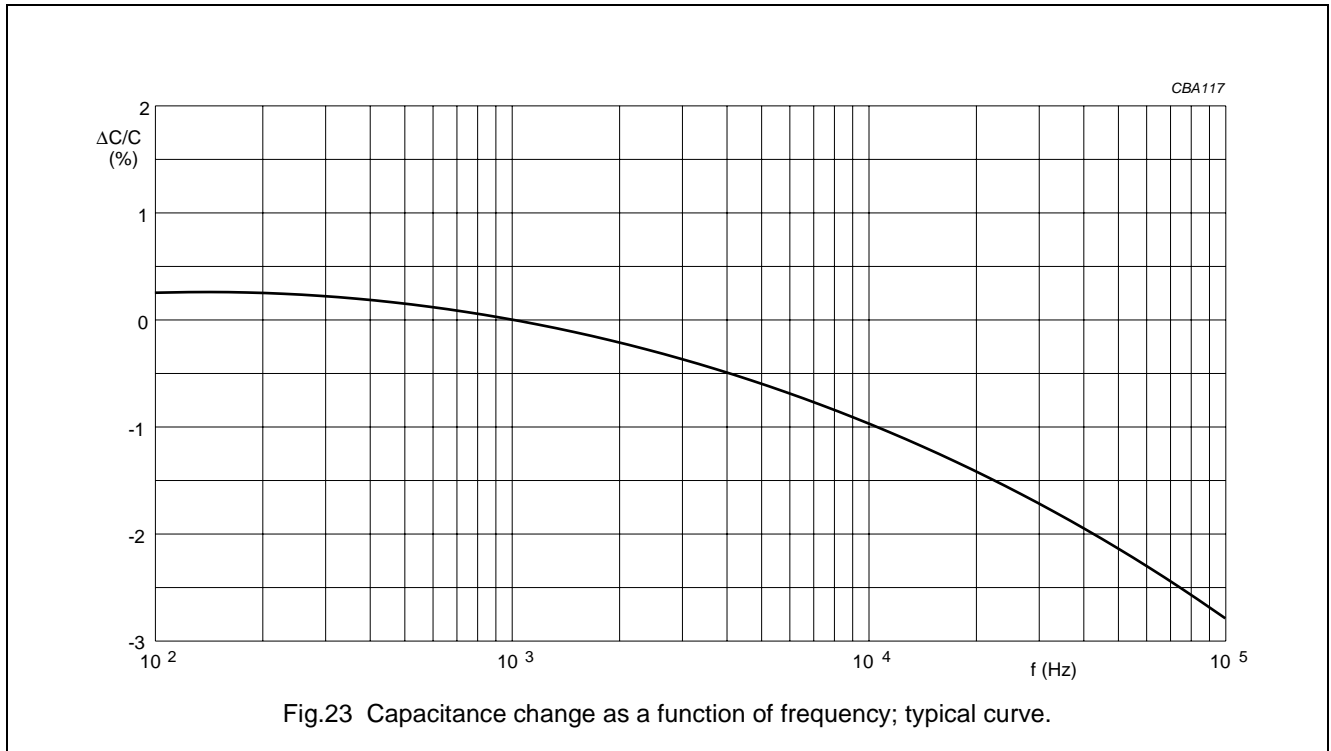
For reference testing, a conditioning period shall be applied over 96 ± 4 hours by heating the products in a circulating air oven at the rated temperature and a relative humidity not exceeding 20%.

Metallized polyester film capacitors

MKT 370/371/372/373

CHARACTERISTICS

Capacitance



Metallized polyester film capacitors

MKT 370/371/372/373

Impedance

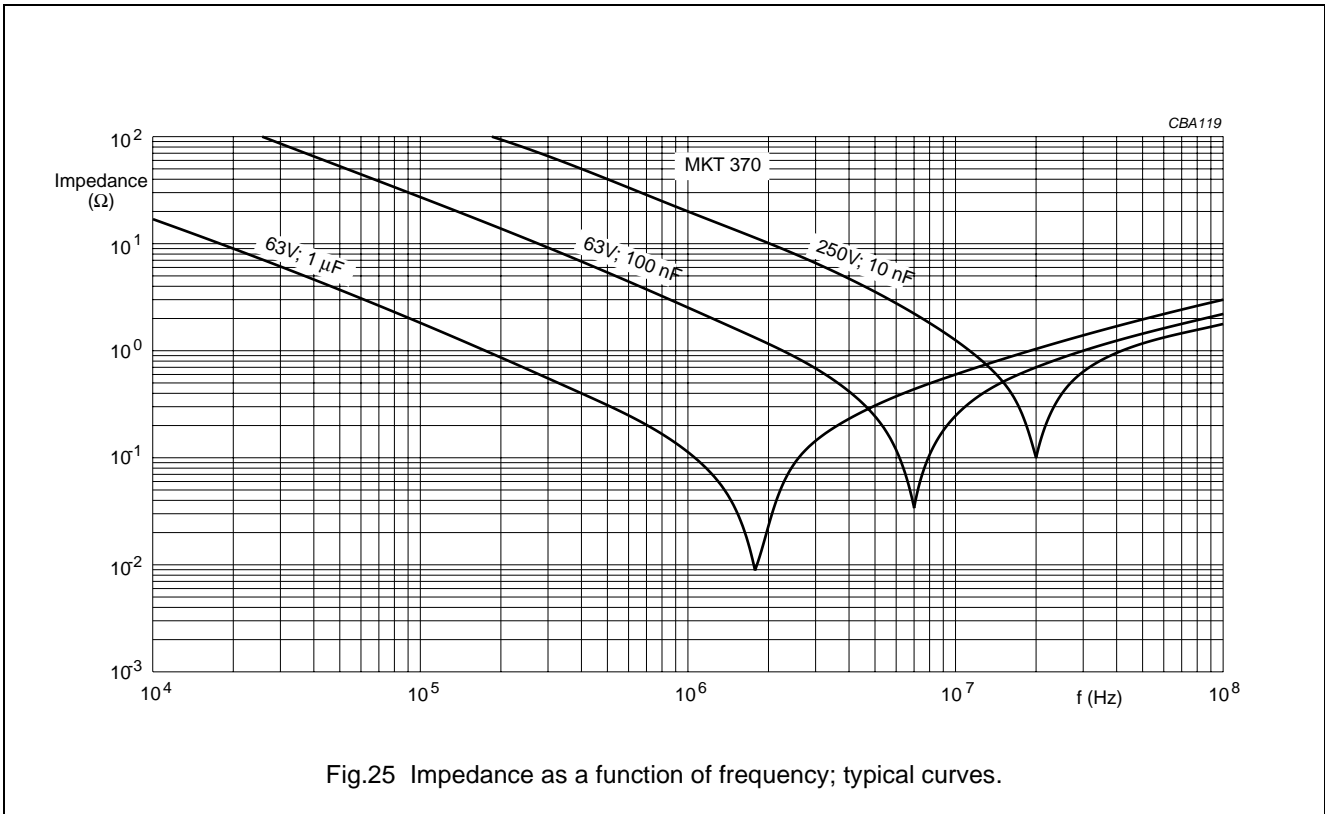


Fig.25 Impedance as a function of frequency; typical curves.

Maximum DC and AC voltage as a function of temperature

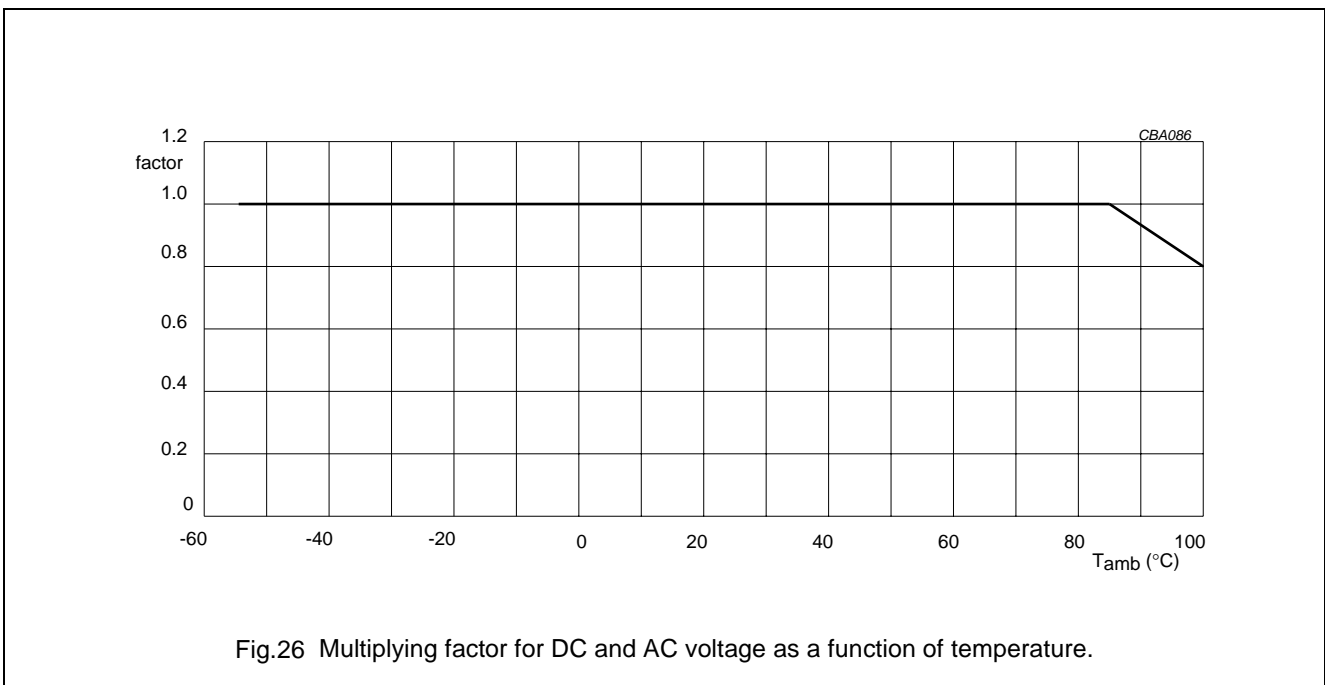
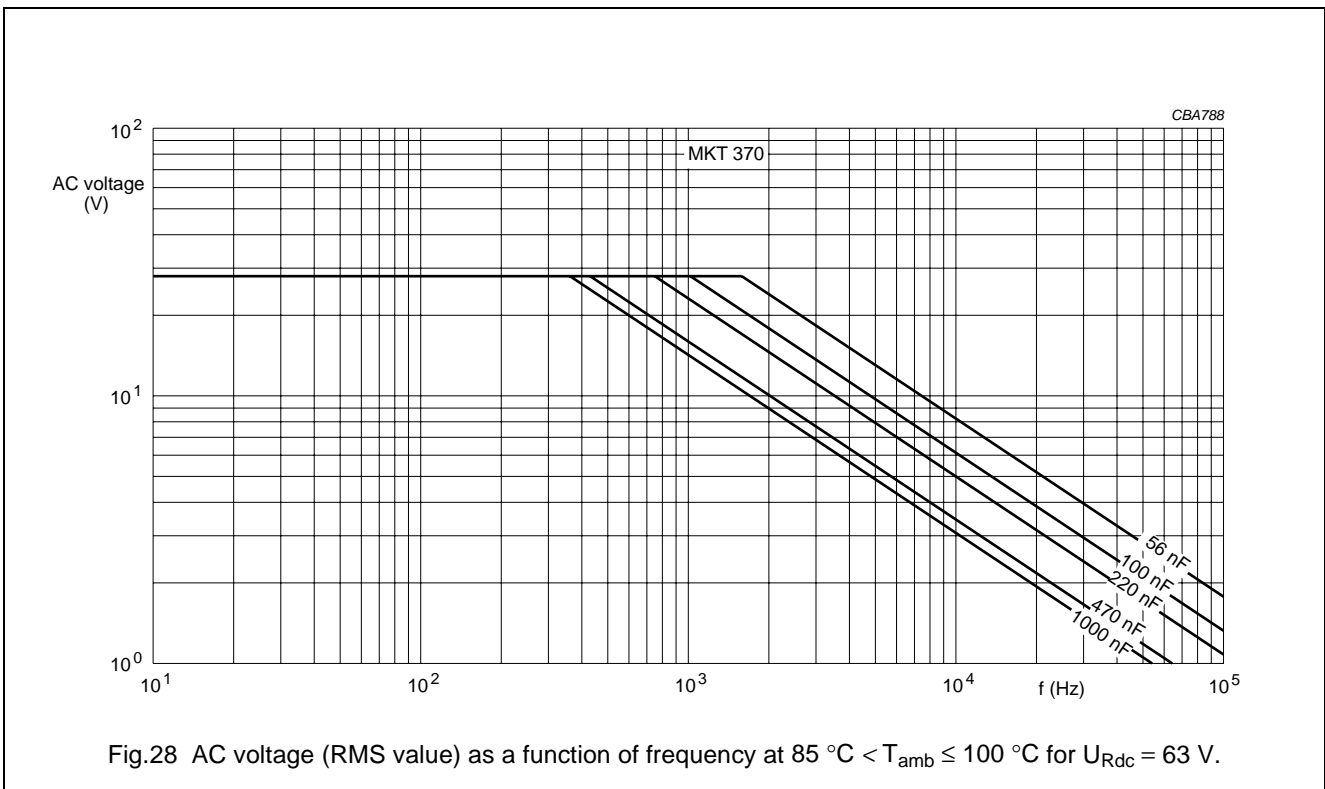
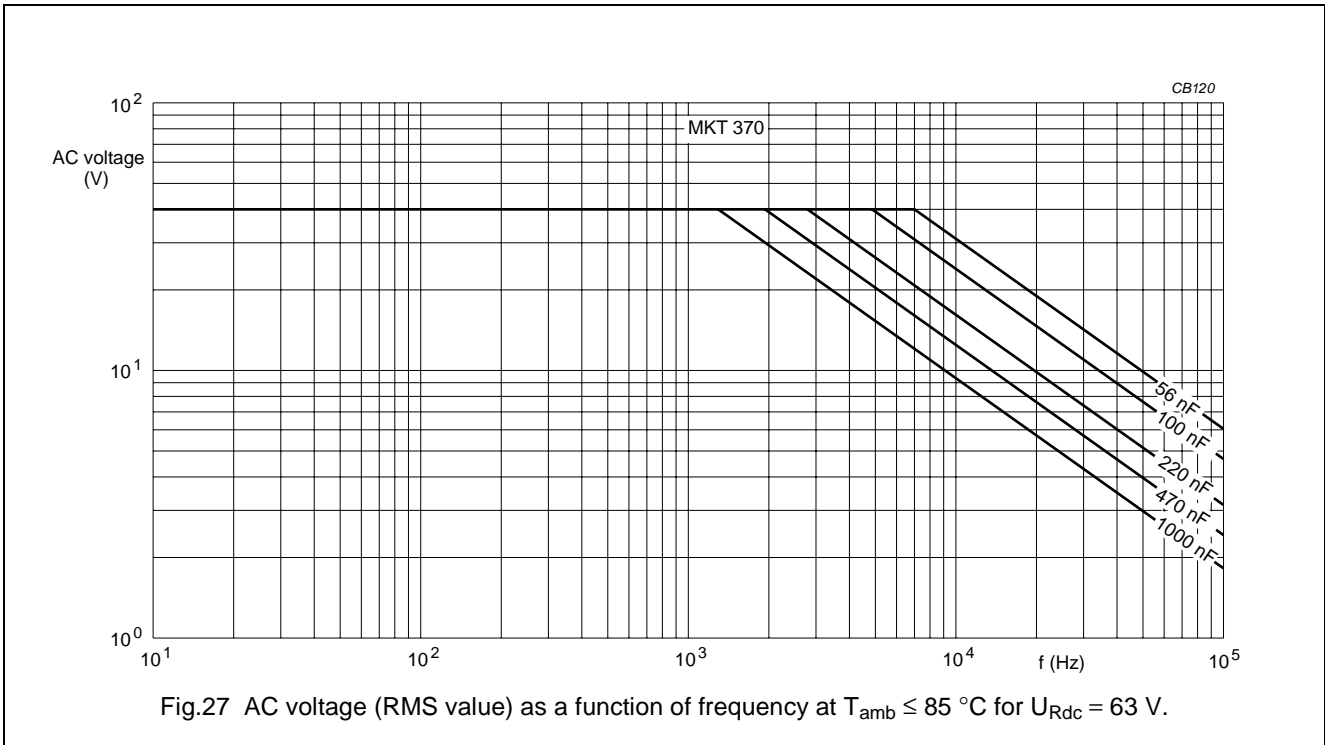


Fig.26 Multiplying factor for DC and AC voltage as a function of temperature.

Metallized polyester film capacitors

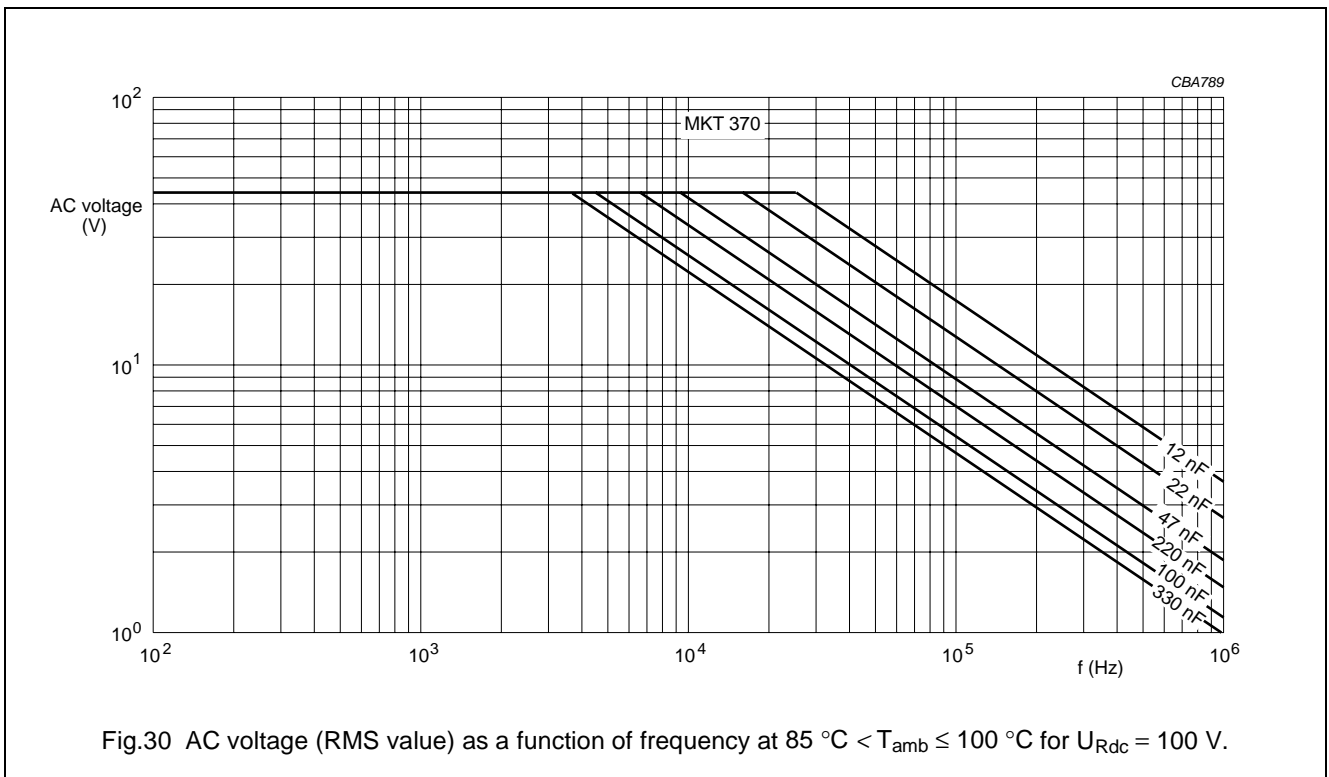
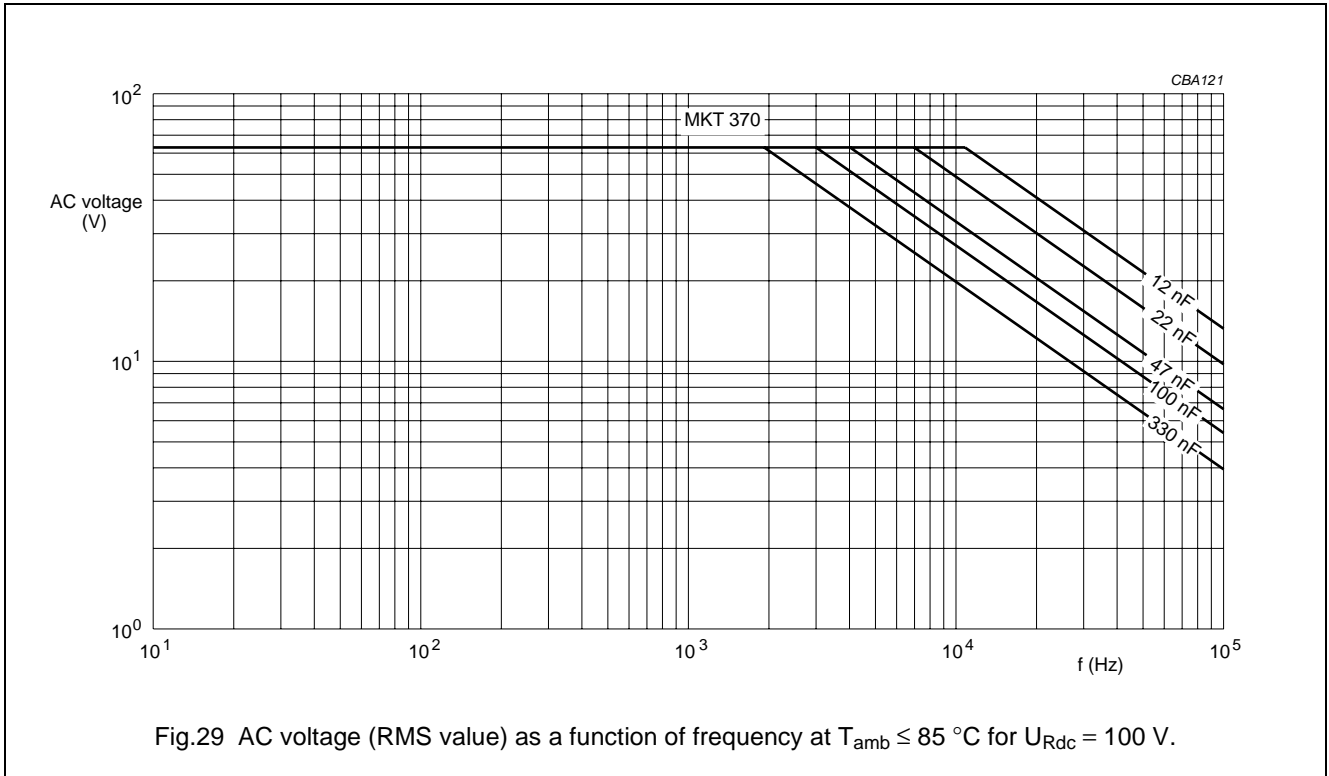
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Maximum RMS voltage (sinewave) as a function of frequency



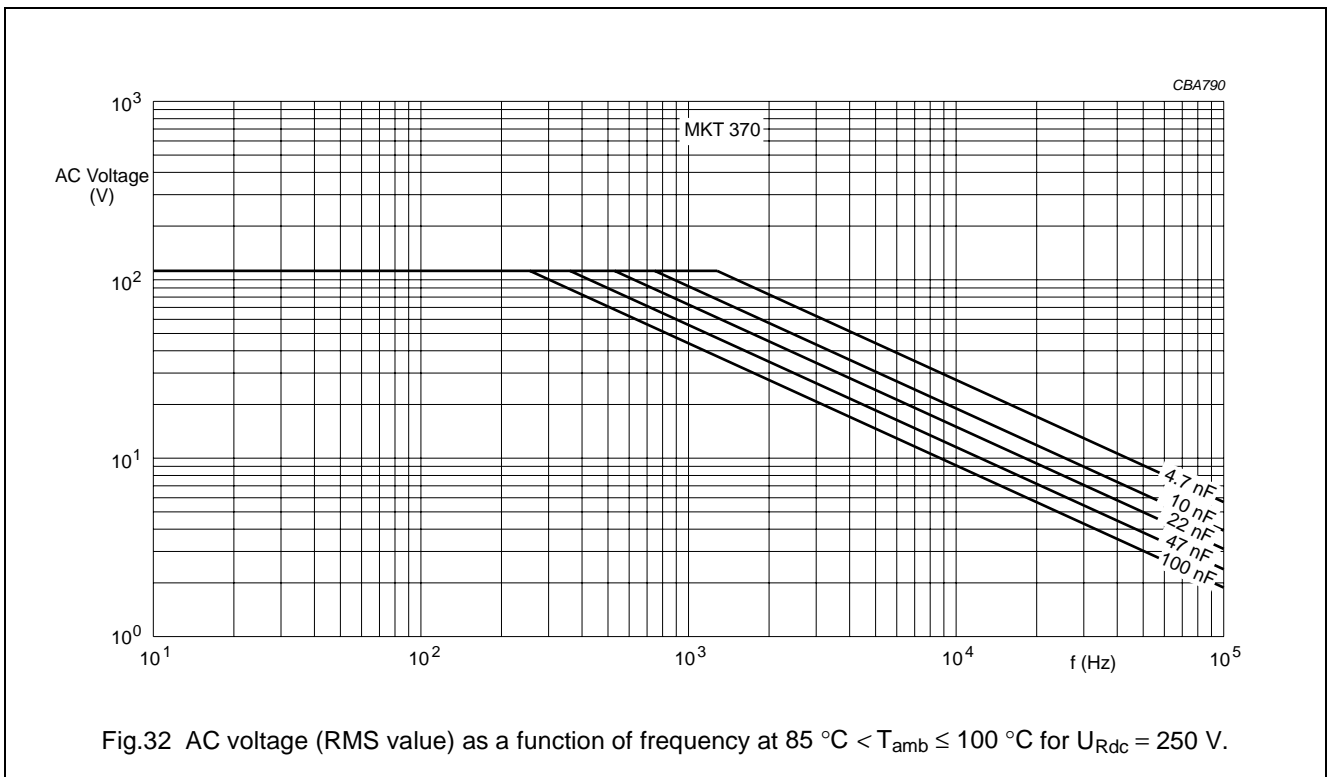
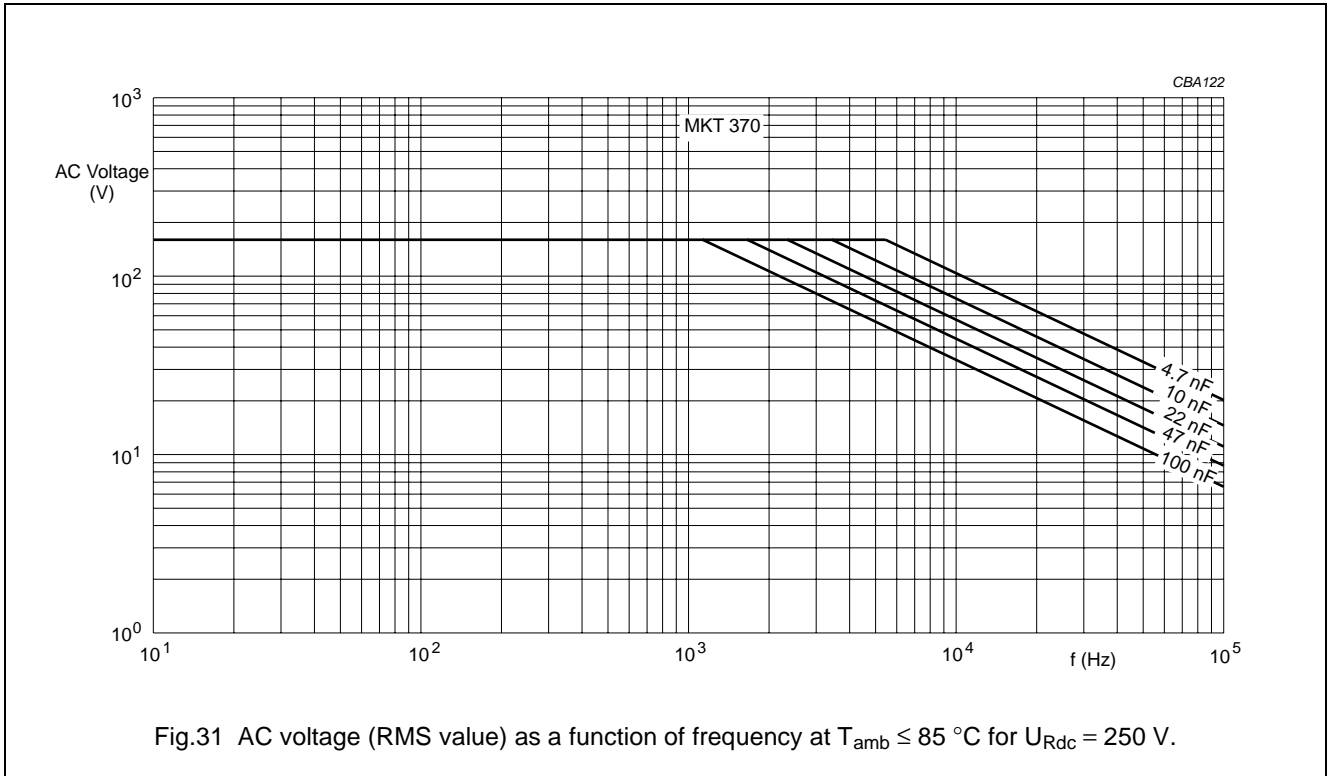
Metallized polyester film capacitors

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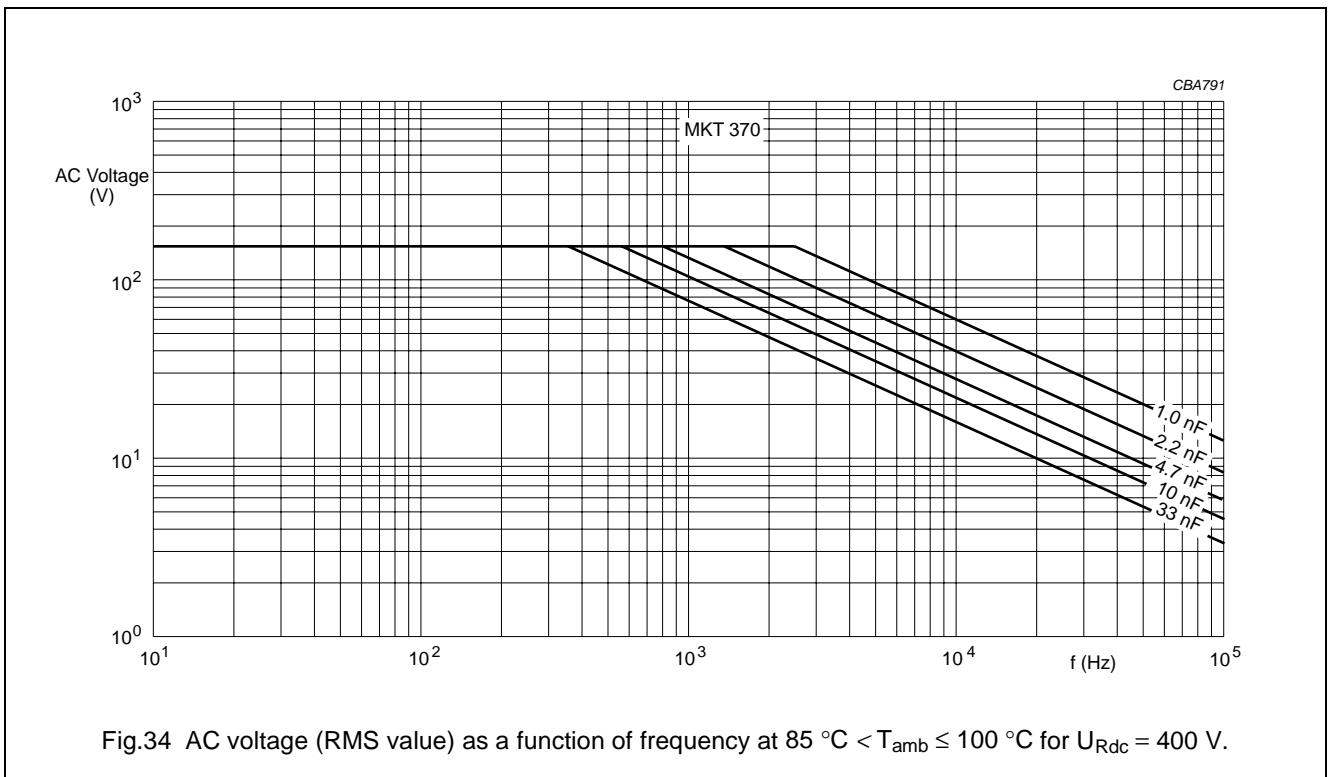
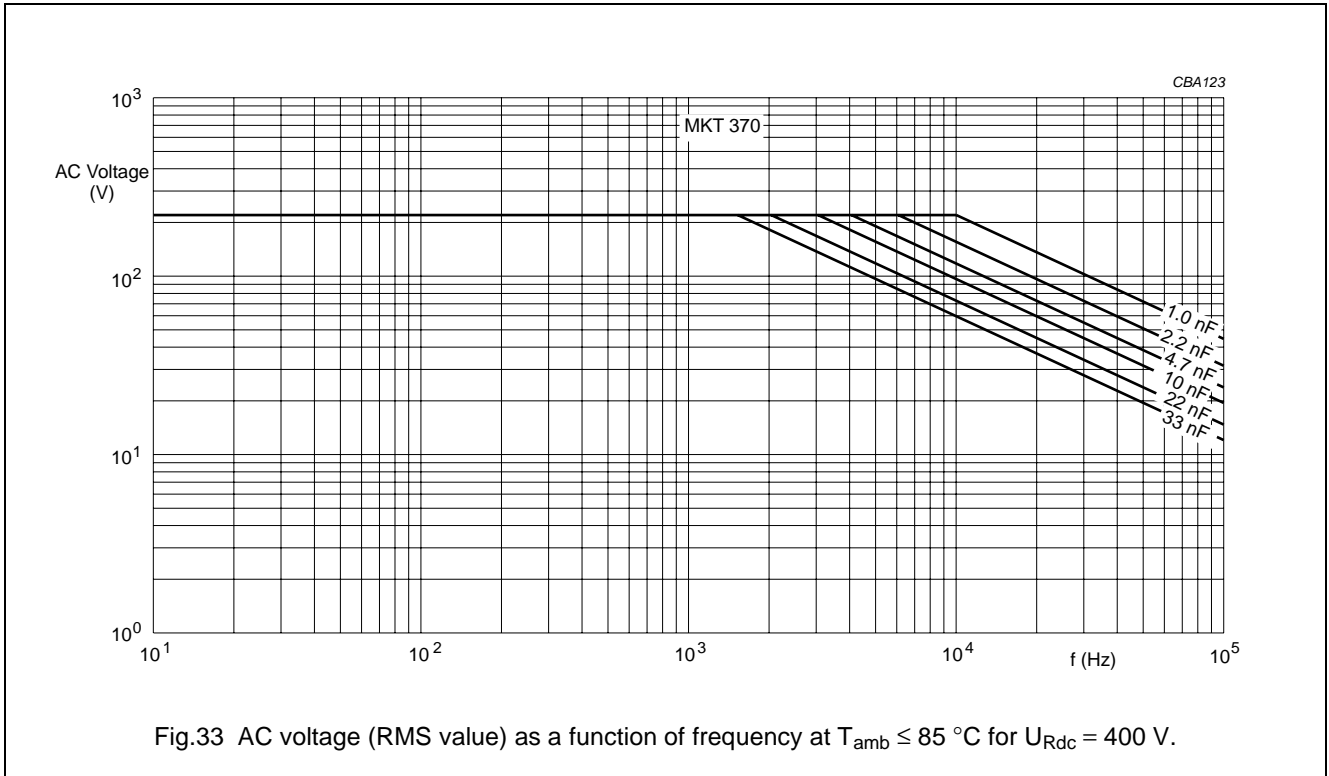
Metallized polyester film capacitors

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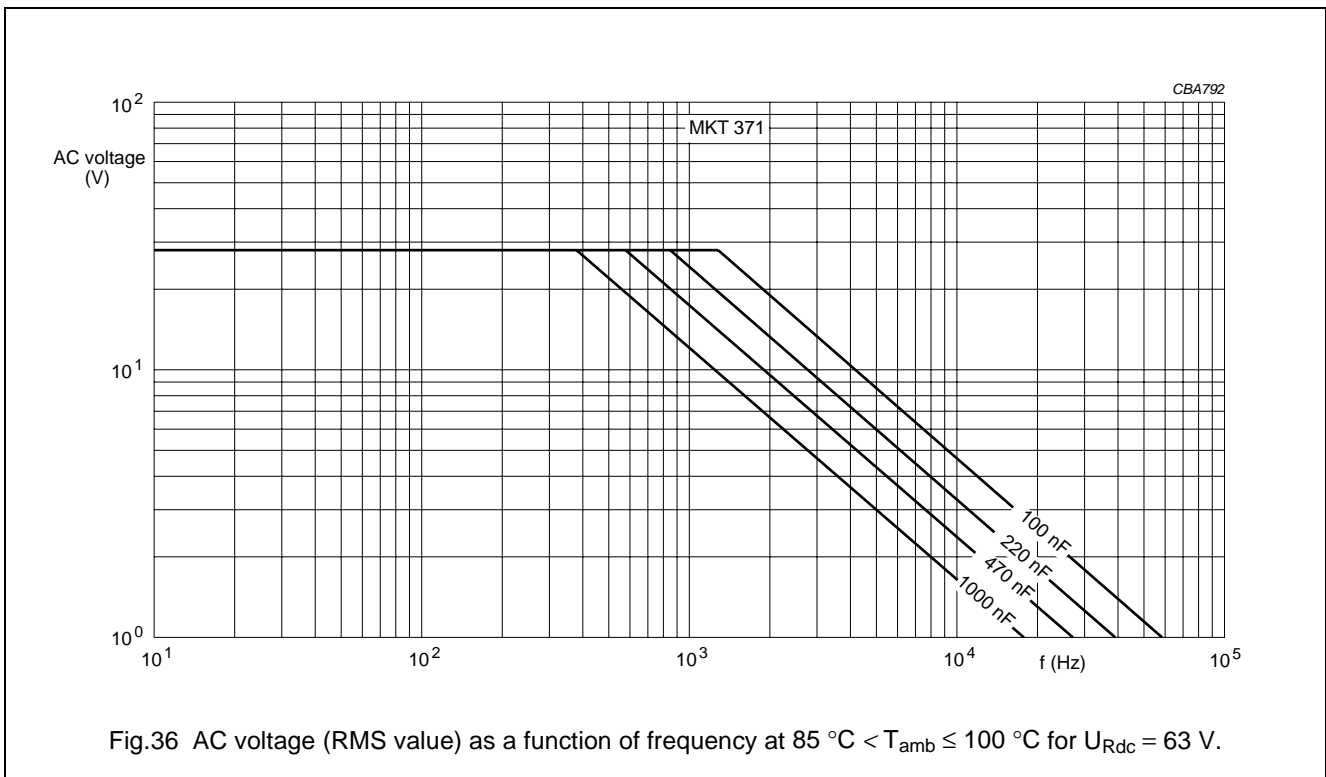
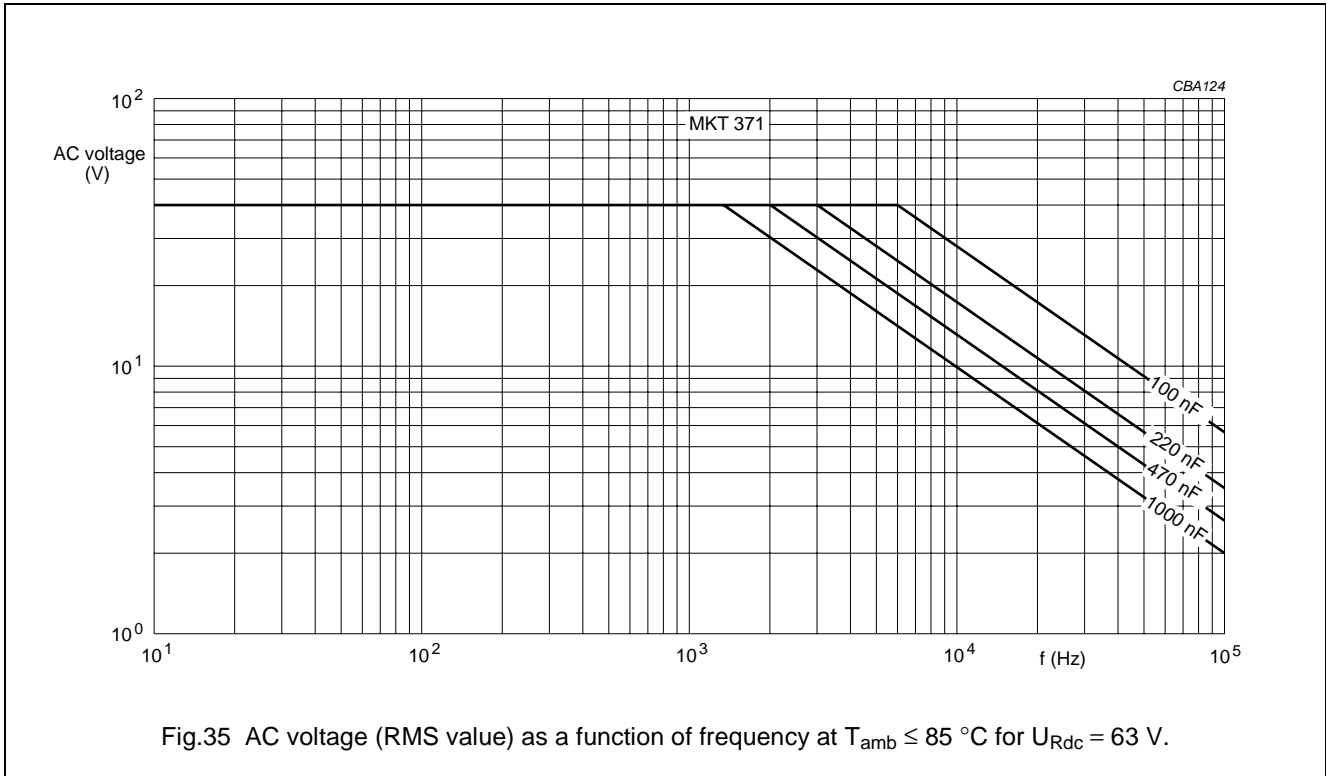
Metallized polyester film capacitors

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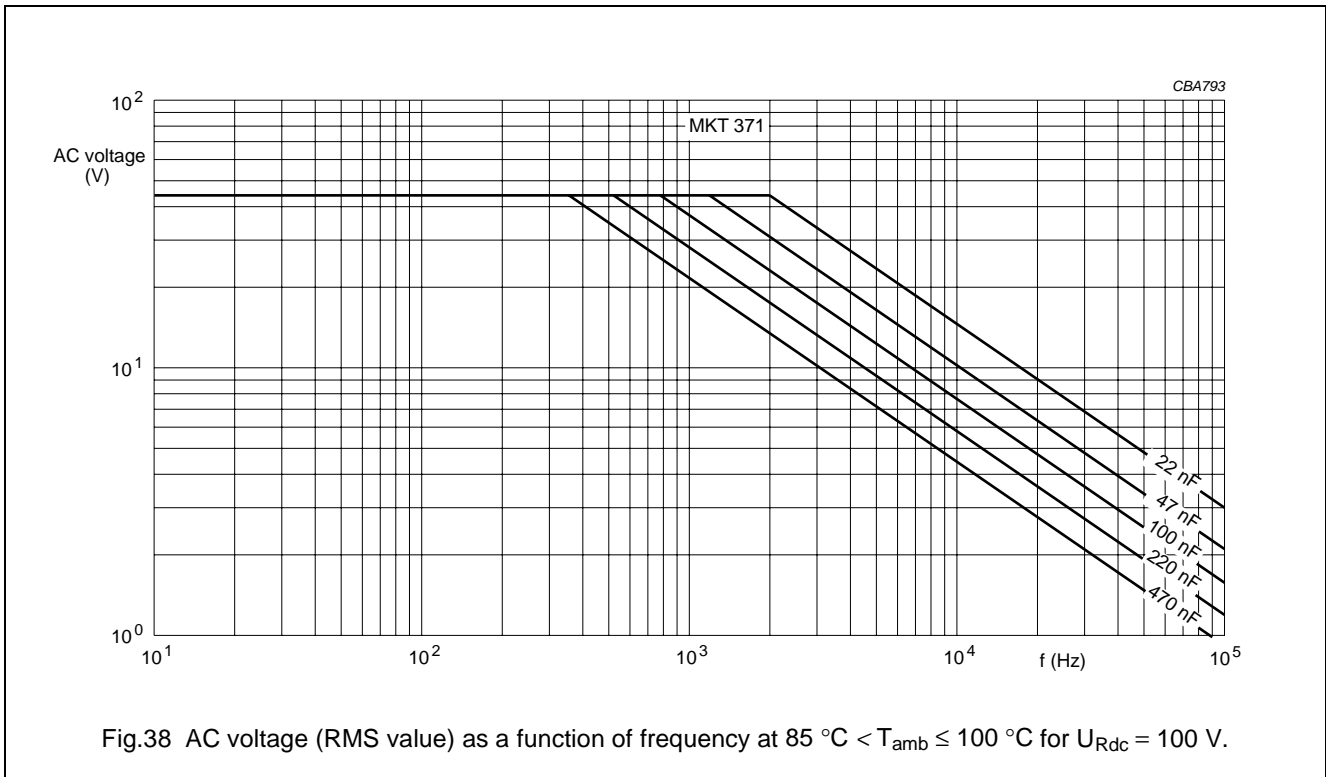
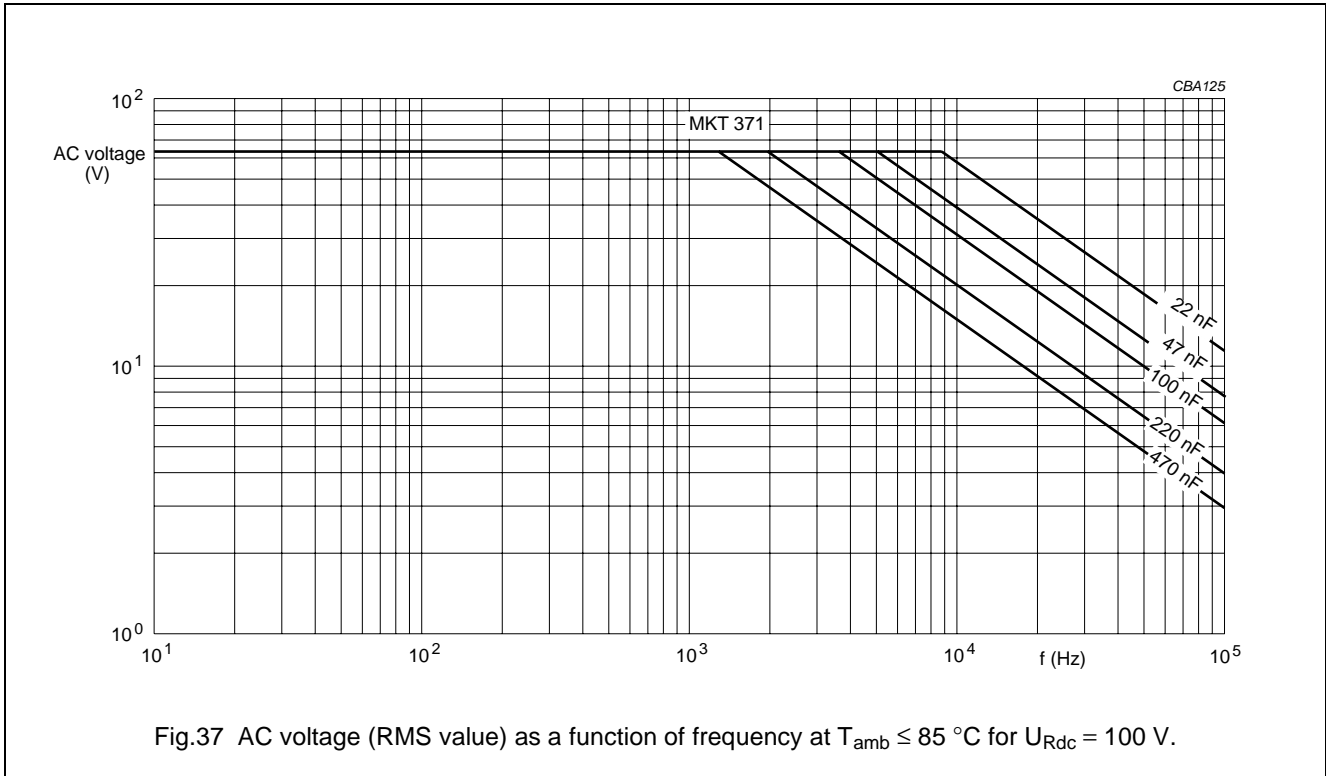
Metallized polyester film capacitors

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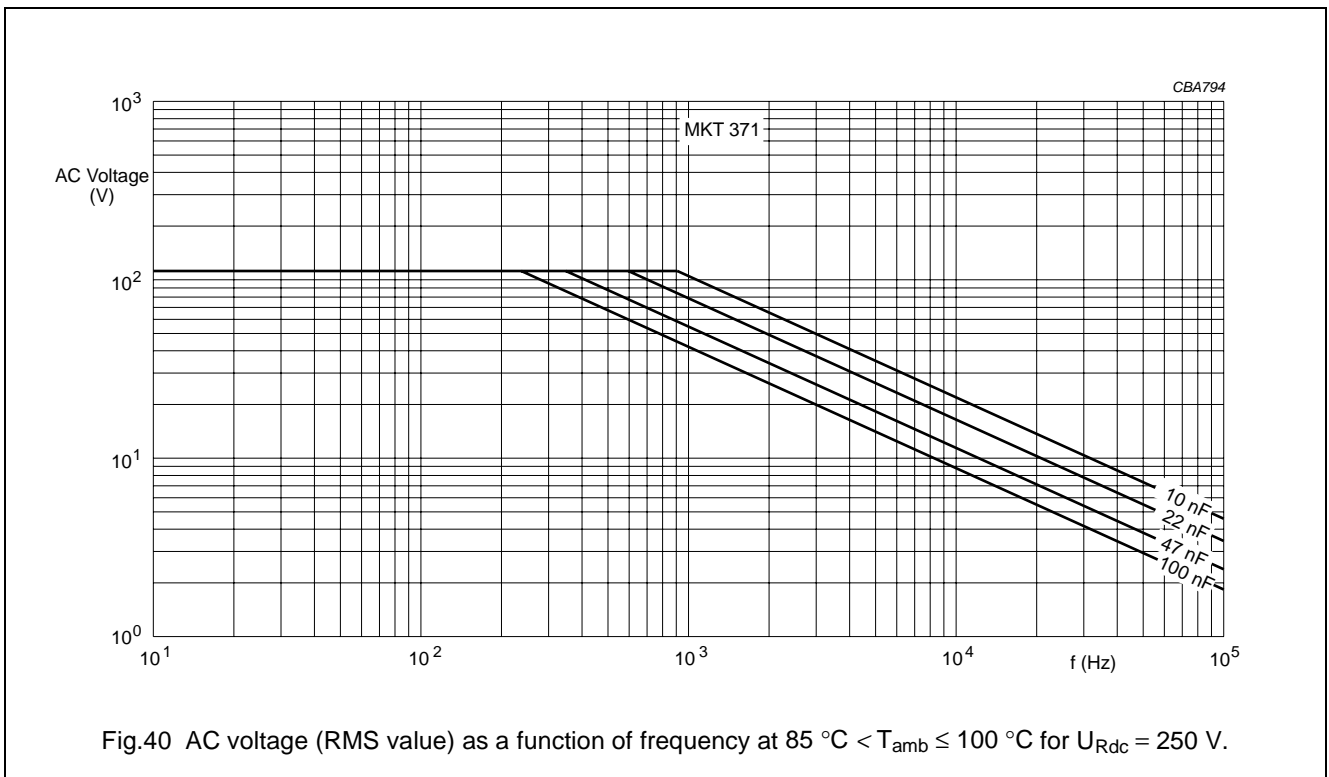
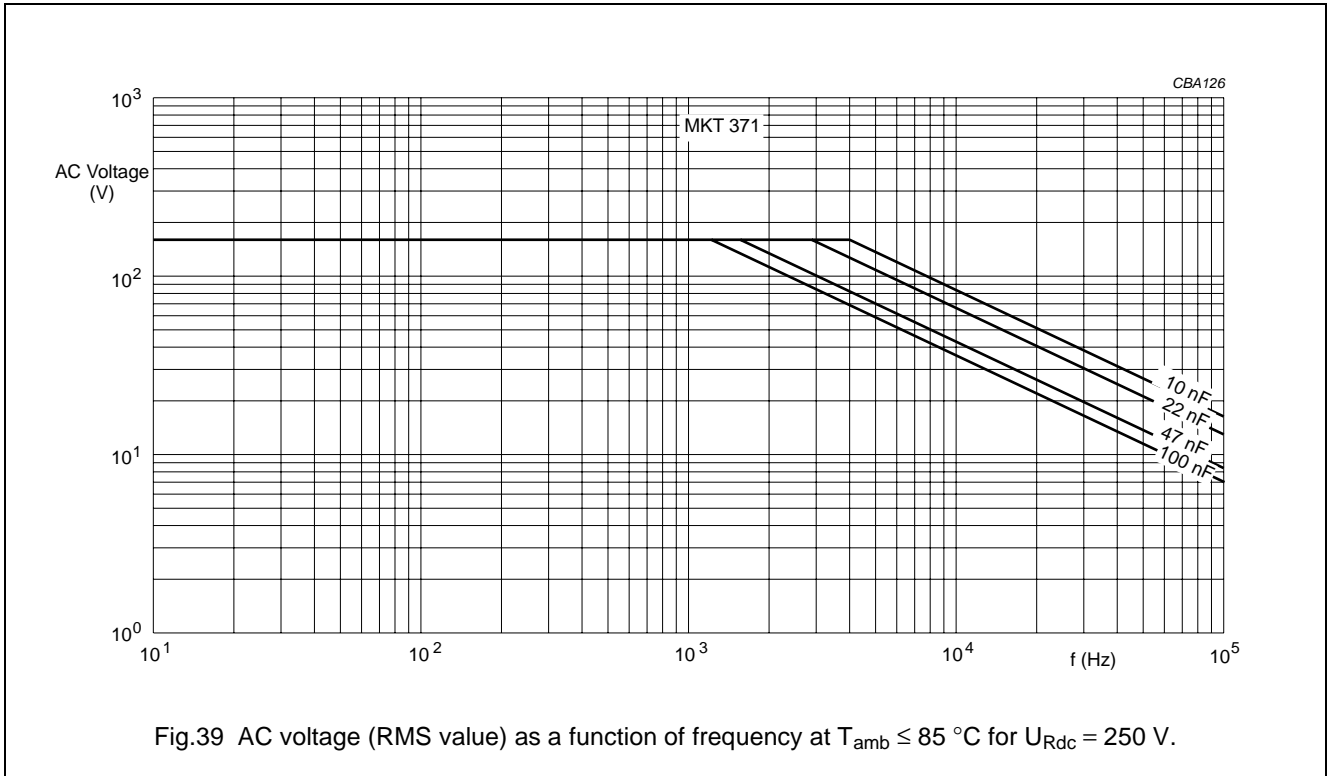
Metallized polyester film capacitors

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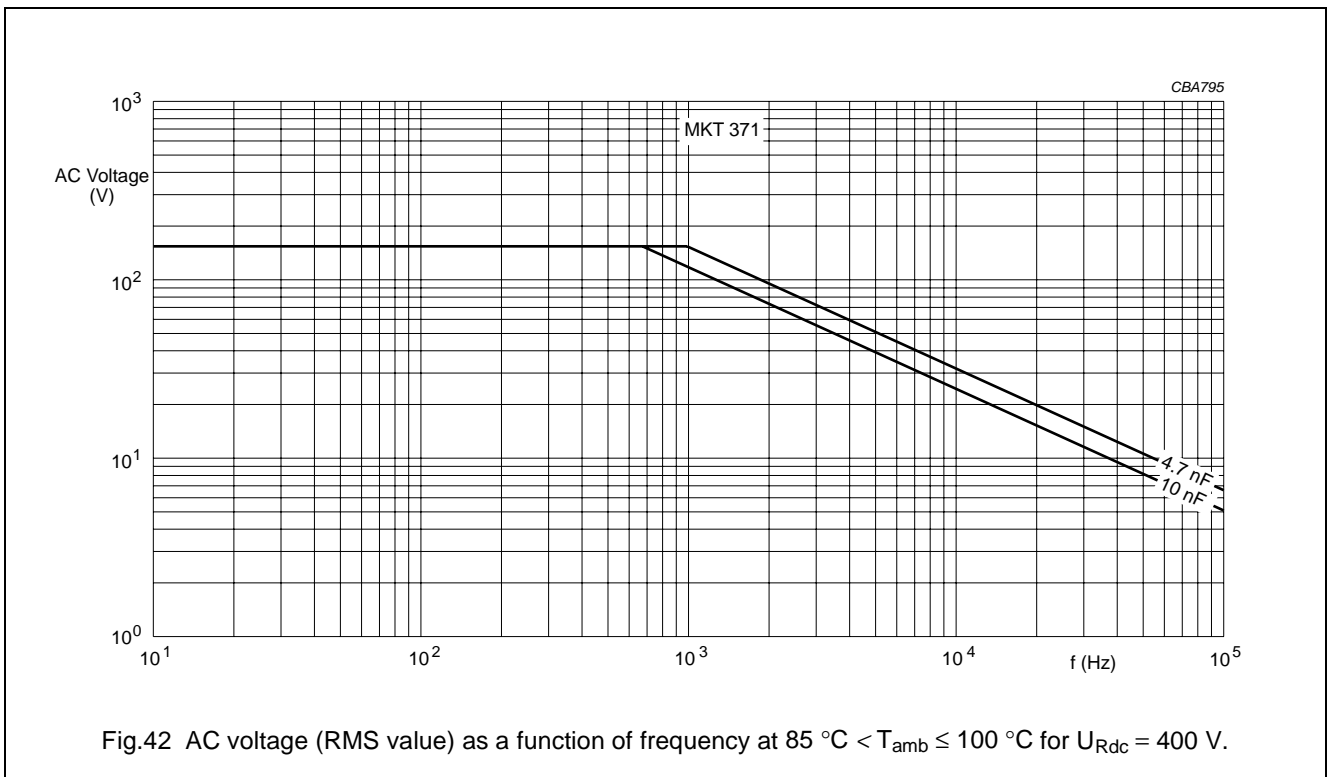
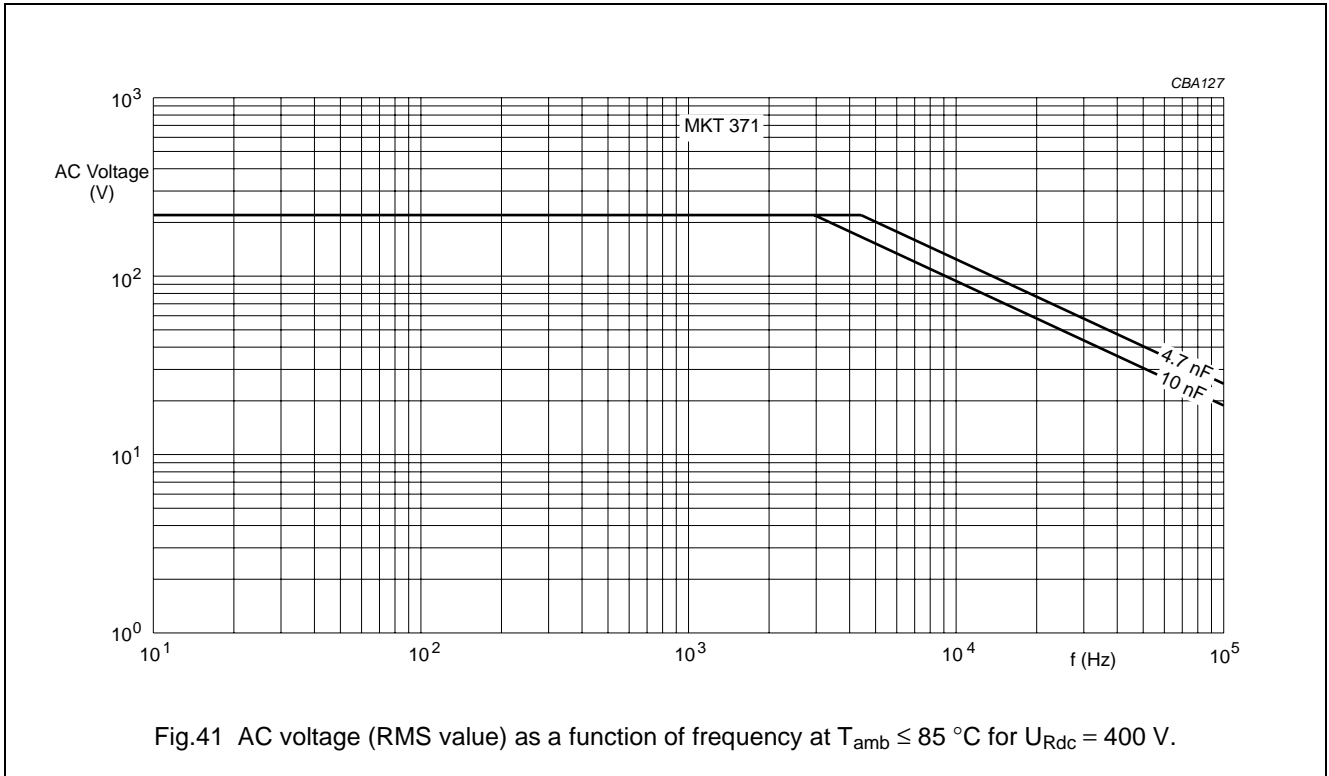
Metallized polyester film capacitors

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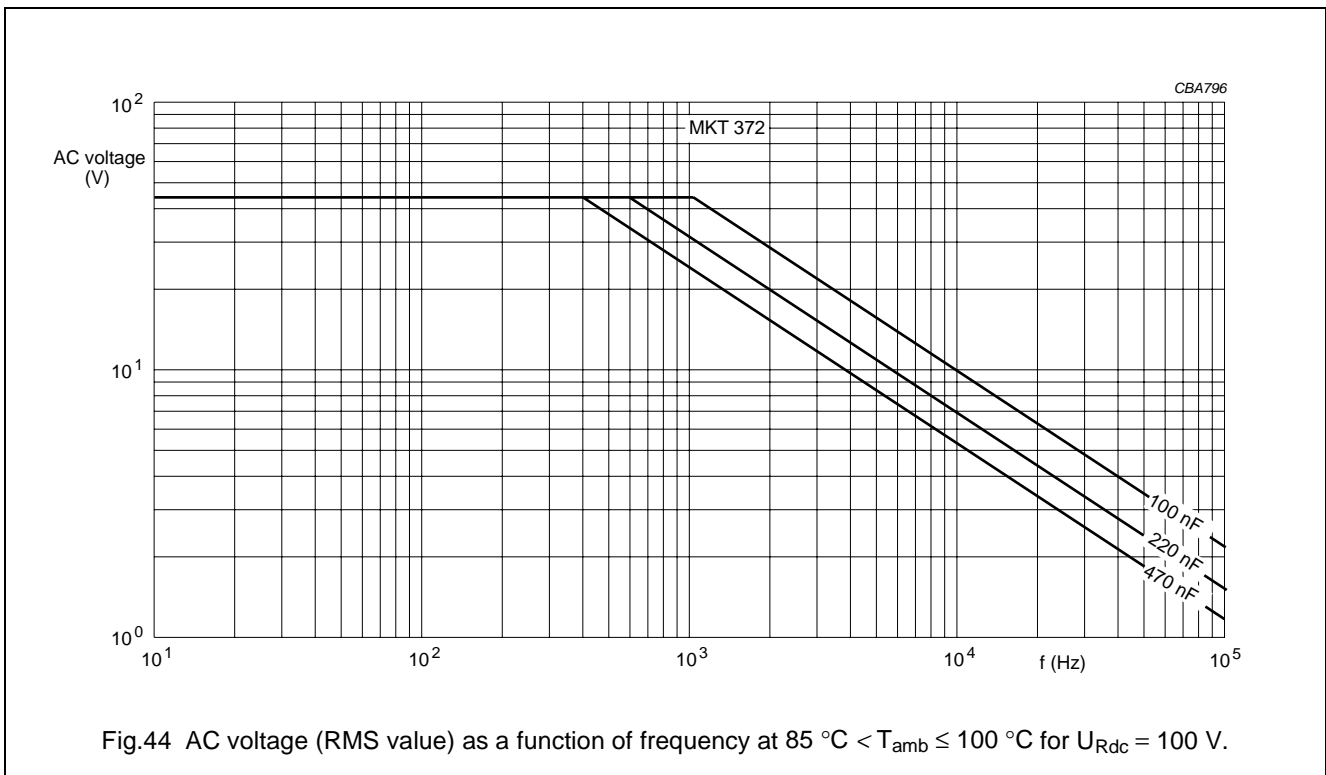
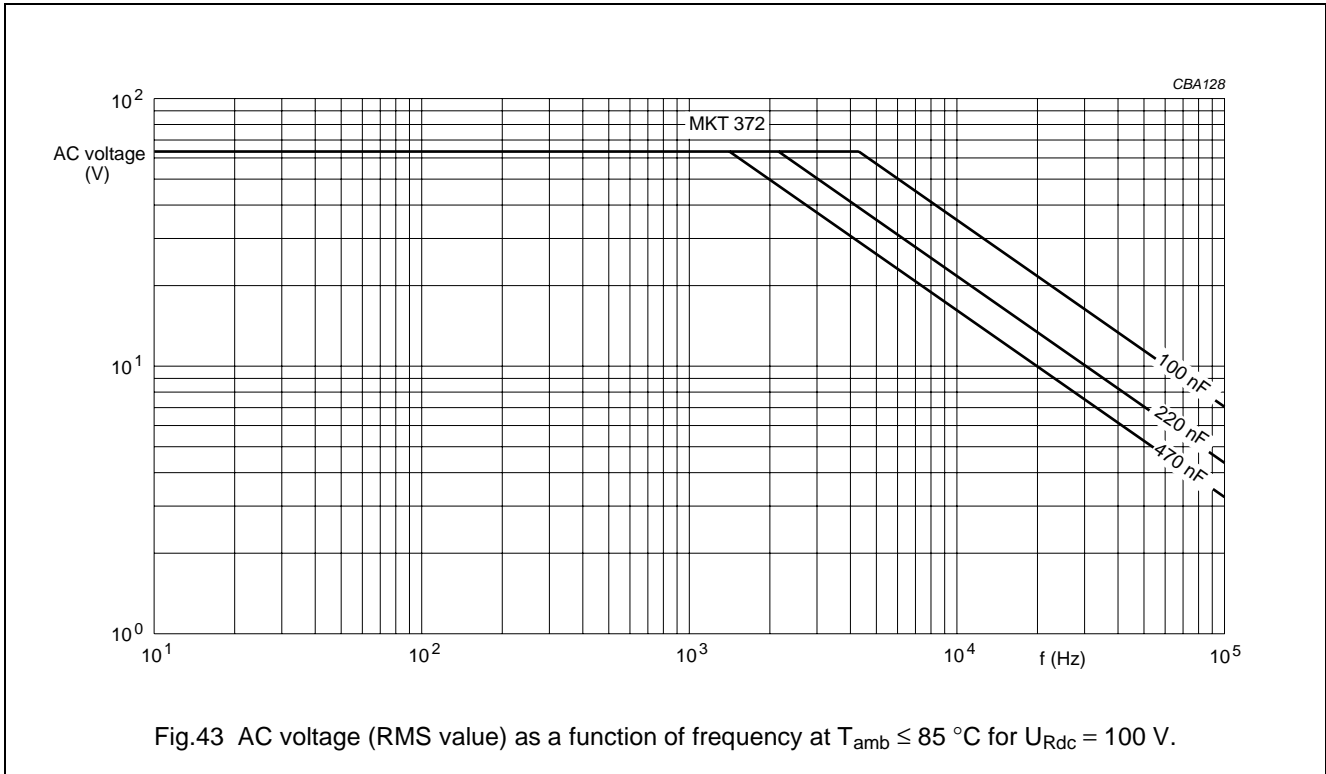
Metallized polyester film capacitors

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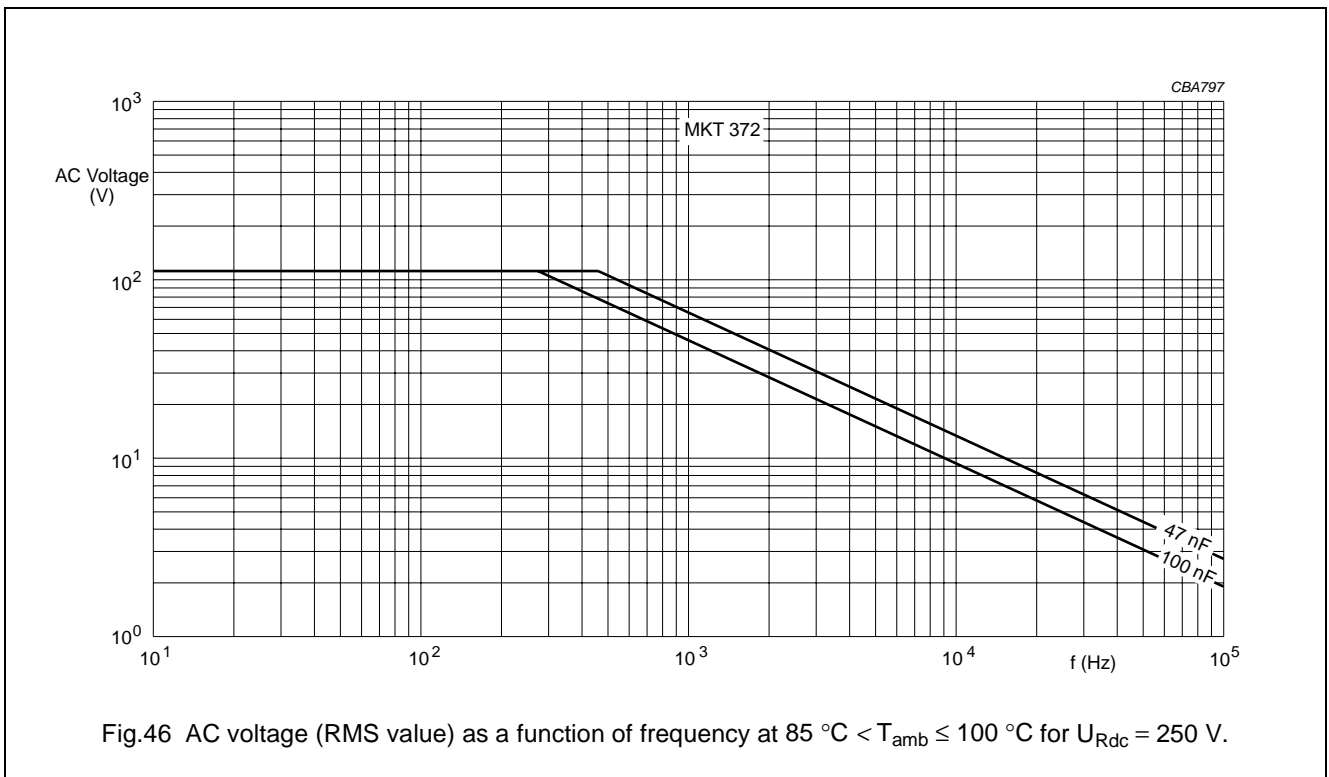
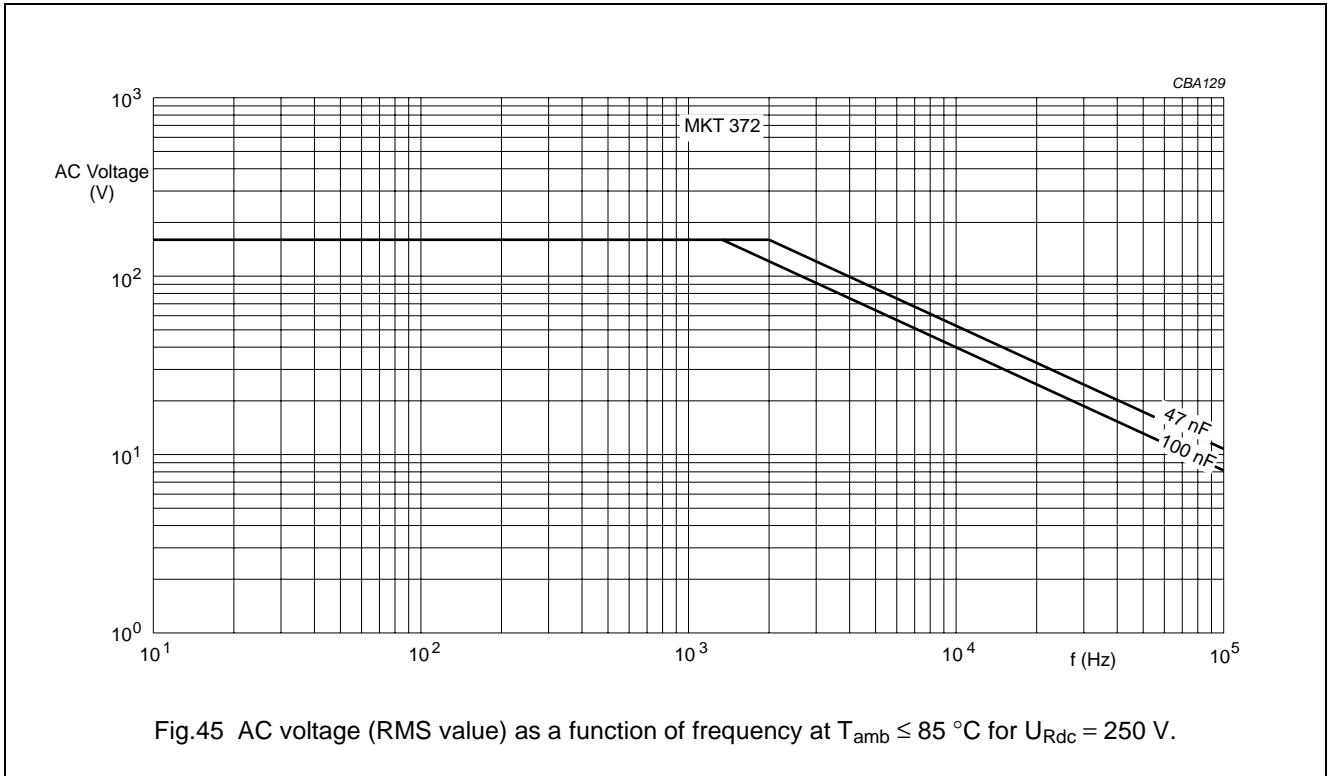
Metallized polyester film capacitors

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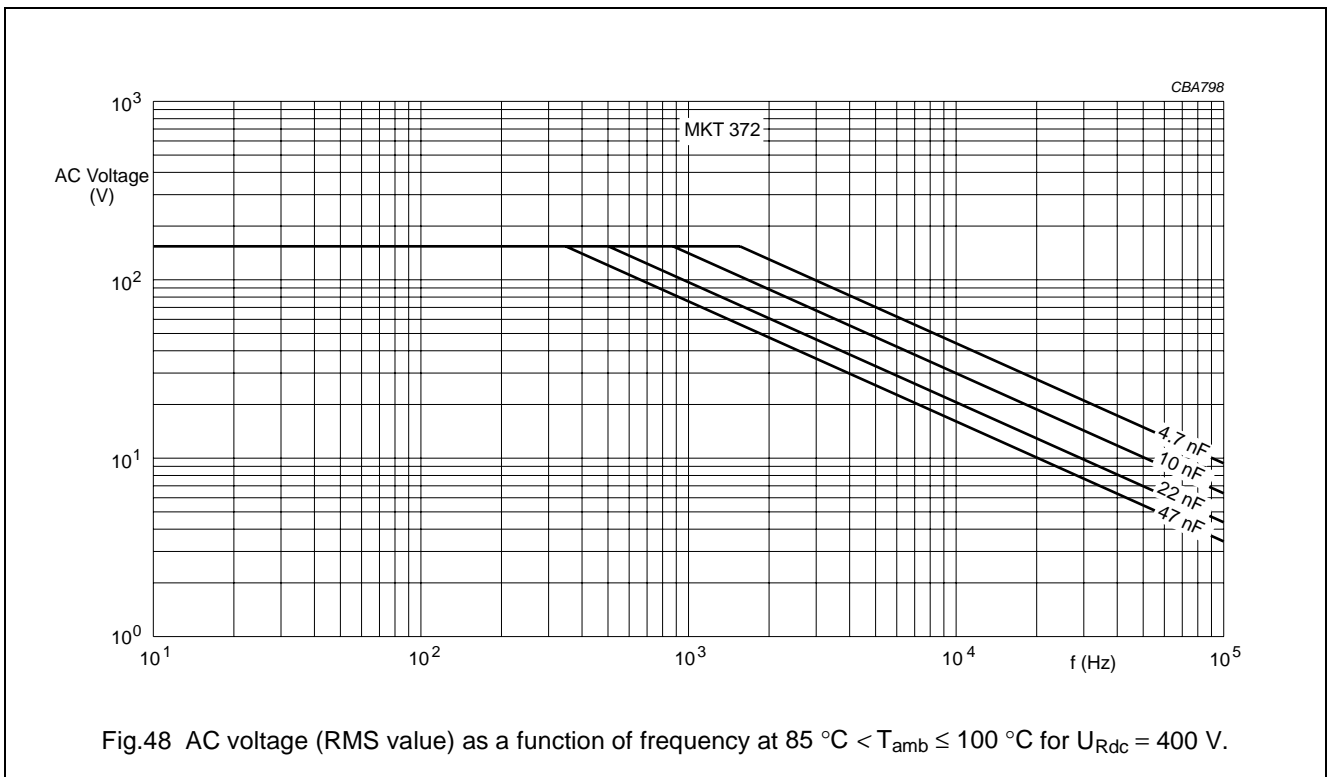
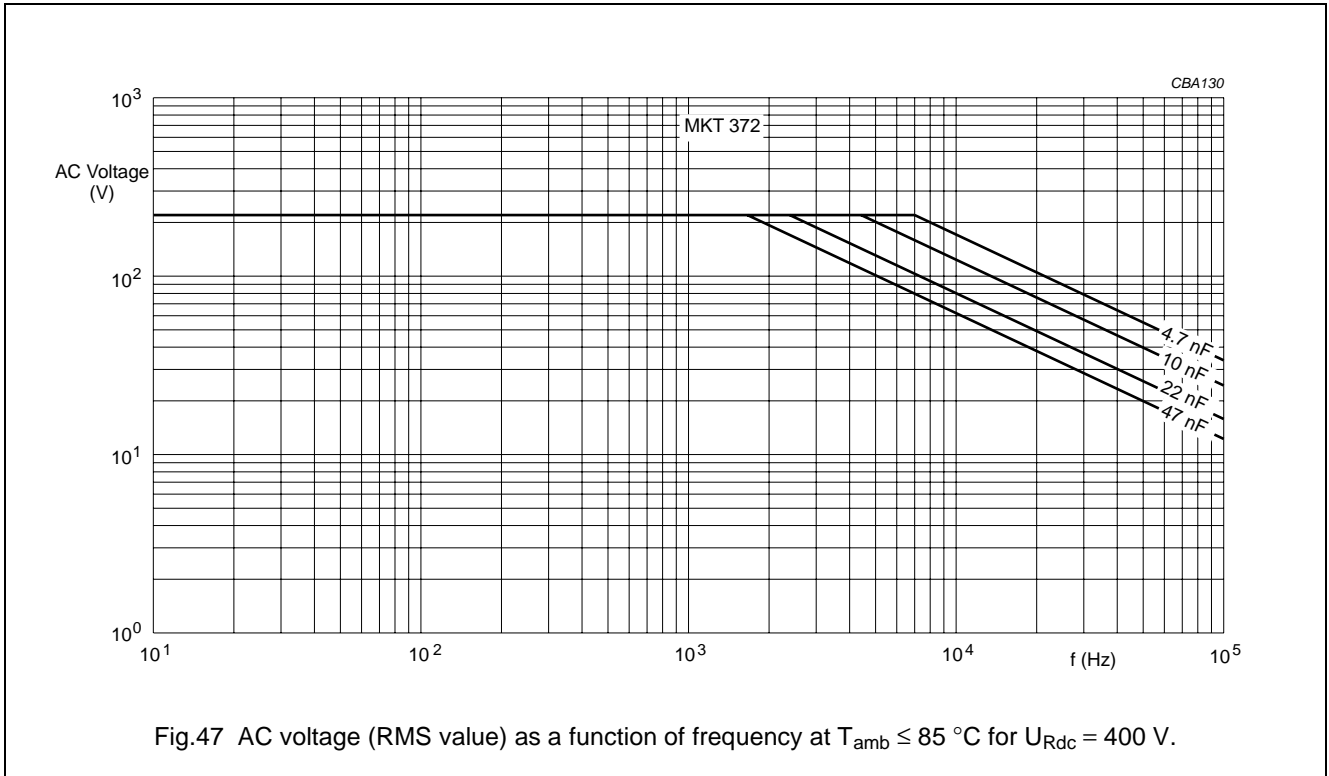
Metallized polyester film capacitors

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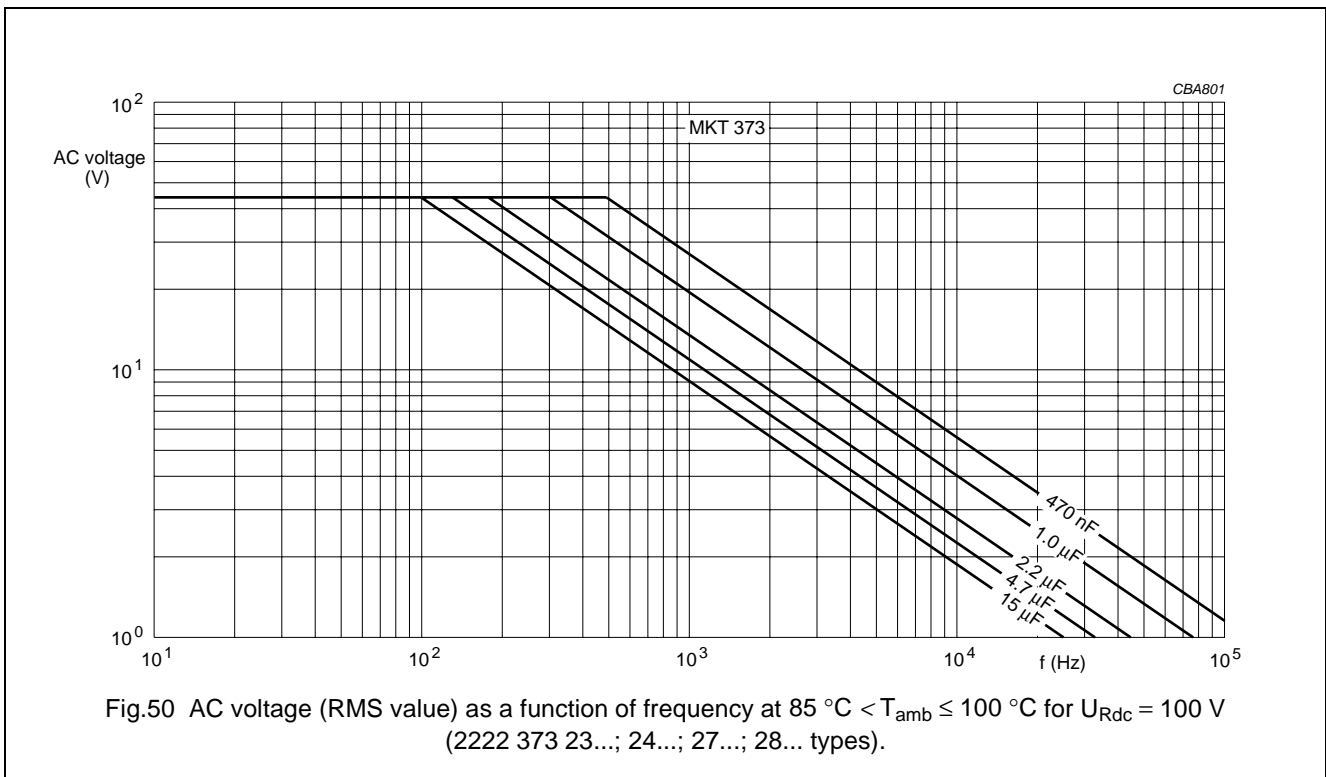
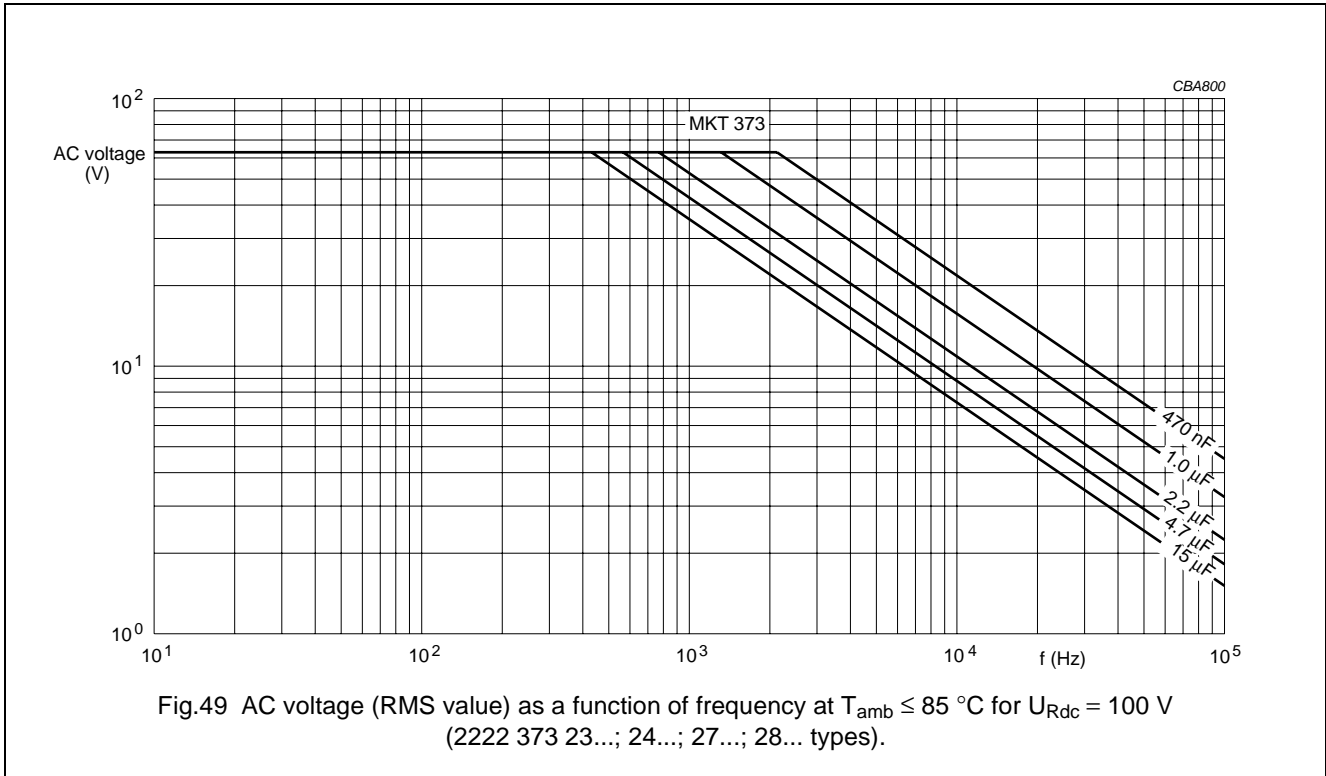
Metallized polyester film capacitors

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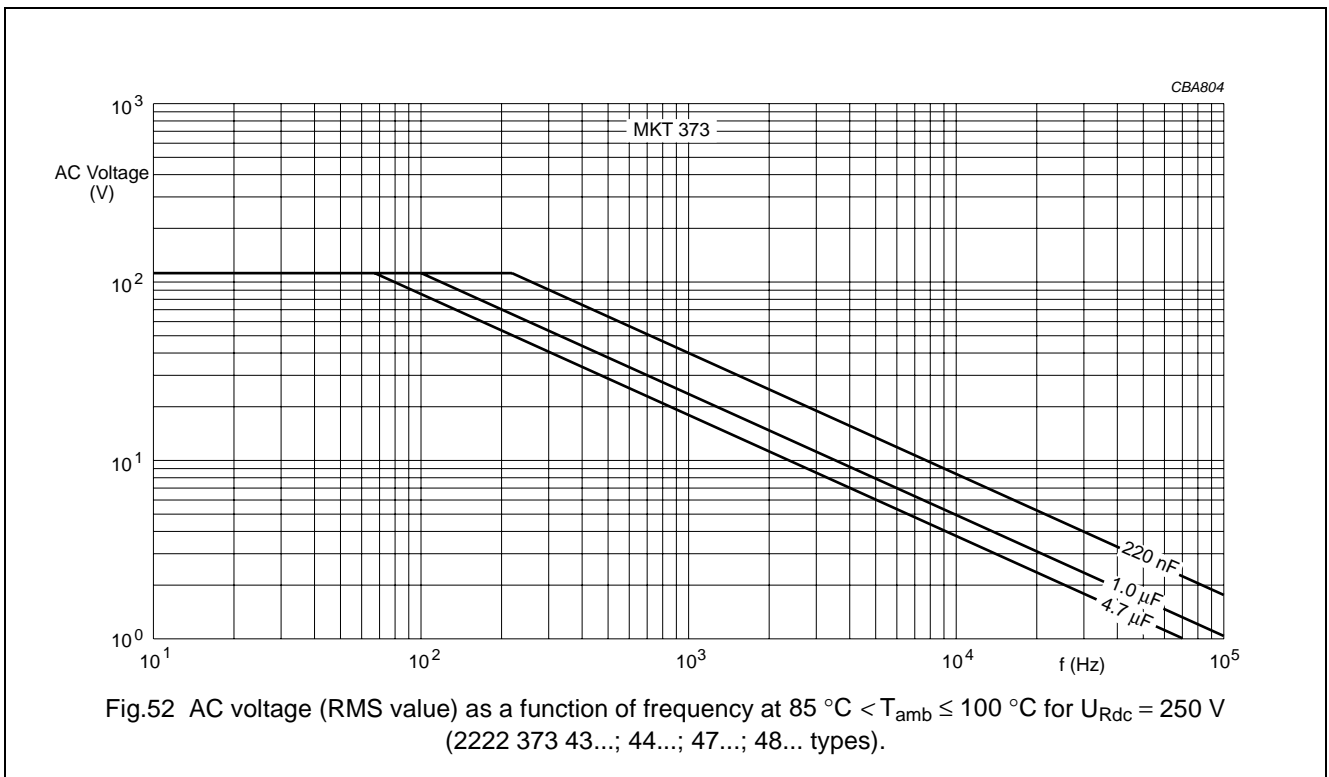
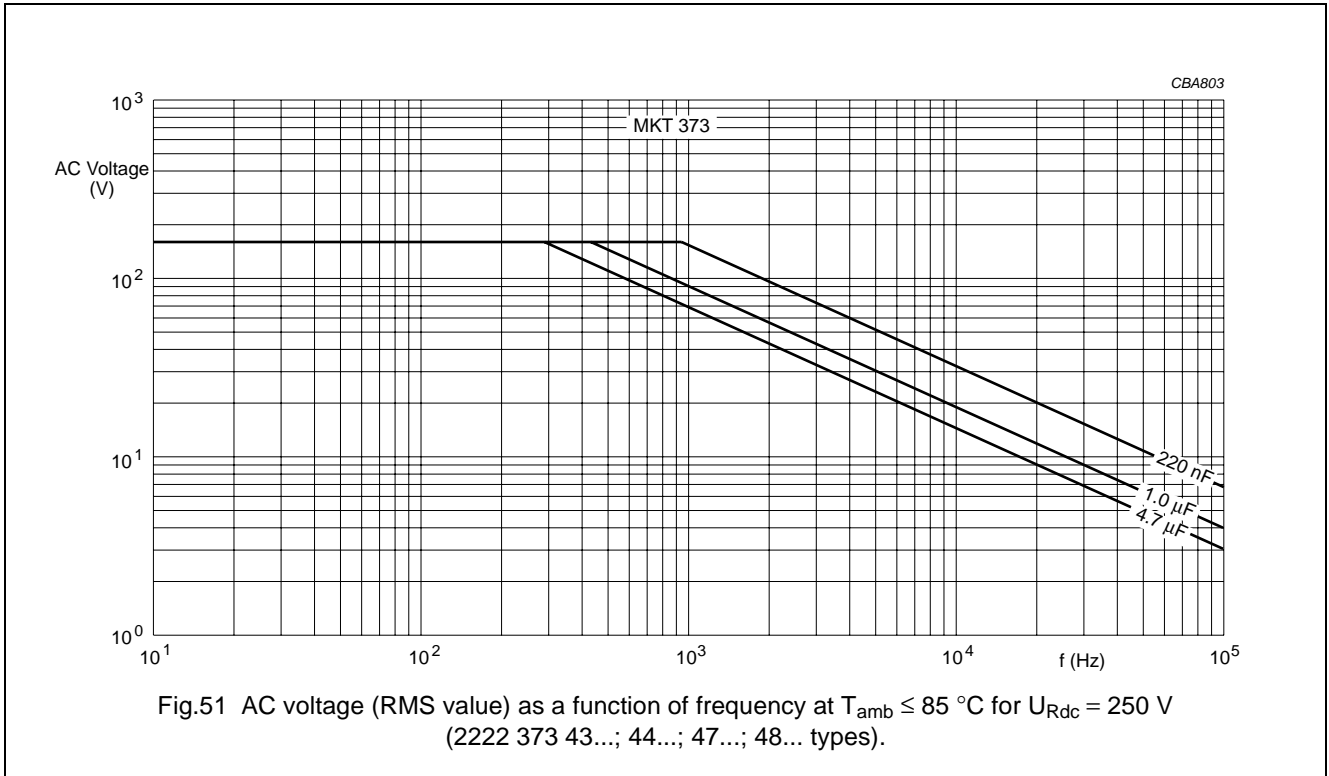
Metallized polyester film capacitors

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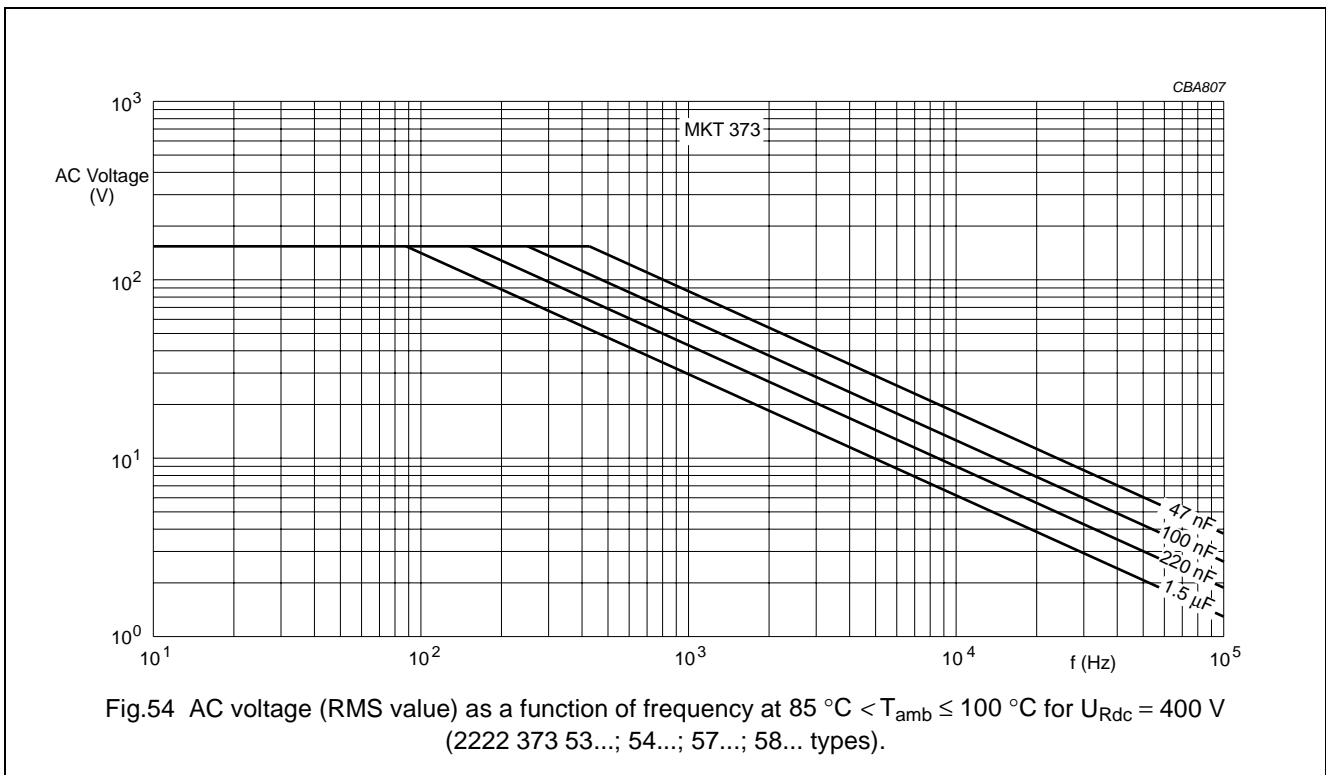
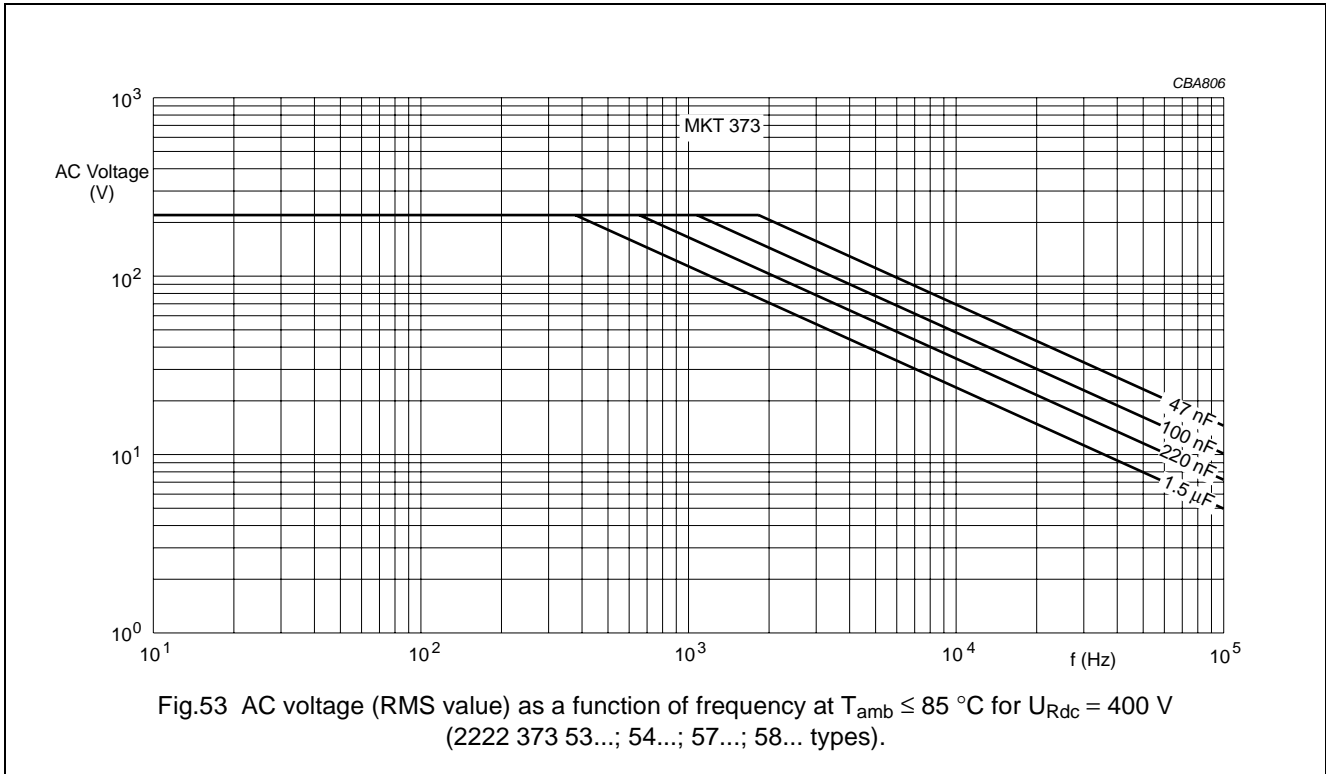
Metallized polyester film capacitors

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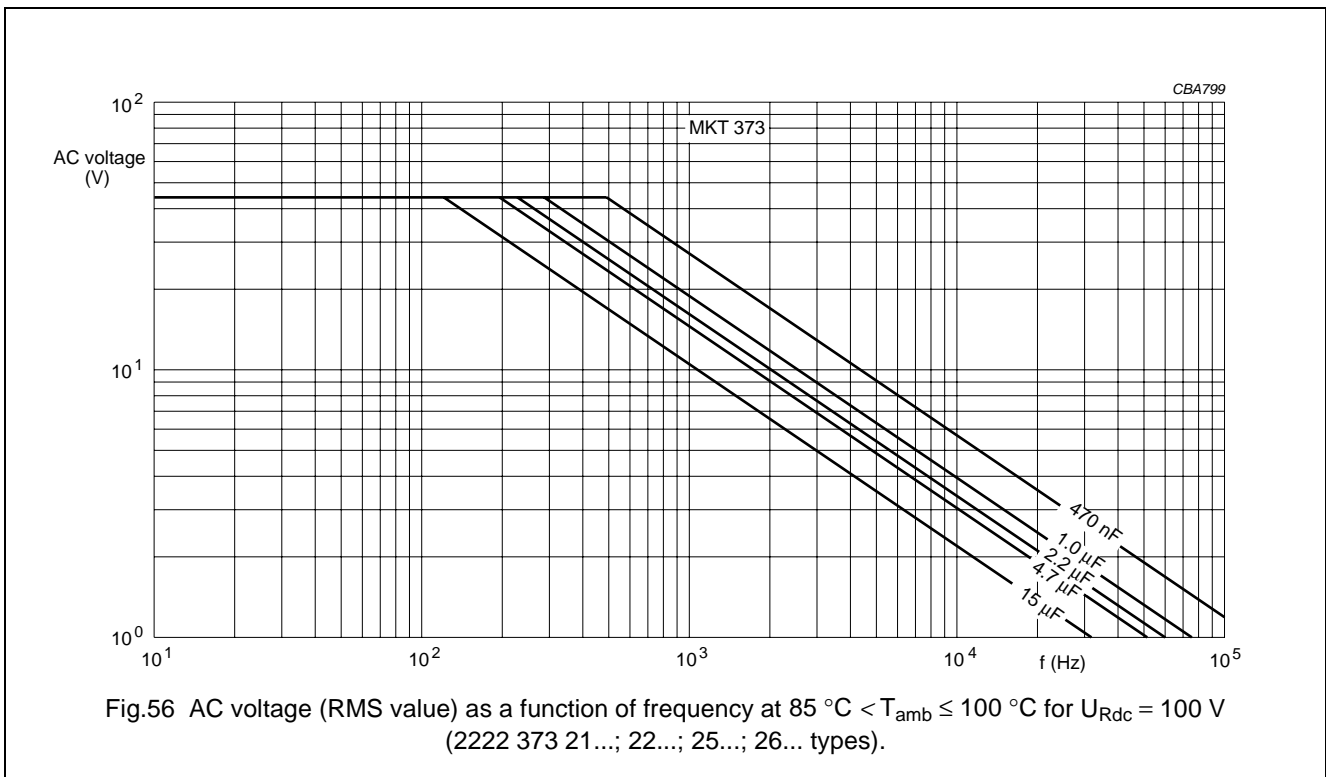
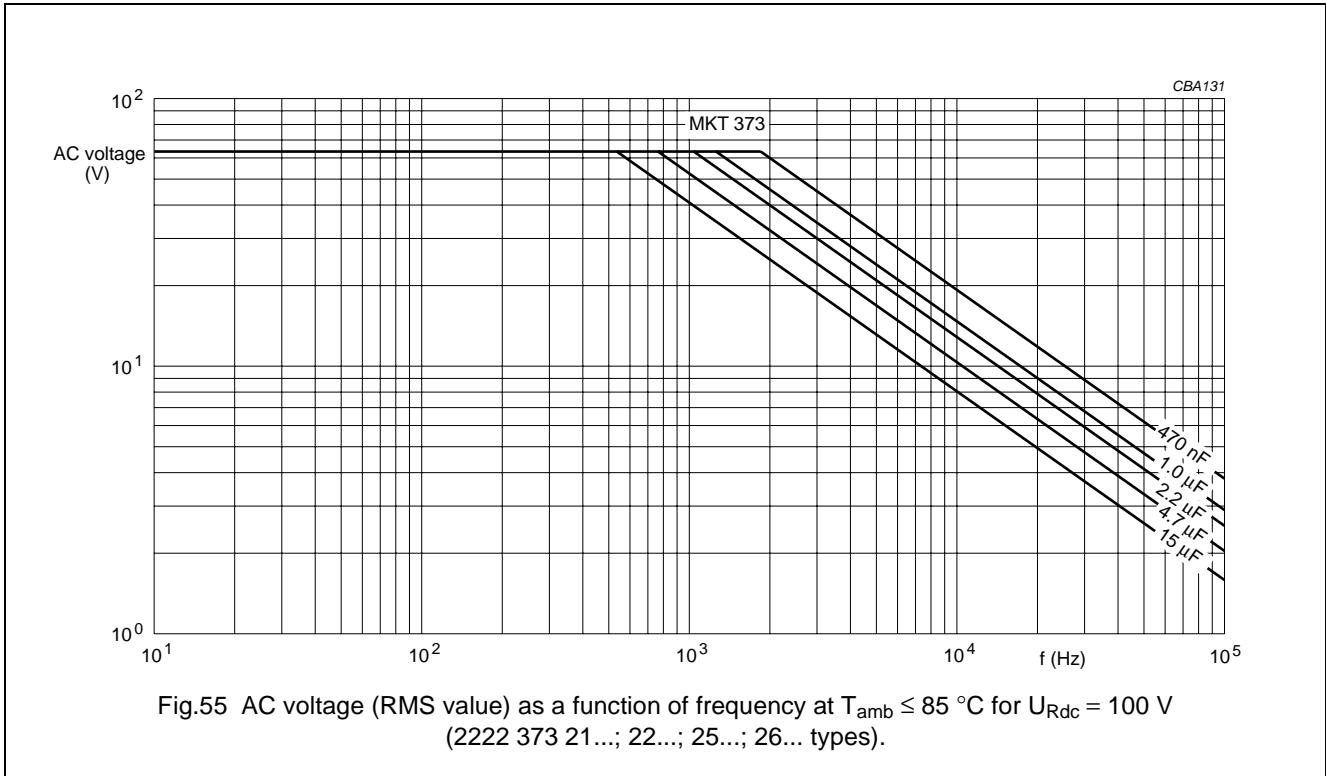
Metallized polyester film capacitors

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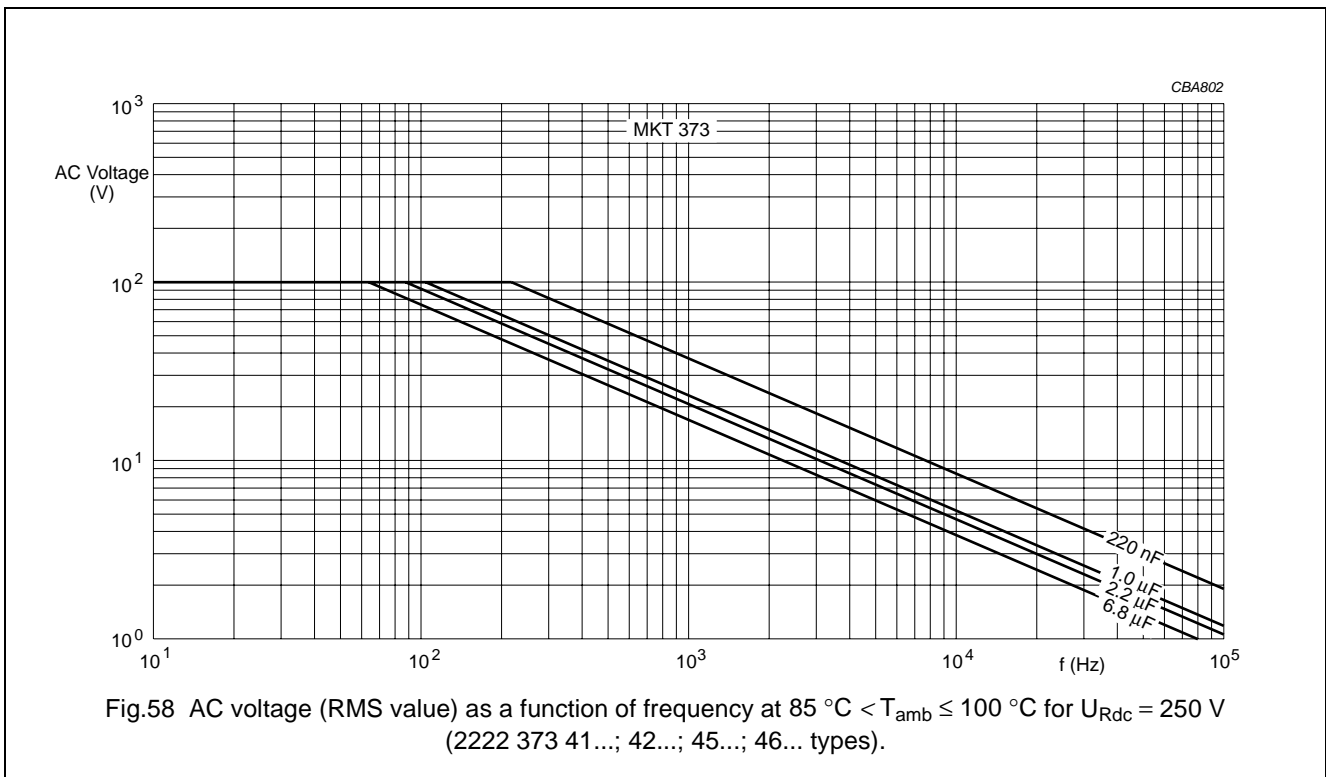
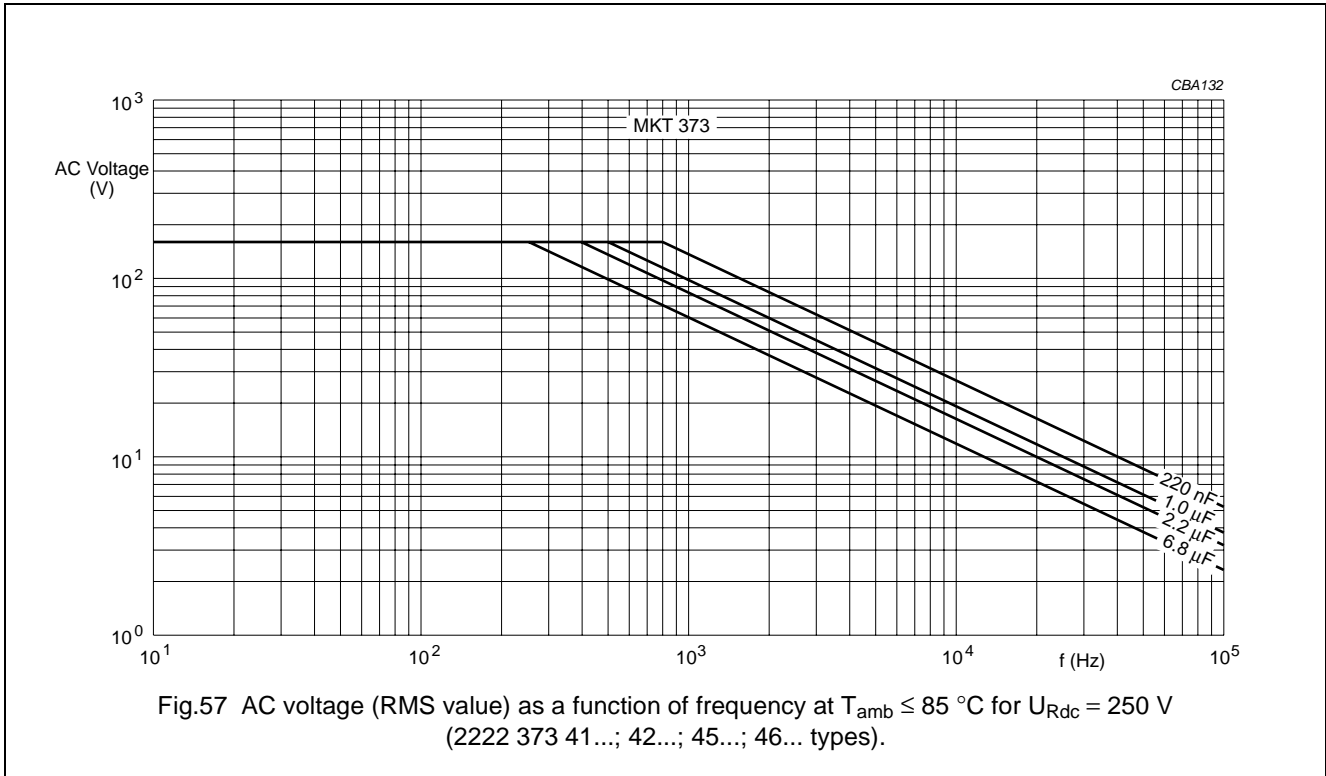
Metallized polyester film capacitors

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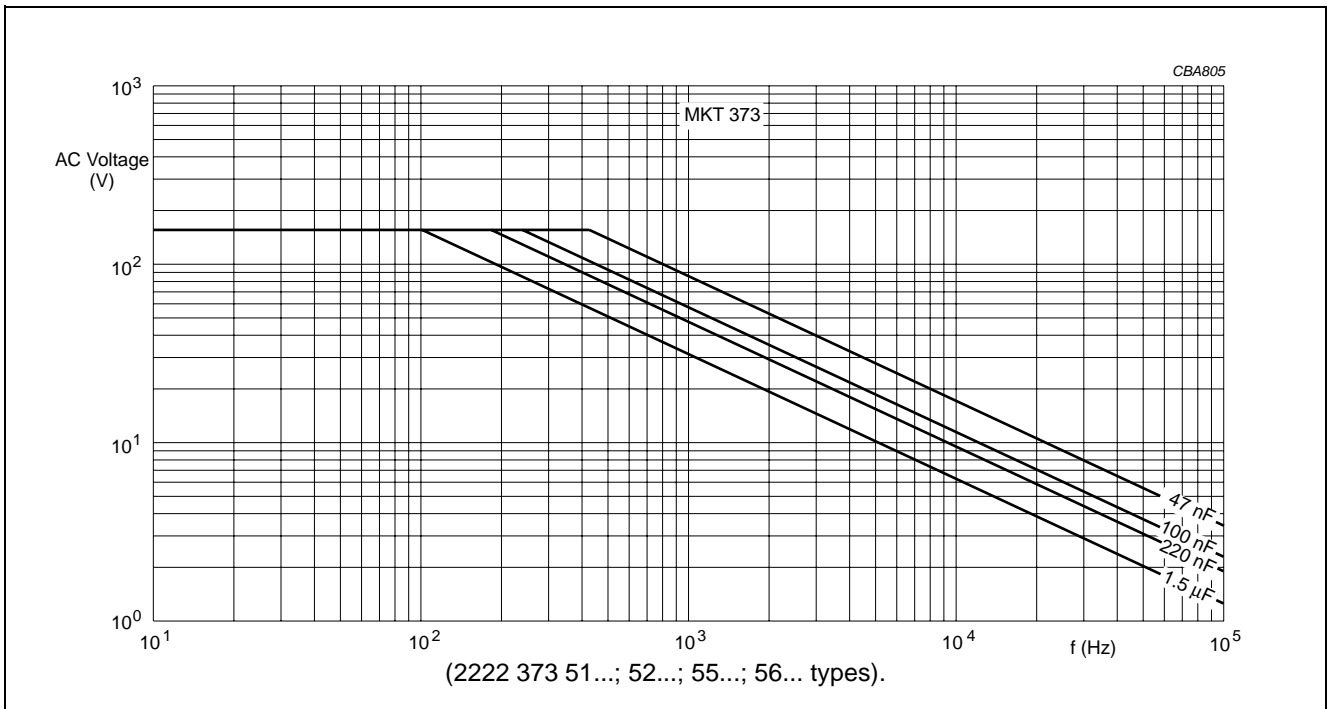
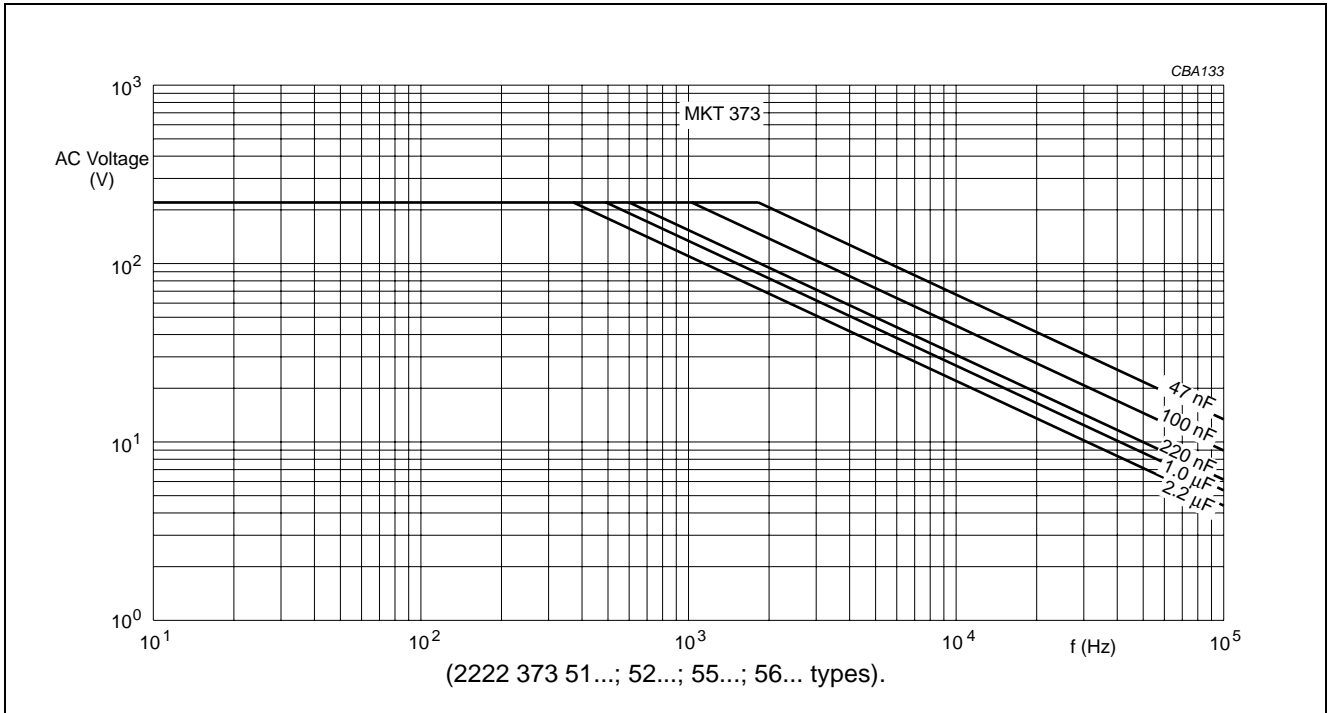
Metallized polyester film capacitors

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Metallized polyester film capacitors

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Maximum RMS current (sinewave) as a function of frequency

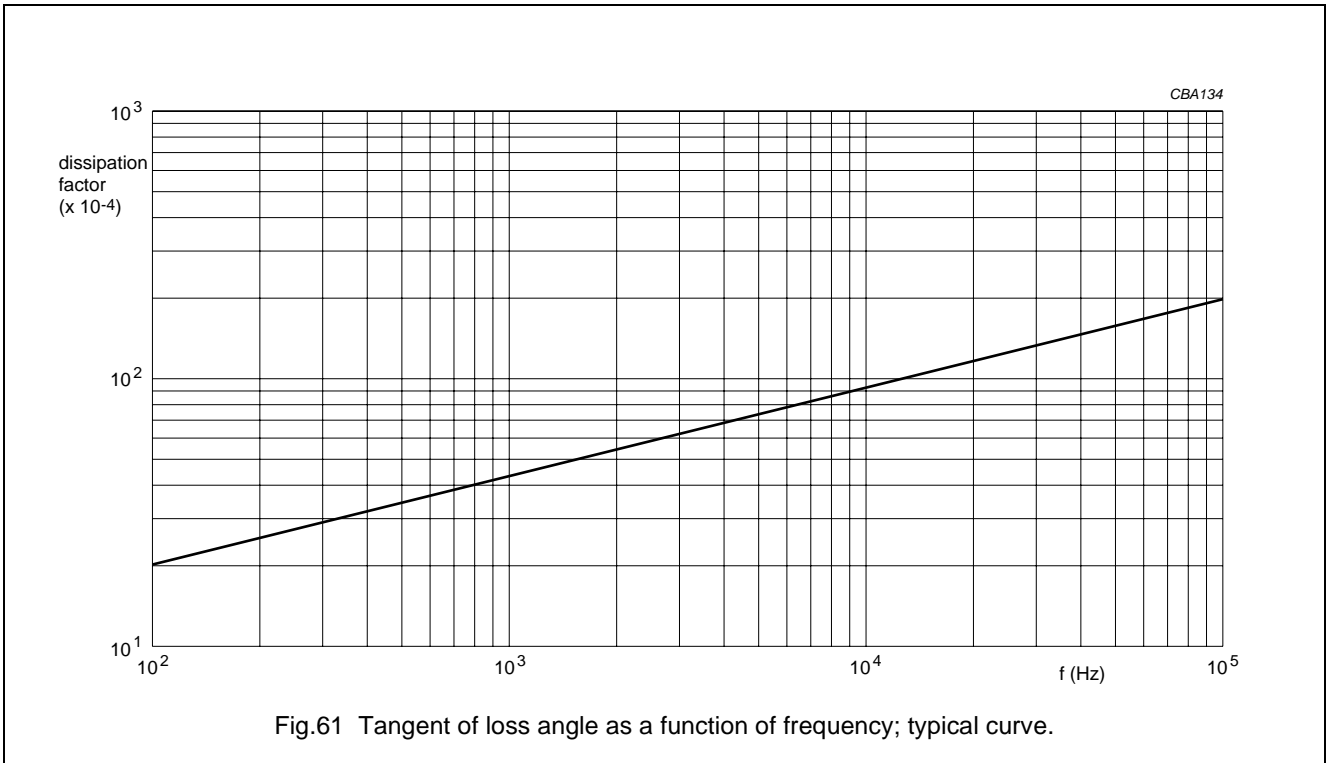
The maximum RMS current is defined by $I_{ac} = \omega \times C \times U_{ac}$.

U_{ac} is the maximum AC voltage depending on the ambient temperature in Figs 27 to 60.

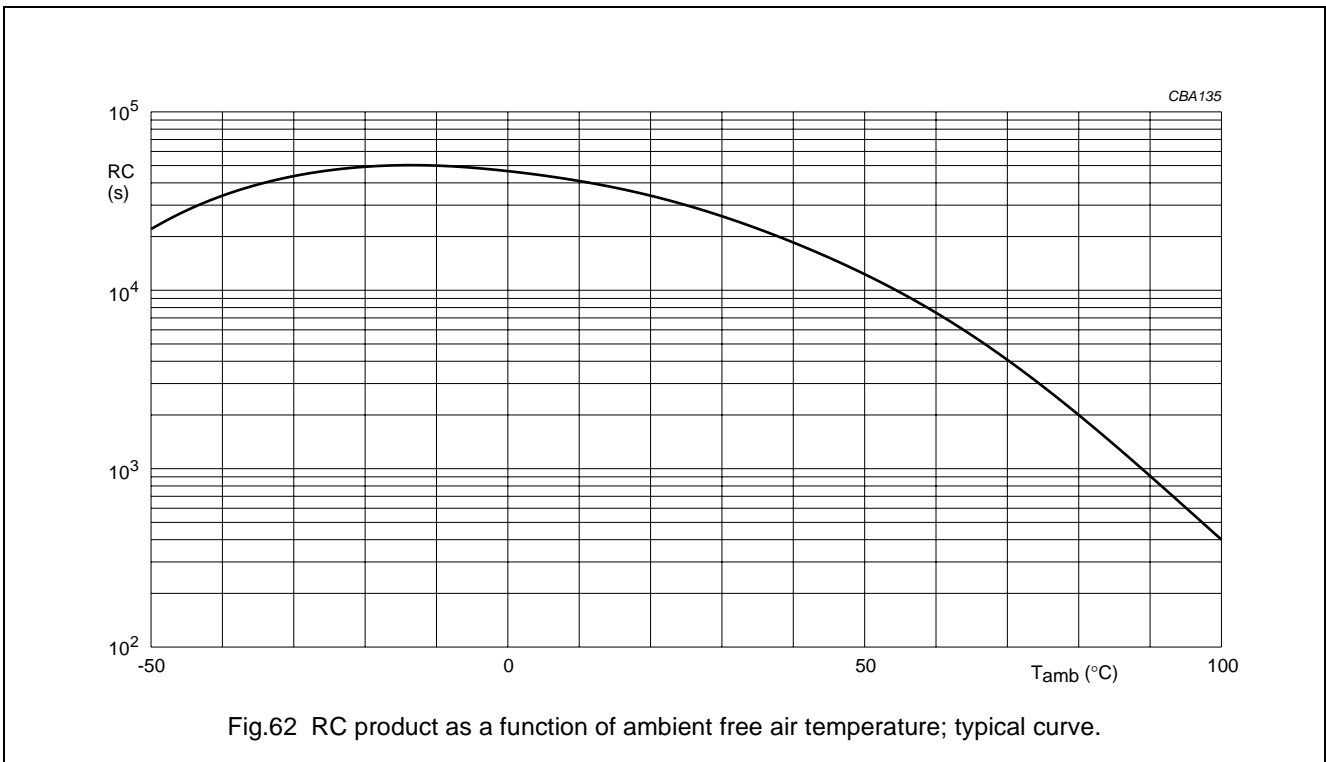
Metallized polyester film capacitors

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Tangent of loss angle



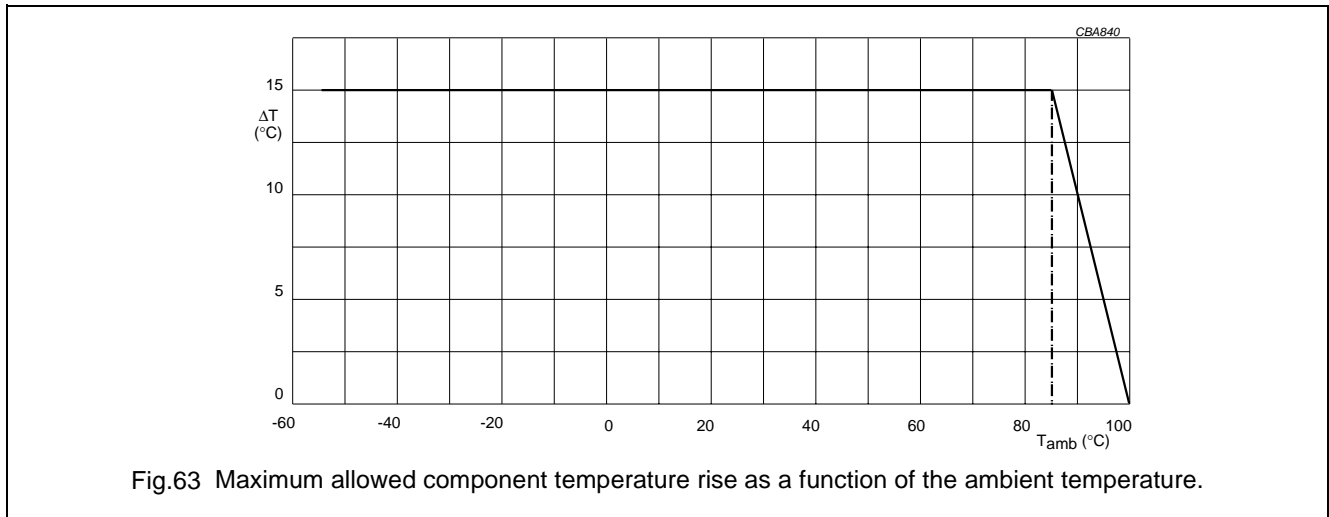
Insulation resistance



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Maximum allowed component temperature rise (ΔT) as a function of the ambient temperature (T_{amb})



Heat conductivity (G) as a function of pitch and capacitor body thickness in mW/°C

Table 1 Heat conductivity

b_{max} (mm)	PITCH (mm)					
	5	7.5	10	15	22.5	27.5
2.5	2.5	3	–	–	–	–
3.0	–	4	–	–	–	–
3.5	3.0	–	–	–	–	–
4.0	–	5	6.0	–	–	–
4.5	4.0	–	–	–	–	–
5.0	–	6	7.5	10	–	–
6.0	5.5	7	9.0	11	19	–
7.0	–	–	–	12	21	–
8.5	–	–	–	16	25	–
10.0	–	–	–	18	28	–
11.0	–	–	–	–	–	36
13.0	–	–	–	–	–	42
15.0	–	–	–	–	–	48
18.0	–	–	–	–	–	57

Power dissipation and maximum component temperature rise

The power dissipation must be limited in order not to exceed the maximum allowed component temperature rise as a function of the free air ambient temperature.

The power dissipation can be calculated according chapter “Introduction”, section “Maximum power dissipation”.

The component temperature rise (ΔT) can be measured (see section “Measuring the component temperature” for more details) or calculated by $\Delta T = P/G$:

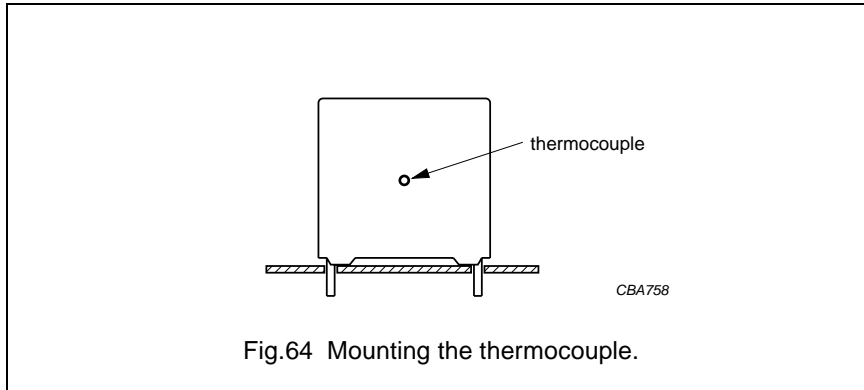
- ΔT = component temperature rise (°C).
- P = power dissipation of the component (mW).
- G = heat conductivity of the component (mW/°C).

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Measuring the component temperature

A thermocouple must be attached to the capacitor body as in Fig.64.



The temperature is measured in unloaded (T_{amb}) and maximum loaded condition (T_c).

The temperature rise is given by $\Delta T = T_c - T_{amb}$.

To avoid radiation or convection, the capacitor should be tested in a wind-free box.

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Application note and limiting conditions

These capacitors are not suitable for mains applications as across-the-line capacitors without additional protection, as described hereunder. These mains applications are strictly regulated in safety standards and therefore electromagnetic interference suppression capacitors conforming the standards must be used.

To select the capacitor for a certain application, the following conditions must be checked:

1. The peak voltage (U_p) shall not be greater than the rated DC voltage (U_{Rdc}).
2. The peak-to-peak voltage (U_{p-p}) shall not be greater than the maximum U_{p-p} to avoid the ionisation inception level.
3. The voltage pulse slope (dU/dt) shall not exceed the rated voltage pulse slope in an RC-circuit at rated voltage and without ringing. If the pulse voltage is lower than the rated DC voltage, the rated voltage pulse slope may be multiplied by U_{Rdc} and divided by the applied voltage.

For all other pulses following equation must be fulfilled:

$$2 \times \int_0^T \left(\frac{dU}{dt} \right)^2 \times dt < U_{Rdc} \times \left(\frac{dU}{dt} \right)_{rated}$$

T is the pulse duration.

4. The maximum component surface temperature rise must be lower than the limits in Fig.63.
5. Since in circuits used at voltages over 280 V peak-to-peak the risk for an intrinsically active flammability after a capacitor breakdown (short circuit) increases, it is recommended that the power to the component is limited to 100 times the values mentioned in Table 1 "Heat conductivity".
6. When using these capacitors as across-the-line capacitor in the input filter for mains applications or as series connected with an impedance to the mains the applicant must guarantee that following conditions are fulfilled in any case (spikes and surge voltages from the mains included).

VOLTAGE CONDITIONS FOR 6 ABOVE

ALLOWED VOLTAGES	$T_{amb} \leq 85 \text{ }^\circ\text{C}$	$85 \text{ }^\circ\text{C} < T_{amb} \leq 100 \text{ }^\circ\text{C}$
Maximum continuous RMS voltage	U_{Rac}	$0.8 \times U_{Rac}$
Maximum temporary RMS -overvoltage (<24 hours)	$1.25 \times U_{Rac}$	$1.0 \times U_{Rac}$
Maximum peak voltage (V_{o-p}) (<2 s)	$1.6 \times U_{Rdc}$	$1.3 \times U_{Rdc}$

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Example

$C = 3300 \text{ nF} - 100 \text{ V}$ used for the voltage signal shown in Fig.65.

$$U_{p-p} = 80 \text{ V}; U_p = 70 \text{ V}; T_1 = 0.5 \text{ ms}; T_2 = 1 \text{ ms}.$$

The ambient temperature is $35 \text{ }^\circ\text{C}$.

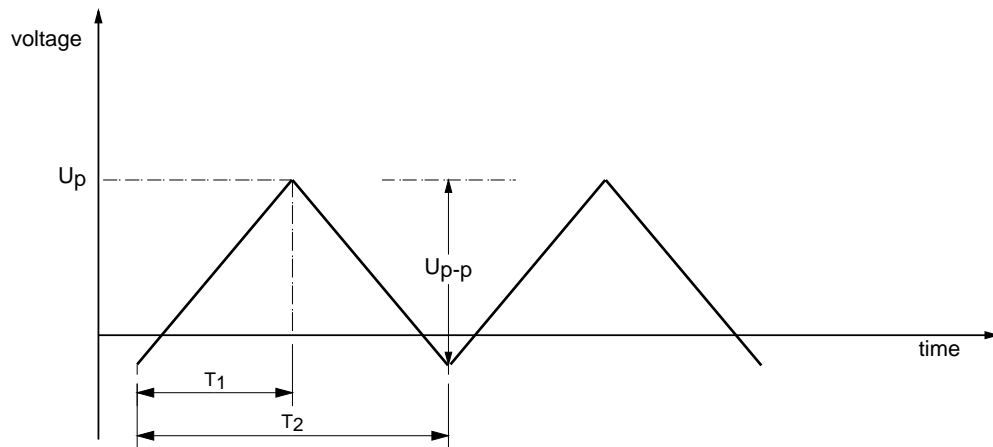
Checking the conditions:

1. The peak voltage $U_p = 70 \text{ V}$ is lower than 100 V (DC).
2. The peak-to-peak voltage 80 V is lower than $2 \times \sqrt{2} \times 63 \text{ V(AC)} = 178 U_{p-p}$.
3. The voltage pulse slope $dU/dt = 80 \text{ V}/500 \text{ } \mu\text{s} = 0.16 \text{ V}/\mu\text{s}$.
This is lower than $8 \text{ V}/\mu\text{s}$ (see specific reference data for each version).
4. The dissipated power is 60 mW as calculated with Fourier terms.

The temperature rise for $b_{\text{max}} = 7.0 \text{ mm}$ and pitch = 15 mm will be $\frac{60\text{mW}}{12\text{mW}/^\circ\text{C}} = 5 \text{ }^\circ\text{C}$.

This is lower than $15 \text{ }^\circ\text{C}$ temperature rise at $35 \text{ }^\circ\text{C}$; see Fig.63.

5. Not applicable.
6. Not applicable.



CBA865

Fig.65 Voltage signal.

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MARKING**Product marking**

CAPACITORS WITH PITCH = 5.08 mm: STYLE 2222 370

CO₂ laser marking:

Only for case sizes:

- 2.5 × 6.5 × 7.2 mm
- 3.5 × 8.0 × 7.2 mm.

The capacitors are marked by laser print on the top (see Fig.66) with the following information:

1. Capacitance code in accordance with "IEC 60062"
2. Tolerance on rated capacitance: M = ±20%;
K = ±10%; J = ±5%;

and on the side with the following information:

1. Year and week of manufacture (e.g. 0001)
2. Rated voltage (DC) (e.g. 100 V)
3. Code for dielectric material (MKT)
4. Code for factory of origin (HQ)
5. Manufacturer's type designation (e.g. 370)
6. Code for manufacturer.

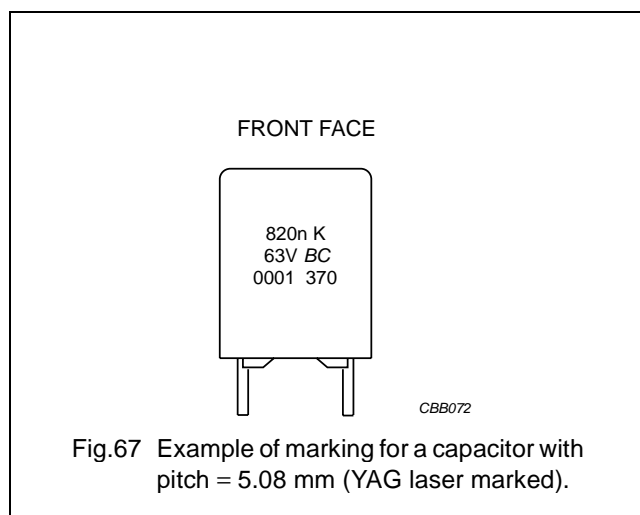
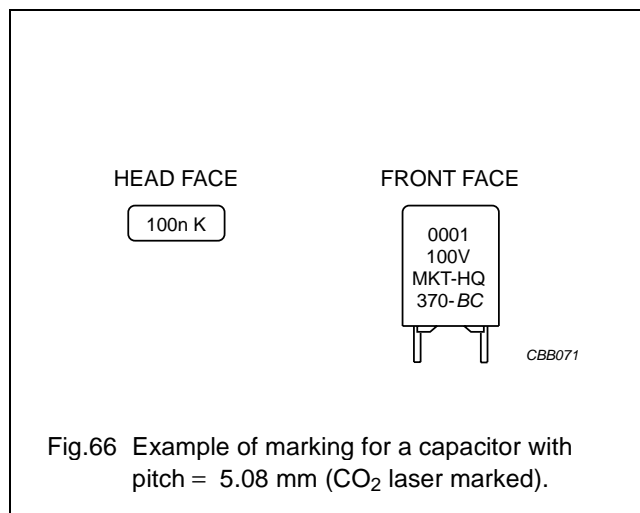
YAG laser marking:

Only for case size:

- 4.5 × 9.0 × 7.2 mm
- 6.0 × 10.0 × 7.2 mm.

The capacitors are marked by YAG laser on the side (see Fig.67) with the following information:

1. Capacitance code in accordance with "IEC 60062"
2. Tolerance on rated capacitance: M = ±20%;
K = ±10%; J = ±5%
3. Rated voltage (DC) (e.g. 63 V)
4. Code for manufacturer
5. Year and week of manufacture (e.g. 0001)
6. Manufacturer's type designation (e.g. 370).



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CAPACITORS WITH PITCH = 7.62 mm: STYLE 2222 371

The capacitors are marked by YAG laser on the side (see Fig.68) with the following information:

1. Capacitance code in accordance with "IEC 60062"
2. Tolerance on rated capacitance: M = $\pm 20\%$
K = $\pm 10\%$; J = $\pm 5\%$
3. Rated voltage (DC) (e.g. 100 V)
4. Code for manufacturer
5. Year and week of manufacture (e.g. 0001)
6. Manufacturer's type designation (e.g. 371).

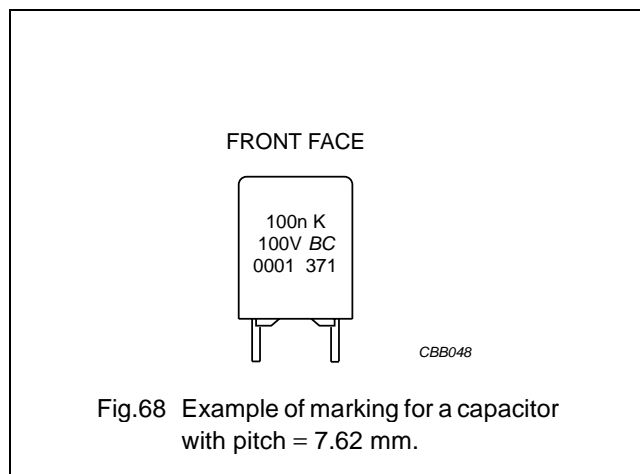


Fig.68 Example of marking for a capacitor with pitch = 7.62 mm.

CAPACITORS WITH PITCH = 10 mm: STYLE 2222 372

The capacitors are marked by laser print on the side (see Fig.69) with the following information:

1. Year and week of manufacture (e.g. 0001)
2. Capacitance code in accordance with "IEC 60062"
3. Tolerance on rated capacitance: K = $\pm 10\%$; J = $\pm 5\%$;
4. Rated voltage (DC) (e.g. 100 V)
5. Code for dielectric material (MKT)
6. Manufacturer's type designation (e.g. 372)
7. Code for manufacturer.
8. Code for factory of origin (HQ)

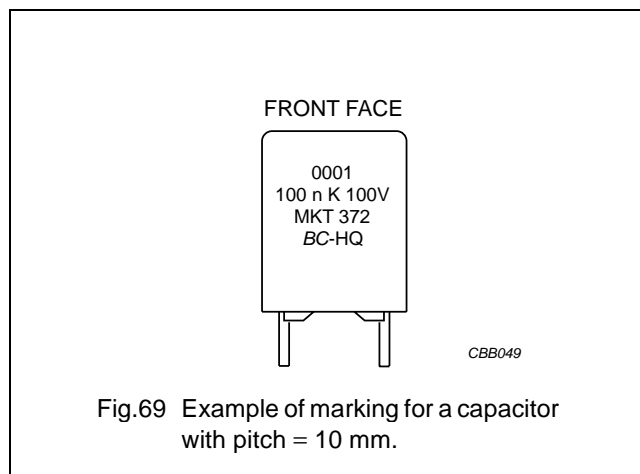


Fig.69 Example of marking for a capacitor with pitch = 10 mm.

CAPACITORS WITH PITCH = 15 mm: STYLES 2222 373

The capacitors are marked by laser print on the top (see Fig.70) with the following information:

1. Rated capacitance code in accordance with "IEC 60062"
2. Tolerance on rated capacitance: K = $\pm 10\%$; J = $\pm 5\%$
3. Rated voltage (DC) (e.g. 100 V)
4. Manufacturer's type designation (373)
5. Code for dielectric material (MKT);

and on the side with the following information:

1. Manufacturer
2. Code for factory of origin (HQ)
3. Year and week of manufacture (e.g. 0001).

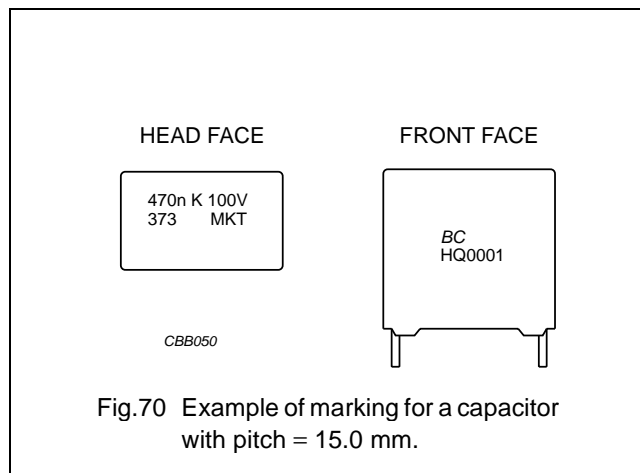


Fig.70 Example of marking for a capacitor with pitch = 15.0 mm.

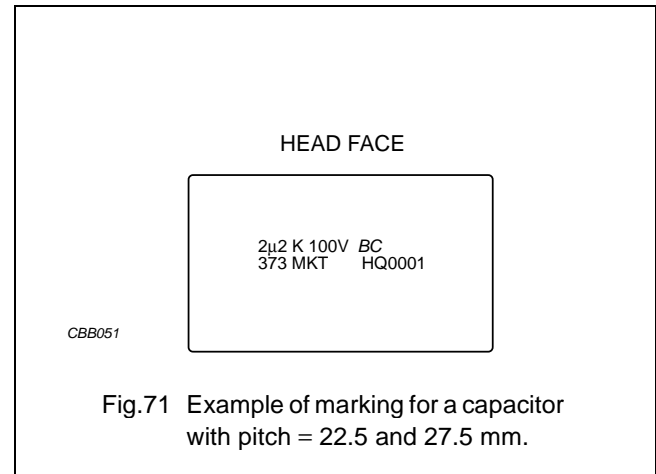
Metallized polyester film capacitors

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CAPACITORS WITH PITCH = 22.5 AND 27.5 mm:
STYLES 2222 373

The capacitors are marked on the top (see Fig.71) with the following information:

1. Rated capacitance code in accordance with "IEC 60062"
2. Tolerance on rated capacitance: K = $\pm 10\%$; J = $\pm 5\%$
3. Rated voltage (DC) (e.g. 100 V)
4. Manufacturer
5. Manufacturer's type designation (373)
6. Code for dielectric material (MKT)
7. Code for factory of origin (HQ)
8. Year and week of manufacture (e.g. 0001).



Package marking

The package containing the capacitors is marked as shown in Fig.72.

BCcomponents
MADE IN BELGIUM
DC FILM CAPACITOR
MKT RADIAL POTTED TYPE
0.1µF ±10% 100V= 55/100/56

WO: 12345678
ORIG **A170** RPC **HQ** 1234
TYPE **MKT 372**

QTY **1000** DATE **0003**
CODENO **2222 372 21104**

Barcode label marking

LINE	MARKING EXPLANATION
1	Manufacturer's name
2	Country of origin
3	Sub-family
4	Type description
5	Capacitance value in µF, tolerance, voltage and climatic category ("IEC 60068-1")
6	–
7	Preference origin code: A Country of origin in code: 170 (Belgium) Responsible production centre: HQ WO: work order Wage number of final inspection (only for capacitors with pitch = 5, 7.5 and 10 mm)
8	Product type description
9	Quantity and production period, year and week code
10	Product code (12NC)

Fig.72 Barcode label.

2000 Feb 01

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QUICK REFERENCE TEST REQUIREMENTS (see note 1)

TEST	PROCEDURE (quick reference)	REQUIREMENTS
Robustness of leads		
Tensile strength: "IEC 60068-2-21"	load 10 N; 10 s	no visible damage legible marking $ \Delta C/C \leq 2\%$ $\Delta \tan \delta \leq 30 \times 10^{-4}$; note 2
Bending: "IEC 60068-2-21"	load 5 N; $4 \times 90^\circ$	
Resistance to soldering heat: "IEC 60068-2-20"	solder bath: 260 °C; 10 s	
Component solvent resistance	isopropyl alcohol; 23 °C; 5 minutes	
Robustness of component		
Vibration: "IEC 60068-2-6"	10 to 55 Hz; amplitude 0.75 mm or acceleration 98 m/s ² ; 6 hours	$ \Delta C/C \leq 3\%$ $\Delta \tan \delta \leq 30 \times 10^{-4}$; note 2
Shock: "IEC 60068-2-27"	half sinewave; 490 m/s ² ; 11 ms	
Climatic sequence		
Dry heat: "IEC 60068-2-2"	16 hours; 100 °C	$ \Delta C/C \leq 3\%$ $\Delta \tan \delta \leq 50 \times 10^{-4}$; note 2 $R_{\text{ins}} \geq 50\%$ of specified value
Damp heat cyclic, test Db, first cycle: "IEC 60068-2-30"		
Cold: "IEC 60068-2-1"	2 hours; -55 °C	
Damp heat, test Db, remaining cycles: "IEC 60068-2-30"		
Other applicable tests		
Damp heat, steady state: "IEC 60068-2-3"	56 days; 40 °C; 90 to 95% RH	$ \Delta C/C \leq 5\%$ $\Delta \tan \delta \leq 50 \times 10^{-4}$; note 2 $R_{\text{ins}} \geq 50\%$ of specified value
Endurance (DC): "IEC 60384-2"	2000 hours; $1.25 \times U_{\text{Rdc}}$; 85 °C $1 \times U_{\text{Rdc}}$; 100 °C	$ \Delta C/C \leq 5\%$ $\Delta \tan \delta \leq 30 \times 10^{-4\text{s}}$; note 2 $R_{\text{ins}} \geq 50\%$ of specified value
Heat storage: "IEC 60384-2"	2000 hours; 100 °C	$ \Delta C/C \leq 3\%$ $\Delta \tan \delta \leq 30 \times 10^{-4}$; note 2
Endurance (AC): "IEC 60384-2"	1000 hours: $1.1 \times U_{\text{Rac}}$; 85 °C	$ \Delta C/C \leq 8\%$ (style 370) $ \Delta C/C \leq 5\%$ (style 371) $ \Delta C/C \leq 3\%$ (style 372 and 373) $\Delta \tan \delta \leq 30 \times 10^{-4}$; note 2

Metallized polyester film capacitors

MKT 370/371/372/373

TEST	PROCEDURE (quick reference)	REQUIREMENTS
Resistance to detergents	3 minutes in dishwater at 70 °C	$ \Delta C/C \leq 1\%$ $\Delta \tan \delta \leq 30 \times 10^{-4}$; note 2 $R_{ins} \geq 50\%$ of specified value
Resistance to soldering heat with preheating: "IEC 60384-2"	body temperature: 100 °C; bath temperature: 260 °C; dwell time: 5 s	$ \Delta C/C \leq 2\%$ (C ≤ 10 nF) $ \Delta C/C \leq 1\%$ (C > 10 nF) $\Delta \tan \delta \leq 30 \times 10^{-4}$; note 2
Passive flammability (styles 372 and 373): "IEC 60384-1"	Class C	no burning

Notes

1. For detailed information, see "Type detail specification HQN-384-02/103".
2. Measuring frequency 10 kHz.