

Metallized polyester film capacitors

MKT 370/371/372/373

MKT RADIAL POTTED CAPACITORS

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

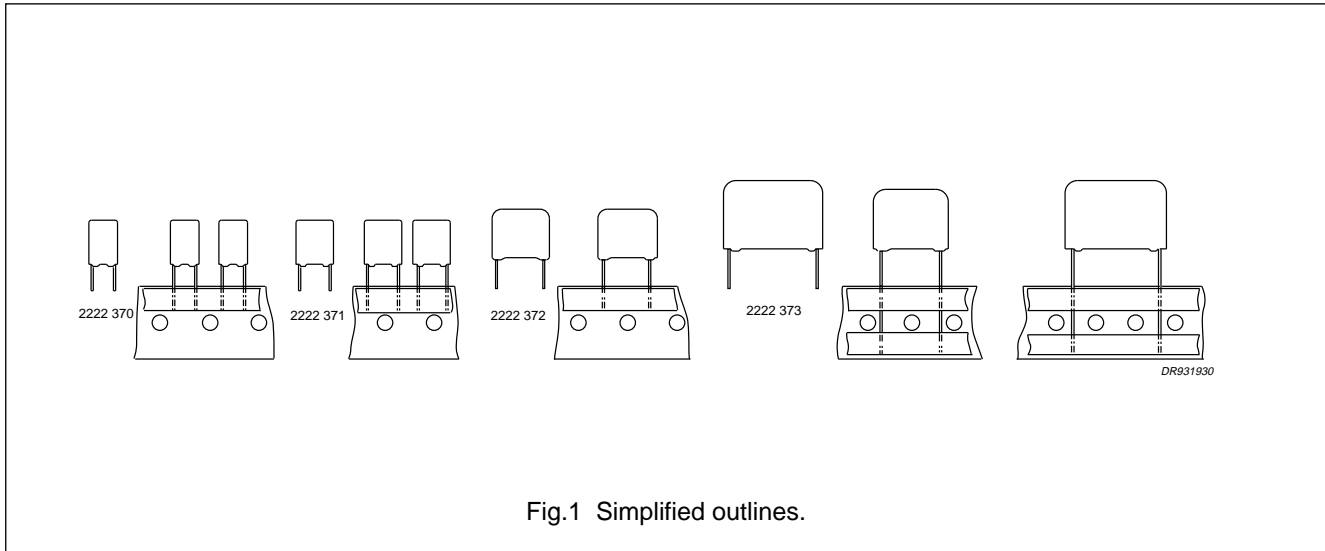


Fig.1 Simplified outlines.

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.

QUICK REFERENCE DATA

DESCRIPTION	VALUE
Capacitance range (E12 series)	0.001 to 15 μ F
Capacitance tolerance	\pm 10%; \pm 5%
Rated voltage (DC)	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 384-2
Performance grade	grade 1 (long life)

APPLICATIONS

- Blocking and coupling
- Bypass and energy reservoir.

Metallized polyester film capacitors

MKT 370

MKT 370 GENERAL DATA

PITCH 5 mm

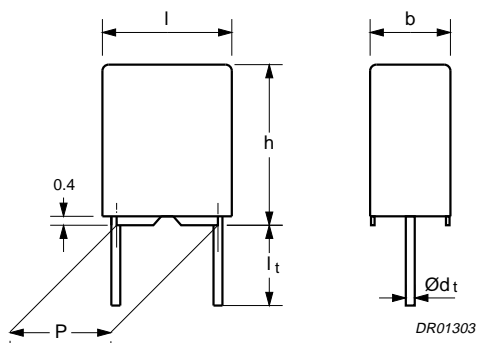


Fig.2 Outline.

Specific reference data for the 63 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle:			
$C \leq 0.1 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
$0.1 \mu\text{F} < C \leq 0.47 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 300 \times 10^{-4}$
$0.47 \mu\text{F} < C \leq 1.0 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	–
Rated voltage pulse slope $(dU/dt)_R$ at U_{Rdc}	60 V/ μs		
R between leads, for $C \leq 0.33 \mu\text{F}$	>15000 M Ω		
RC between leads, for $C > 0.33 \mu\text{F}$	>5000 s		

Available 63 V DC versions

PACKAGING	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Ammopack	H = 18.5 mm; note 1	$\pm 10\%$	2222 370 75...	preferred
		$\pm 5\%$	2222 370 76...	preferred
	H = 16.0 mm; note 1	$\pm 10\%$	2222 370 78...	on request
		$\pm 5\%$	2222 370 79...	on request
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
	$l_t = 26.0 \pm 1.0$ mm	$\pm 10\%$	2222 370 15...	on request
		$\pm 5\%$	2222 370 16...	on request
Taped on reel	H = 18.5 mm; note 1	$\pm 10\%$	2222 370 18...	on request
		$\pm 5\%$	2222 370 19...	on request

Note

1. H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 370

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

loose and taped

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 370 AND PACKAGING					
			AMMOPACK		REEL	LOOSE IN BOX		
			H = 18.5 mm		SPQ	SPQ	$l_t = 4.0 \text{ mm}$	$l_t = 26.0 \text{ mm}$
			last 5 digits of catalogue number ⁽¹⁾				SPQ	SPQ
C-tol = $\pm 10\%$		C-tol = $\pm 5\%$						
Pitch = $5.08 \pm 0.30 \text{ mm}$; $d_t = 0.50 \pm 0.05 \text{ mm}$								
0.056	$2.5 \times 6.5 \times 7.2$	0.25	75563	76563	2000	2000	2000	1000
0.068			75683	76683				
0.082			75823	76823				
0.1			75104	76104				
0.12			75124	76124				
0.15			75154	76154				
0.18			75184	76184				
0.22	$3.5 \times 8.0 \times 7.2$	0.35	75224	76224	1500	1500	2000	1000
0.27			75274	76274				
0.33			75334	76334				
0.39			75394	76394				
0.47			75474	76474				
0.56	$4.5 \times 9.0 \times 7.2$	0.45	75564	76564	1000	1000	2000	1000
0.68			75684	76684				
0.82	$5.0 \times 10.0 \times 7.2$	0.50	75824	76824	1000	1000	2000	1000
1	$6.0 \times 11.0 \times 7.2$	0.60	75105	76105	750	1000	2000	1000
1.2 ⁽²⁾			75125	76125				

Notes

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

Metallized polyester film capacitors

MKT 370

MKT 370 GENERAL DATA

PITCH 5 mm

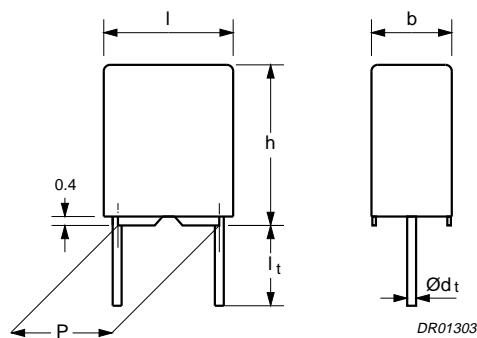


Fig.3 Outline.

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 U _{Rdc}	110 V/μs		
R between leads, for C ≤ 0.33 μF	>15000 MΩ		
RC between leads, for C > 0.33 μF	>5000 s		

Available 100 V DC versions

PACKAGING	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Ammopack	H = 18.5 mm; note 1	±10%	2222 370 85...	preferred
		±5%	2222 370 86...	preferred
	H = 16 mm; note 1	±10%	2222 370 88...	on request
		±5%	2222 370 89...	on request
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 ±1.0 mm	±10%	2222 370 25...	on request
		±5%	2222 370 26...	on request
Taped on reel	H = 18.5 mm; note 1	±10%	2222 370 28...	on request
		±5%	2222 370 29...	on request

Note

1. H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 370

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

loose and taped

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 370 AND PACKAGING					
			AMMOPACK		REEL	LOOSE IN BOX		
			H = 18.5 mm		SPQ	SPQ	$l_t = 4.0 \text{ mm}$	$l_t = 26.0 \text{ mm}$
			last 5 digits of catalogue number ⁽¹⁾				SPQ	SPQ
C-tol = $\pm 10\%$		C-tol = $\pm 5\%$						
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	85123	86123	2000	2000	2000	1000
0.015			85153	86153				
0.018			85183	86183				
0.022			85223	86223				
0.027			85273	86273				
0.033			85333	86333				
0.039			85393	86393				
0.047			85473	86473				
0.056			85563	86563				
0.068			85683	86683				
0.082	85823	86823						
0.10	$3.5 \times 8.0 \times 7.2$	0.35	85104	86104	1500	1500	2000	1000
0.12			85124	86124				
0.15			85154	86154				
0.18			85184	86184				
0.22	$4.5 \times 9.0 \times 7.2$	0.45	85224	86224	1000	1000	2000	1000
0.27			85274	86274				
0.33	$5.0 \times 10.0 \times 7.2$	0.50	85334	86334	1000	1000	2000	1000
0.39	$6.0 \times 11.0 \times 7.2$	0.65	85394	86394	750	1000	2000	1000
0.47			85474	86474				

Note

1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 370

MKT 370 GENERAL DATA

PITCH 5 mm

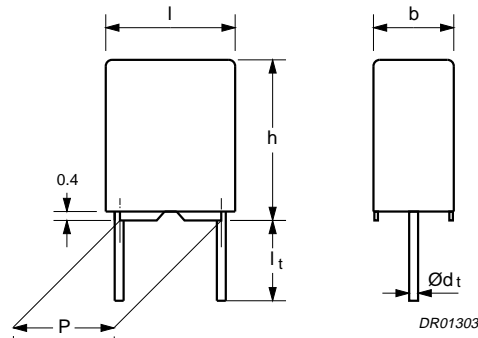


Fig.4 Outline.

Specific reference data for the 250 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: $C \leq 0.1 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
Rated voltage pulse slope $(dU/dt)_R$ at U_{Rdc}	330 V/ μs		
R between leads	$>30000 \text{ M}\Omega$		

Available 250 V DC versions

PACKAGING	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Ammopack	H = 18.5 mm; note 1	$\pm 10\%$	2222 370 35...	preferred
		$\pm 5\%$	2222 370 36...	preferred
	H = 16 mm; note 1	$\pm 10\%$	2222 370 38...	on request
		$\pm 5\%$	2222 370 39...	on request
Loose in box	$l_t = 4.0 +1.0/-0.5 \text{ mm}$	$\pm 10\%$	2222 370 41...	on request
		$\pm 5\%$	2222 370 42...	on request
	$l_t = 26.0 \pm 1.0 \text{ mm}$	$\pm 10\%$	2222 370 45...	on request
		$\pm 5\%$	2222 370 46...	on request
Taped on reel	H = 18.5 mm; note 1	$\pm 10\%$	2222 370 48...	on request
		$\pm 5\%$	2222 370 49...	on request

Note

1. H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 370

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

loose and taped

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 370 AND PACKAGING					
			AMMOPACK		REEL	LOOSE IN BOX		
			H = 18.5 mm		SPQ	SPQ	$l_t = 4.0 \text{ mm}$	$l_t = 26.0 \text{ mm}$
			last 5 digits of catalogue number ⁽¹⁾				SPQ	SPQ
C-tol = $\pm 10\%$		C-tol = $\pm 5\%$						
Pitch = $5.08 \pm 0.30 \text{ mm}; d_t = 0.50 \pm 0.05 \text{ mm}$								
0.0039	$2.5 \times 6.5 \times 7.2$	0.25	35392	36392	2000	2000	2000	1000
0.0047			35472	36472				
0.0056			35562	36562				
0.0068			35682	36682				
0.0082			35822	36822				
0.01			35103	36103				
0.012			35123	36123				
0.015			35153	36153				
0.018			35183	36183				
0.022	$3.5 \times 8.0 \times 7.2$	0.35	35223	36223	1500	1500	2000	1000
0.027			35273	36273				
0.033			35333	36333				
0.039	$4.5 \times 9.0 \times 7.2$	0.45	35393	36393	1000	1000	2000	1000
0.047			35473	36473				
0.056			35563	36563				
0.068	$5.0 \times 10.0 \times 7.2$	0.50	35683	36683	1000	1000	2000	1000
0.082	$6.0 \times 11.0 \times 7.2$	0.60	35823	36823	750	1000	2000	1000
0.1			35104	36104				

Note

1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 370

MKT 370 GENERAL DATA

PITCH 5 mm

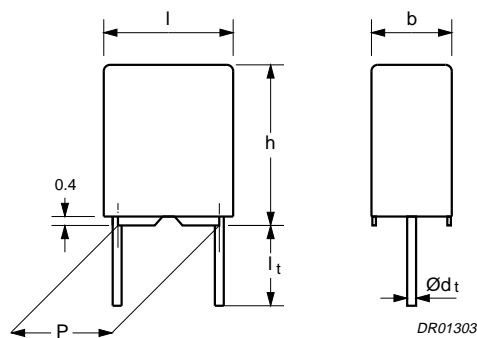


Fig.5 Outline.

Specific reference data for the 400 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: $C \leq 0.1 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
Rated voltage pulse slope $(dU/dt)_R$ at U_{Rdc}	630 V/ μs		
R between leads	>30000 M Ω		

Available 400 V DC versions

PACKAGING	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Ammopack	H = 18.5 mm; note 1	$\pm 10\%$	2222 370 65...	preferred
		$\pm 5\%$	2222 370 66...	preferred
	H = 16 mm; note 1	$\pm 10\%$	2222 370 68...	on request
		$\pm 5\%$	2222 370 69...	on request
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
	$l_t = 26.0 \pm 1.0$ mm	$\pm 10\%$	2222 370 55...	on request
		$\pm 5\%$	2222 370 56...	on request
Taped on reel	H = 18.5 mm; note 1	$\pm 10\%$	2222 370 58...	on request
		$\pm 5\%$	2222 370 59...	on request

Note

1. H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 370

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

loose and taped

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 370 AND PACKAGING					
			AMMOPACK		REEL	LOOSE IN BOX		
			H = 18.5 mm		SPQ	SPQ	$l_t = 4.0 \text{ mm}$	$l_t = 26.0 \text{ mm}$
			last 5 digits of catalogue number ⁽¹⁾				SPQ	SPQ
C-tol = $\pm 10\%$		C-tol = $\pm 5\%$						
Pitch = $5.08 \pm 0.30 \text{ mm}$; $d_t = 0.50 \pm 0.05 \text{ mm}$								
0.001	$2.5 \times 6.5 \times 7.2$	0.25	65102	66102	2000	2000	2000	1000
0.0012			65122	66122				
0.0015			65152	66152				
0.0018			65182	66182				
0.0022			65222	66222				
0.0027			65272	66272				
0.0033			65332	66332				
0.0039			65392	66392				
0.0047			65472	66472				
0.0056			65562	66562				
0.0068			65682	66682				
0.0082	65822	66822						
0.01	$3.5 \times 8.0 \times 7.2$	0.35	65103	66103	1500	1500	2000	1000
0.012			65123	66123				
0.015			65153	66153				
0.018	$4.5 \times 9.0 \times 7.2$	0.45	65183	66183	1000	1000	2000	1000
0.022			65223	66223				
0.027			65273	66273				
0.033	$6.0 \times 11.0 \times 7.2$	0.60	65333	66333	750	1000	2000	1000
0.039			65393	66393				
0.047			65473	66473				

Note

1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 371

MKT 371 GENERAL DATA

PITCH 7.5mm

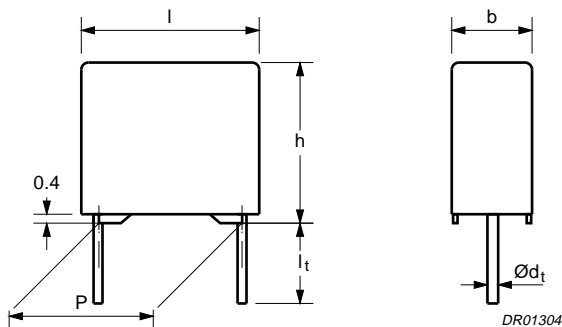


Fig.6 Outline.

Specific reference data for the 63 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle:			
$C \leq 0.1 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
$0.1 \mu\text{F} < C \leq 0.47 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 300 \times 10^{-4}$
$0.47 \mu\text{F} < C \leq 1.0 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	–
Rated voltage pulse slope $(dU/dt)_R$ at U_{Rdc}	18 V/ μs		
R between leads, for $C \leq 0.33 \mu\text{F}$	$> 15000 \text{ M}\Omega$		
RC between leads, for $C > 0.33 \mu\text{F}$	$> 5000 \text{ s}$		

Available 63 V DC versions

PACKAGING	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	$H = 18.5 \text{ mm}$; note 1	$\pm 10\%$	2222 371 38...	preferred
		$\pm 5\%$	2222 371 39...	preferred
Loose in box	$l_t = 26.0 \pm 1.0 \text{ mm}$	$\pm 10\%$	2222 371 15...	on request
		$\pm 5\%$	2222 371 16...	on request
Taped on reel	$H = 18.5 \text{ mm}$; note 1	$\pm 10\%$	2222 371 35...	on request
		$\pm 5\%$	2222 371 36...	on request
	$H = 16.5 \text{ mm}$; note 1	$\pm 10\%$	2222 371 18...	on request
		$\pm 5\%$	2222 371 19...	on request

Note

1. H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 371

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

loose and taped

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 371 AND PACKAGING							
			LOOSE IN BOX				AMMOPACK			REEL
			$l_t = 4.0 +1.0/-0.5 \text{ mm}$		$l_t = 26.0 \text{ mm}$		$H = 18.5 \text{ mm}$			SPQ
			last 5 digits of catalogue number ⁽¹⁾		SPQ	SPQ	last 5 digits of catalogue number ⁽¹⁾		SPQ	
C-tol = $\pm 10\%$	C-tol = $\pm 5\%$			C-tol = $\pm 10\%$	C-tol = $\pm 5\%$					
Pitch = $7.62 +0.30/-0.40 \text{ mm}$; $d_t = 0.60 \pm 0.06 \text{ mm}$										
0.056	$2.5 \times 6.5 \times 10.0$	0.3	11563	12563	1000	1000	38563	39563	2000	2000
0.068			11683	12683			38683	39683		
0.082			11823	12823			38823	39823		
0.1			11104	12104			38104	39104		
0.12	$3.0 \times 8.0 \times 10.0$	0.4	11124	12124	1000	1000	38124	39124	1500	1500
0.15			11154	12154			38154	39154		
0.18			11184	12184			38184	39184		
0.22			11224	12224			38224	39224		
0.27	$4.0 \times 9.0 \times 10.0$	0.5	11274	12274	1000	1000	38274	39274	1000	1500
0.33			11334	12334			38334	39334		
0.39			11394	12394			38394	39394		
0.47			11474	12474			38474	39474		
0.56			11564	12564			38564	39564		
0.68			11684	12684			38684	39684		
0.82	$5.0 \times 10.5 \times 10.0$	0.7	11824	12824	1000	1000	38824	39824	1000	1000
0.1			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

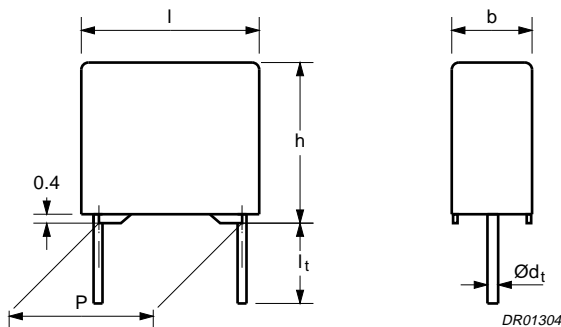


Fig.7 Outline.

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 U _{Rdc}	36 V/μs		
R between leads, for C ≤ 0.33 μF	>15000 MΩ		
RC between leads, for C > 0.33 μF	>5000 s		

Available 100 V DC versions

PACKAGING	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	l _t = 4.0 +1.0/-0.5 mm	±10%	2222 371 21...	preferred
		±5%	2222 371 22...	preferred
Ammopack	H = 18.5 mm; note 1	±10%	2222 371 68...	preferred
		±5%	2222 371 69...	preferred
Loose in box	l _t = 26.0 ±1.0 mm	±10%	2222 371 25...	on request
		±5%	2222 371 26...	on request
Taped on reel	H = 18.5 mm; note 1	±10%	2222 371 65...	on request
		±5%	2222 371 66...	on request
	H = 16.5 mm; note 1	±10%	2222 371 28...	on request
		±5%	2222 371 29...	on request

Note

1. H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 371

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

loose and taped

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 371 AND PACKAGING							
			LOOSE IN BOX				AMMOPACK			REEL
			$l_t = 4.0 +1.0/-0.5 \text{ mm}$		$l_t = 26.0 \text{ mm}$		H = 18.5 mm			SPQ
			last 5 digits of catalogue number ⁽¹⁾		SPQ	SPQ	last 5 digits of catalogue number ⁽¹⁾		SPQ	
C-tol = $\pm 10\%$	C-tol = $\pm 5\%$			C-tol = $\pm 10\%$	C-tol = $\pm 5\%$					
Pitch = 7.62 +0.30/-0.40 mm; $d_t = 0.60 \pm 0.06 \text{ mm}$										
0.018	2.5 × 6.5 × 10.0	0.3	21183	22183	1000	1000	68183	69183	2000	2000
0.022			21223	22223			68223	69223		
0.027			21273	22273			68273	69273		
0.033			21333	22333			68333	69333		
0.039			21393	22393			68393	69393		
0.047			21473	22473			68473	69473		
0.056	3.0 × 8.0 × 10.0	0.4	21563	22563	1000	1000	68563	69563	1500	1500
0.068			21683	22683			68683	69683		
0.082			21823	22823			68823	69823		
0.1			21104	22104			68104	69104		
0.12	4.0 × 9.0 × 10.0	0.5	21124	22124	1000	1000	68124	69124	1000	1500
0.15			21154	22154			68154	69154		
0.18			21184	22184			68184	69184		
0.22			21224	22224			68224	69224		
0.27	5.0 × 10.5 × 10.0	0.7	21274	22274	1000	1000	68274	69274	1000	1000
0.33			21334	22334			68334	69334		
0.39			21394	22394			68394	69394		
0.47			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

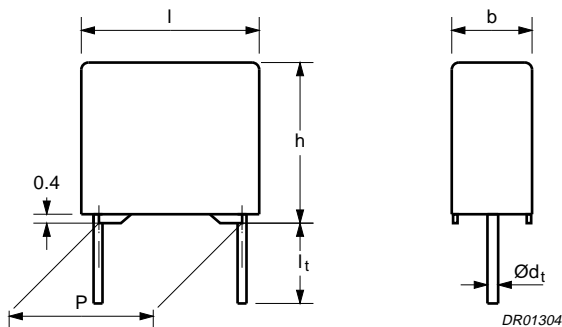


Fig.8 Outline.

Specific reference data for the 250 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
Rated voltage pulse slope (dU/dt) _R at U _{Rdc}	70 V/μs		
R between leads	>30000 MΩ		

Available 250 V DC versions

PACKAGING	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	l _t = 4.0 +1.0/-0.5 mm	±10%	2222 371 41...	preferred
		±5%	2222 371 42...	preferred
Ammopack	H = 18.5 mm; note 1	±10%	2222 371 78...	preferred
		±5%	2222 371 79...	preferred
Loose in box	l _t = 26.0 ±1.0 mm	±10%	2222 371 45...	on request
		±5%	2222 371 46...	on request
Taped on reel	H = 18.5 mm; note 1	±10%	2222 371 75...	on request
		±5%	2222 371 76...	on request
	H = 16.5 mm; note 1	±10%	2222 371 48...	on request
		±5%	2222 371 49...	on request

Note

1. H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 371

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

loose and taped

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 371 AND PACKAGING							
			LOOSE IN BOX				AMMOPACK			REEL
			$l_t =$ 4.0 +1.0/-0.5 mm		$l_t =$ 26.0 mm	H = 18.5 mm			SPQ	SPQ
			last 5 digits of catalogue number ⁽¹⁾		SPQ	last 5 digits of catalogue number ⁽¹⁾		SPQ		
			C-tol = $\pm 10\%$	C-tol = $\pm 5\%$		C-tol = $\pm 10\%$	C-tol = $\pm 5\%$			
Pitch = 7.62 +0.30/-0.40 mm; $d_t = 0.60 \pm 0.06$ mm										
0.0082	2.5 × 6.5 × 10.0	0.3	41822	42822	1000	1000	78822	79822	2000	2000
0.01			41103	42103			78103	79103		
0.012			41123	42123			78123	79123		
0.015			41153	42153			78153	79153		
0.018	3.0 × 8.0 × 10.0	0.4	41183	42183	1000	1000	78183	79183	1500	1500
0.022			41223	42223			78223	79223		
0.027			41273	42273			78273	79273		
0.033			41333	42333			78333	79333		
0.039			41393	42393			78393	79393		
0.047			41473	42473			78473	79473		
0.056	4.0 × 9.0 × 10.0	0.5	41563	42563	1000	1000	78563	79563	1000	1500
0.068			41683	42683			78683	79683		
0.082			41823	42823			78823	79823		
0.1			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

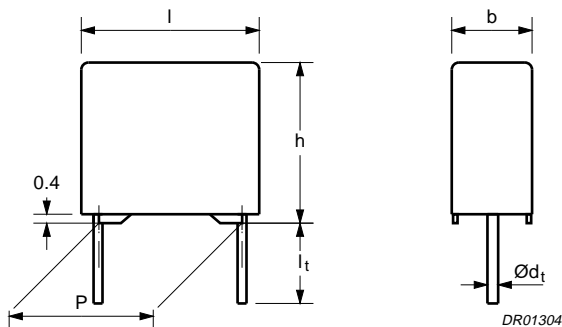


Fig.9 Outline.

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 U_{Rdc}	190 V/ μ s		
R between leads	$> 30000 \text{ M}\Omega$		

Available 400 V DC versions

PACKAGING	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 51...	preferred
		$\pm 5\%$	2222 371 52...	preferred
Ammopack	$H = 18.5 \text{ mm}$; note 1	$\pm 10\%$	2222 371 88...	preferred
		$\pm 5\%$	2222 371 89...	preferred
Loose in box	$l_t = 26.0 \pm 1.0 \text{ mm}$	$\pm 10\%$	2222 371 55...	on request
		$\pm 5\%$	2222 371 56...	on request
Taped on reel	$H = 18.5 \text{ mm}$; note 1	$\pm 10\%$	2222 371 85...	on request
		$\pm 5\%$	2222 371 86...	on request
	$H = 16.5 \text{ mm}$; note 1	$\pm 10\%$	2222 371 58...	on request
		$\pm 5\%$	2222 371 59...	on request

Note

1. H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 371

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

loose and taped

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 371 AND PACKAGING							
			LOOSE IN BOX				AMMOPACK			REEL
			$l_t =$ 4.0 +1.0/-0.5 mm		$l_t =$ 26.0 mm	H = 18.5 mm			SPQ	SPQ
			last 5 digits of catalogue number ⁽¹⁾		SPQ	SPQ	last 5 digits of catalogue number ⁽¹⁾			
C-tol = $\pm 10\%$	C-tol = $\pm 5\%$			C-tol = $\pm 10\%$	C-tol = $\pm 5\%$					
Pitch = 7.62 +0.30/-0.40 mm; $d_t = 0.60 \pm 0.06$ mm										
0.0039	2.5 × 6.5 × 10.0	0.3	51392	52392	1000	1000	88392	89392	2000	2000
0.0047			51472	52472			88472	89472		
0.0056			51562	52562			88562	89562		
0.0068			51682	52682			88682	89682		
0.0082	3.0 × 8.0 × 10.0	0.4	51822	52822	1000	1000	88822	89822	1500	1500
0.01			51103	52103			88103	89103		
0.012	4.0 × 9.0 × 10.0	0.5	51123	52123	1000	1000	88123	89123	1000	1500
0.015			51153	52153			88153	89153		

Note

1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 372

MKT 372 GENERAL DATA

PITCH 10 mm

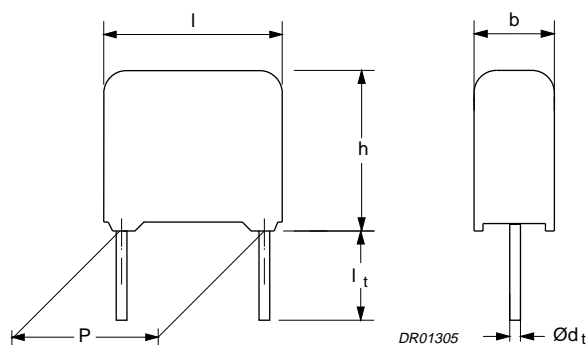


Fig.10 Outline.

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 U _{Rdc}	34 V/μs		
R between leads, for C ≤ 0.33 μF	>15000 MΩ		
RC between leads, for C > 0.33 μF	>5000 s		

Available 100 V DC versions

PACKAGING	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 21...	preferred
		±5%	2222 372 22...	on request
Taped on reel	H = 18.5 mm; note 1	±10%	2222 372 25...	on request
		±5%	2222 372 26...	on request
Ammopack	H = 18.5 mm; note 1	±10%	2222 372 28...	on request
		±5%	2222 372 29...	on request

Note

1. H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 372

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

loose and taped

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 372 AND PACKAGING			
			LOOSE IN BOX		REEL	AMMOPACK
			$l_t = 4.0 +1.0/-0.5$ mm		H = 18.5 mm	H = 18.5 mm
			last 5 digits of catalogue number ⁽¹⁾	SPQ	SPQ	SPQ
			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	21104	1000	1400	750
0.12			21124			
0.15			21154			
0.18			21184			
0.22			21224			
0.27	4.0 × 10.0 × 12.5	0.7	21274	1000	1400	750
0.33			21334			
0.39	5.0 × 11.0 × 12.5	0.9	21394	1000	1100	600
0.47			21474			

Note

1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 372

MKT 372 GENERAL DATA

PITCH 10 mm

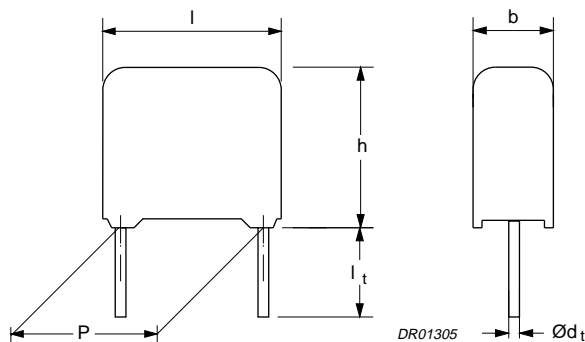


Fig.11 Outline.

Specific reference data for the 250 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: C ≤ 0.1 µF	≤75 × 10 ⁻⁴	≤130 × 10 ⁻⁴	≤250 × 10 ⁻⁴
0.1 µF < C ≤ 0.47 µF	≤75 × 10 ⁻⁴	≤130 × 10 ⁻⁴	≤300 × 10 ⁻⁴
Rated voltage pulse slope (dU/dt) _R at U _{Rdc}	50 V/µs		
R between leads, for C ≤ 0.33 µF	>30000 MΩ		

Available 250 V DC versions

PACKAGING	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 1	±10%	2222 372 45...	on request
		±5%	2222 372 46...	on request
Ammopack	H = 18.5 mm; note 1	±10%	2222 372 48...	on request
		±5%	2222 372 49...	on request

Note

1. H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 372

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

loose and taped

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 372 AND PACKAGING			
			LOOSE IN BOX		REEL	AMMOPACK
			$l_t = 4.0 + 1.0/-0.5 \text{ mm}$		H = 18.5 mm	H = 18.5 mm
			last 5 digits of catalogue number ⁽¹⁾	SPQ	SPQ	SPQ
			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	41473	1000	1400	750
0.056			41563			
0.068			41683			
0.082	4.0 × 10.0 × 12.5	0.7	41823	1000	1400	750
0.1			41104			
0.12	5.0 × 11.0 × 12.5	0.9	41124	1000	1100	600
0.15			41154			

Note

1. The shading indicates preferred types.

Metallized polyester film capacitors

MKT 372

MKT 372 GENERAL DATA

PITCH 10 mm

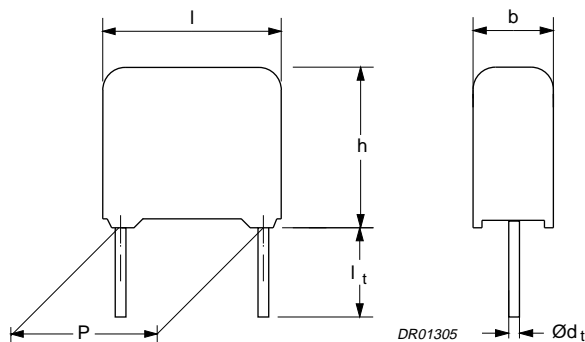


Fig.12 Outline.

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 U_{Rdc}	80 V/ μ s		
R between leads	$> 30000 \text{ M}\Omega$		

Available 400 V DC versions

PACKAGING	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 372 51...	preferred
		$\pm 5\%$	2222 372 52...	on request
Taped on reel	H = 18.5 mm; note 1	$\pm 10\%$	2222 372 55...	on request
		$\pm 5\%$	2222 372 56...	on request
Ammopack	H = 18.5 mm; note 1	$\pm 10\%$	2222 372 58...	on request
		$\pm 5\%$	2222 372 59...	on request

Note

1. H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 372

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

loose and taped

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 372 AND PACKAGING			
			LOOSE IN BOX		REEL	AMMOPACK
			$l_t = 4.0 +1.0/-0.5 \text{ mm}$		H = 18.5 mm	H = 18.5 mm
			last 5 digits of catalogue number ⁽¹⁾	SPQ	SPQ	SPQ
			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	51472	1000	1400	750
0.0056			51562			
0.0068			51682			
0.0082			51822			
0.01			51103			
0.012			51123			
0.015			51153			
0.018			51183			
0.022			51223			
0.027	4.0 × 10.0 × 12.5	0.7	51273	1000	1400	750
0.033			51333			
0.039	5.0 × 11.0 × 12.5	0.9	51393	1000	1100	600
0.047			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

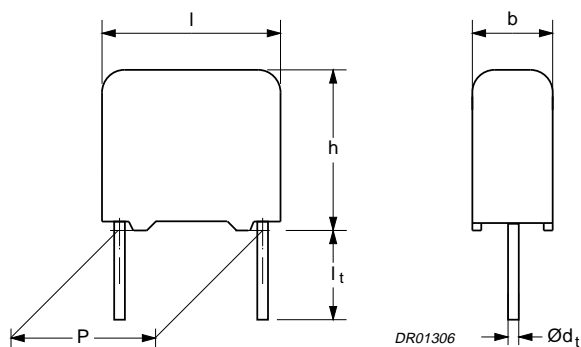


Fig.13 Outline.

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	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 300 \times 10^{-4}$
0.47 μF < C \leq 1.0 μF	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	–
1.0 μF < C \leq 10 μF	$\leq 75 \times 10^{-4}$	$\leq 150 \times 10^{-4}$	–
C > 10 μF	$\leq 75 \times 10^{-4}$	–	–
Rated voltage pulse slope (dU/dt) _R at U _{Rdc} :			
P = 15 mm		14 V/ μs	
P = 22.5 mm		5 V/ μs	
P = 27.5 mm		4 V/ μs	
R between leads, for C \leq 0.33 μF		>15000 M Ω	
RC between leads, for C > 0.33 μF		>5000 s	

Available 100 V DC versions

PACKAGING	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...	preferred
		$\pm 5\%$	2222 373 22...	on request
Taped on reel	H = 18.5 mm; note 1	$\pm 10\%$	2222 373 25...	on request
		$\pm 5\%$	2222 373 26...	on request

Note

1. H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 373

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

loose and taped

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 373 AND PACKAGING		
			LOOSE IN BOX		REEL
			$l_t = 5.0 \pm 1.0 \text{ mm}$		H = 18.5 mm
			last 5 digits of catalogue number ⁽¹⁾	SPQ	SPQ
			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	21334 21394 21474 21564 21684	1000	1100
0.82 1	6.0 × 12.0 × 17.5	1.4	21824 21105	1000	900
1.2 1.5	7.0 × 13.5 × 17.5	1.9	21125 21155	1000	800
1.8 2.2	8.5 × 15.0 × 17.5	2.6	21185 21225	1000	650
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	21275 21335	200	450
3.9 4.7	10.0 × 19.5 × 26.0	5.5	21395 21475	200	350
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	21565 21685	100	300
8.2 10	13.0 × 23.0 × 31.0	10.5	21825 21106	100	250
12 15	18.0 × 28.0 × 31.0	17.5	21126 21156	100	150

Available on request

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 373 AND PACKAGING					
			loose in box; $l_t = 5.0 \pm 1.0 \text{ mm}$			taped on reel; H = 18.5 mm ⁽²⁾		
			last 5 digits of catalogue number		SPQ	last 5 digits of catalogue number		SPQ
			C-tol = $\pm 10\%$	C-tol = $\pm 5\%$		C-tol = $\pm 10\%$	C-tol = $\pm 5\%$	
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	90012	90013	200	90018	90019	600
1.8 2.2	7.0 × 16.5 × 26.0	3.2	90022 90002	90023 90003	200	90028 90008	90029 90009	550
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	90032	90033	100	90038	90039	400

Notes

- The shading indicates preferred types.
- H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 373

MKT 373 GENERAL DATA

PITCH 15/22.5/27.5 mm

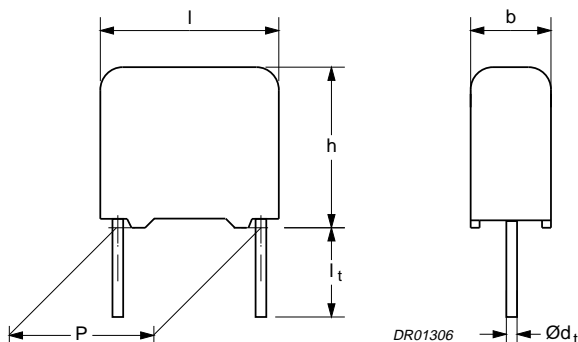


Fig.14 Outline.

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 ≤ 0.47 µF	≤75 × 10 ⁻⁴	≤130 × 10 ⁻⁴	≤300 × 10 ⁻⁴
0.47 µF < C ≤ 1.0 µF	≤75 × 10 ⁻⁴	≤130 × 10 ⁻⁴	–
1.0 µF < C ≤ 4.7 µF	≤75 × 10 ⁻⁴	≤150 × 10 ⁻⁴	–
Rated voltage pulse slope (dU/dt) _R at U _{Rdc} :			
P = 15 mm		16 V/µs	
P = 22.5 mm		7 V/µs	
P = 27.5 mm		6 V/µs	
R between leads, for C ≤ 0.33 µF		>30000 MΩ	
RC between leads, for C > 0.33 µF		>10000 s	

Available 250 V DC versions

PACKAGING	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	l _t = 5.0 ± 1.0 mm	±10%	2222 373 41...	preferred
		±5%	2222 373 42...	on request
Taped on reel	H = 18.5 mm; note 1	±10%	2222 373 45...	on request
		±5%	2222 373 46...	on request

Note

1. H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 373

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

loose and taped

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 373 AND PACKAGING		
			LOOSE IN BOX		REEL
			$l_t = 5.0 \pm 1.0 \text{ mm}$		H = 18.5 mm
			last 5 digits of catalogue number ⁽¹⁾	SPQ	SPQ
			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	41154	1000	1100
			41184		
			41224		
0.27 0.33 0.39 0.47	6.0 × 12.0 × 17.5	1.4	41274	1000	900
			41334		
			41394		
			41474		
0.56 0.68	7.0 × 13.5 × 17.5	1.9	41564	1000	800
			41684		
0.82 1.0	8.5 × 15.0 × 17.5	2.6	41824	1000	650
			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	41125	200	450
			41155		
1.8 2.2	10.0 × 19.5 × 26.0	5.5	41185	200	350
			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	41275	100	250
			41335		
3.9 4.7	15.0 × 25.0 × 31.0	12.5	41395	100	200
			41475		

Available on request

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 373 AND PACKAGING					
			loose in box; $l_t = 5.0 \pm 1.0 \text{ mm}$			taped on reel; H = 18.5 mm ⁽²⁾		
			last 5 digits of catalogue number		SPQ	last 5 digits of catalogue number		SPQ
			C-tol = $\pm 10\%$	C-tol = $\pm 5\%$		C-tol = $\pm 10\%$	C-tol = $\pm 5\%$	
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	90042	90043	200	90048	90049	600
			90052	90053		90058	90059	
			90062	90063		90068	90069	
0.82 1	7.0 × 16.5 × 26.0	3.2	90072	90073	200	90078	90079	550
			90082	90083		90088	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	90172	90173	100	90174	90175	400
			90092	90093		90098	90099	
1.8 2.2	11.0 × 21.0 × 31.0	7.8	90102	90103	100	90108	90109	300
			90112	90113		90118	90119	

Notes

- The shading indicates preferred types.
- H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 373

MKT 373 GENERAL DATA

PITCH 15/22.5/27.5 mm

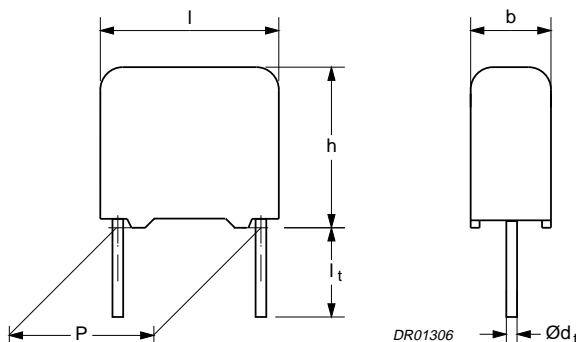


Fig.15 Outline.

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 ≤ 0.1 µF	≤75 × 10 ⁻⁴	≤130 × 10 ⁻⁴	≤250 × 10 ⁻⁴
0.1 µF < C ≤ 0.47 µF	≤75 × 10 ⁻⁴	≤130 × 10 ⁻⁴	≤300 × 10 ⁻⁴
0.47 µF < C ≤ 1.0 µF	≤75 × 10 ⁻⁴	≤130 × 10 ⁻⁴	–
1.0 µF < C ≤ 1.5 µF	≤75 × 10 ⁻⁴	≤150 × 10 ⁻⁴	–
Rated voltage pulse slope (dU/dt) _R at U _{Rdc} :			
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 ≤ 0.33 µF		>30000 MΩ	
RC between leads, for C > 0.33 µF		>10000 s	

Available 400 V DC versions

PACKAGING	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	l _t = 5.0 ± 1.0 mm	±10%	2222 373 51...	preferred
		±5%	2222 373 52...	on request
Taped on reel	H = 18.5 mm; note 1	±10%	2222 373 55...	on request
		±5%	2222 373 56...	on request

Note

1. H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

Metallized polyester film capacitors

MKT 373

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

loose and taped

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 373 AND PACKAGING		
			LOOSE IN BOX		REEL
			$l_t = 5.0 \pm 1.0\text{ mm}$		H = 18.5 mm
			last 5 digits of catalogue number ⁽¹⁾	SPQ	SPQ
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	51473	1000	1100
0.056			51563		
0.068			51683		
0.082			51823		
0.1			51104		
0.12	6.0 × 12.0 × 17.5	1.4	51124	1000	900
0.15			51154		
0.18	7.0 × 13.5 × 17.5	1.9	51184	1000	800
0.22			51224		
0.27	8.5 × 15.0 × 17.5	2.6	51274	1000	650
0.33			51334		
Pitch = $22.5 \pm 0.4\text{ mm}$; $d_t = 0.80 \pm 0.08\text{ mm}$					
0.39	8.5 × 18.0 × 26.0	4.4	51394	200	450
0.47			51474		
0.56	10.0 × 19.5 × 26.0	4.4	51564	200	350
0.68		5.5	51684		
Pitch = $27.5 \pm 0.4\text{ mm}$; $d_t = 0.80 \pm 0.08\text{ mm}$					
0.82	11.0 × 21.0 × 31.0	7.8	51824	100	300
1			51105		
1.2	15.0 × 25.0 × 31.0	12.8	51125	100	200
1.5			51155		

Available on request

C (μF)	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER 2222 373 AND PACKAGING					
			loose in box; $l_t = 5.0 \pm 1.0\text{ mm}$			taped on reel; H = 18.5 mm ⁽²⁾		
			last 5 digits of catalogue number		SPQ	last 5 digits of catalogue number		SPQ
			C-tol = $\pm 10\%$	C-tol = $\pm 5\%$		C-tol = $\pm 10\%$	C-tol = $\pm 5\%$	
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	90122	90123	200	90128	90129	600
0.27	7.0 × 16.5 × 26.0	3.2	90132	90133	200	90138	90139	550
0.33			90142	90143		90148	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	90152	90153	100	90158	90159	400

Notes

1. The shading indicates preferred types.
2. H = in-tape height for detailed specifications refer to this handbook, Chapter "Packaging".

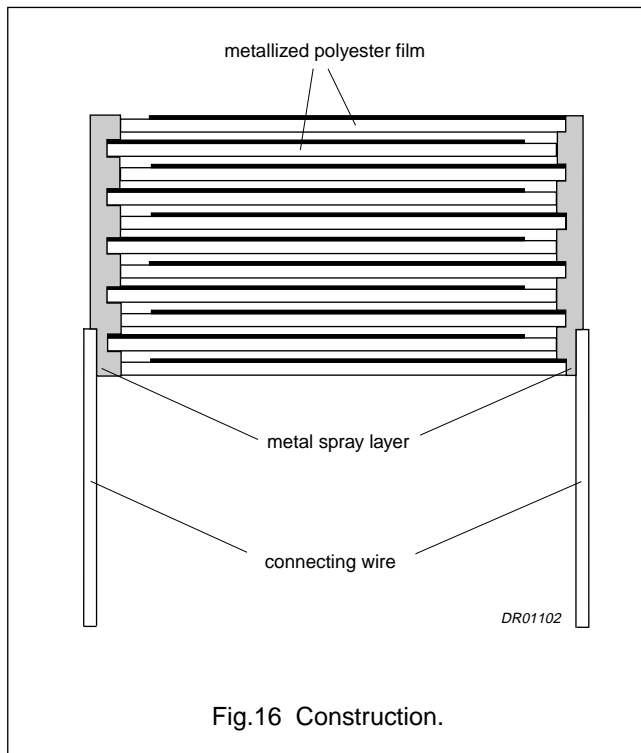
Metallized polyester film capacitors

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 (pitch = 2e)
 - Copper wire (pitch > 2e)
- 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".

SPECIFIC METHOD OF MOUNTING TO WITHSTAND VIBRATION AND SHOCK

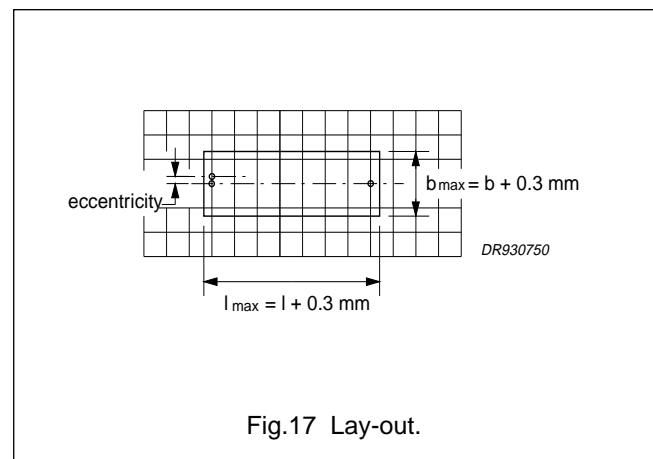
In order to withstand vibration and shock tests, it must be ensured that the stand-off pips are in good contact with the printed-circuit board.

- 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.17:

- Eccentricity see Fig.17. 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 717" as reference: $h_{\max} \leq h + 0.3$ mm.



RATINGS AND CHARACTERISTICS

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 $50 \pm 2\%$.

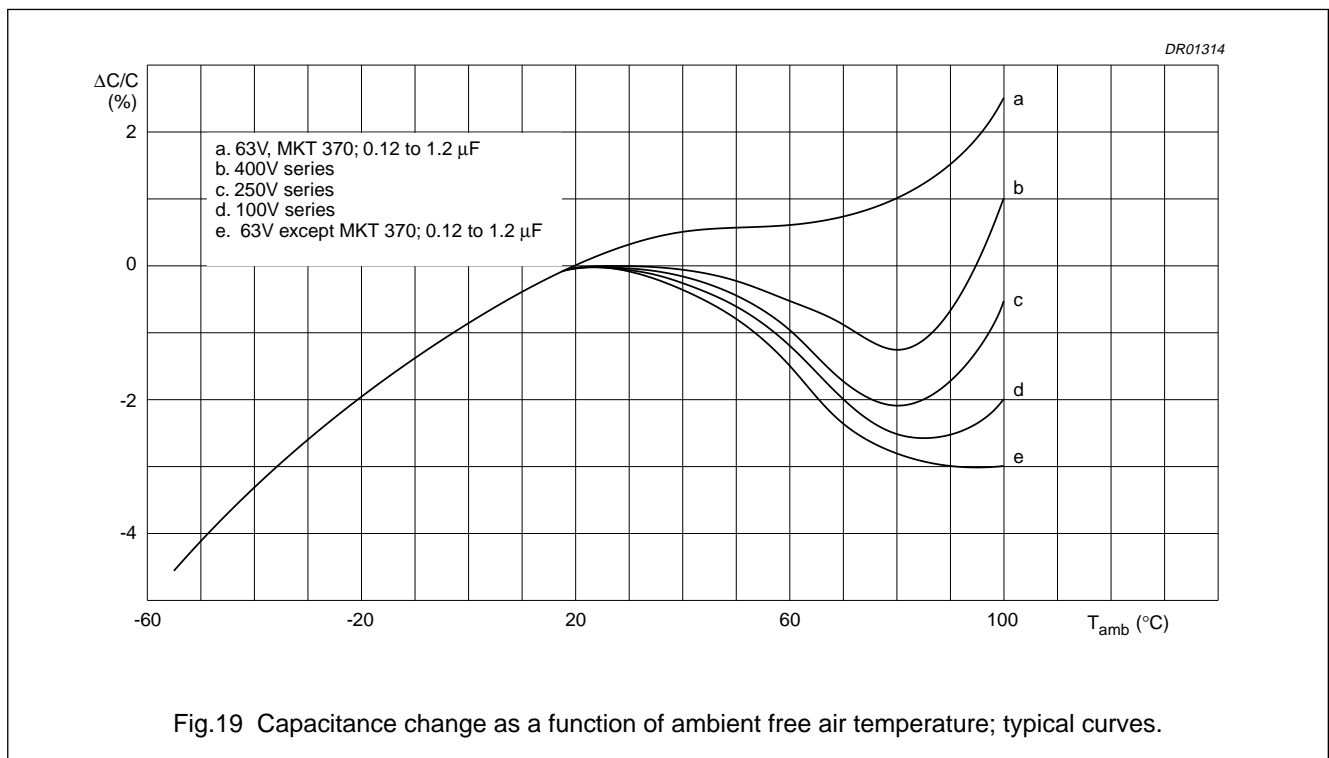
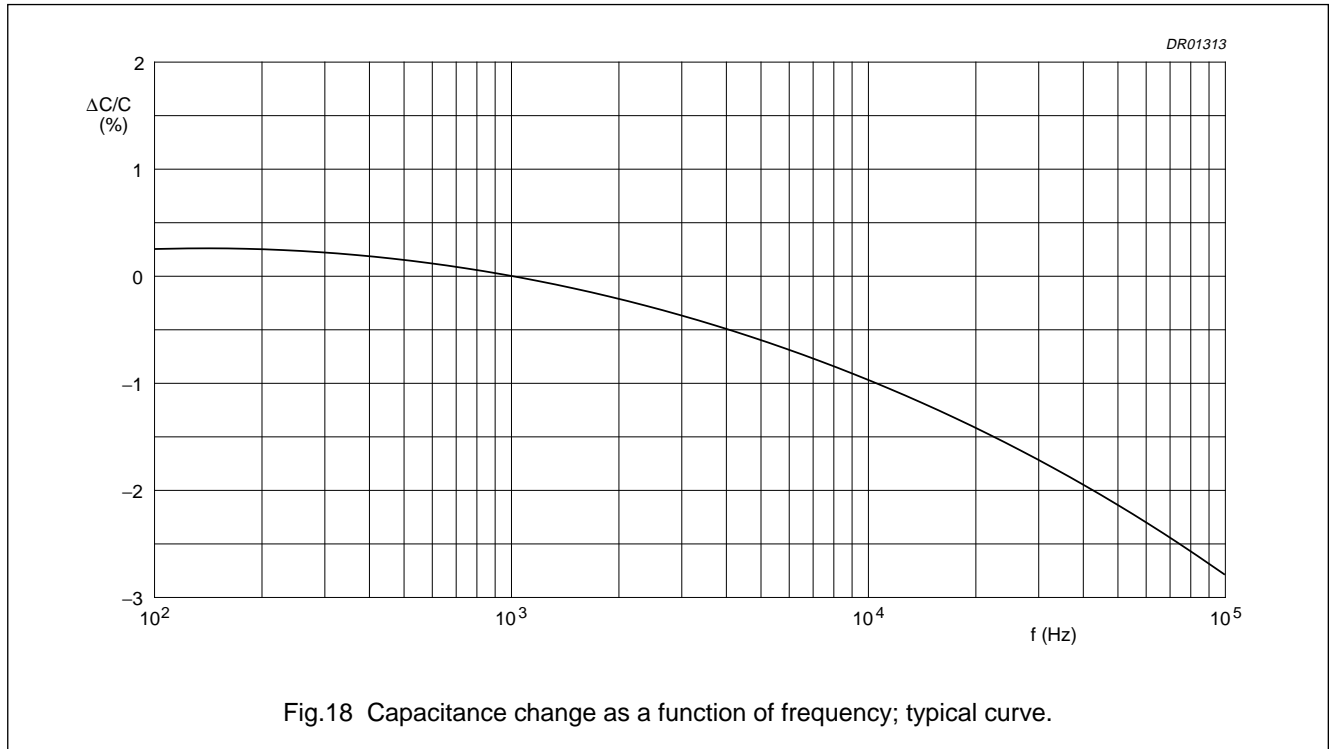
For reference testing, a conditioning period shall be applied over 96 ± 4 hours by heating the products in a circulating air oven at the rated temperature and a relative humidity not exceeding 20%.

Metallized polyester film capacitors

MKT 370/371/372/373

Capacitance

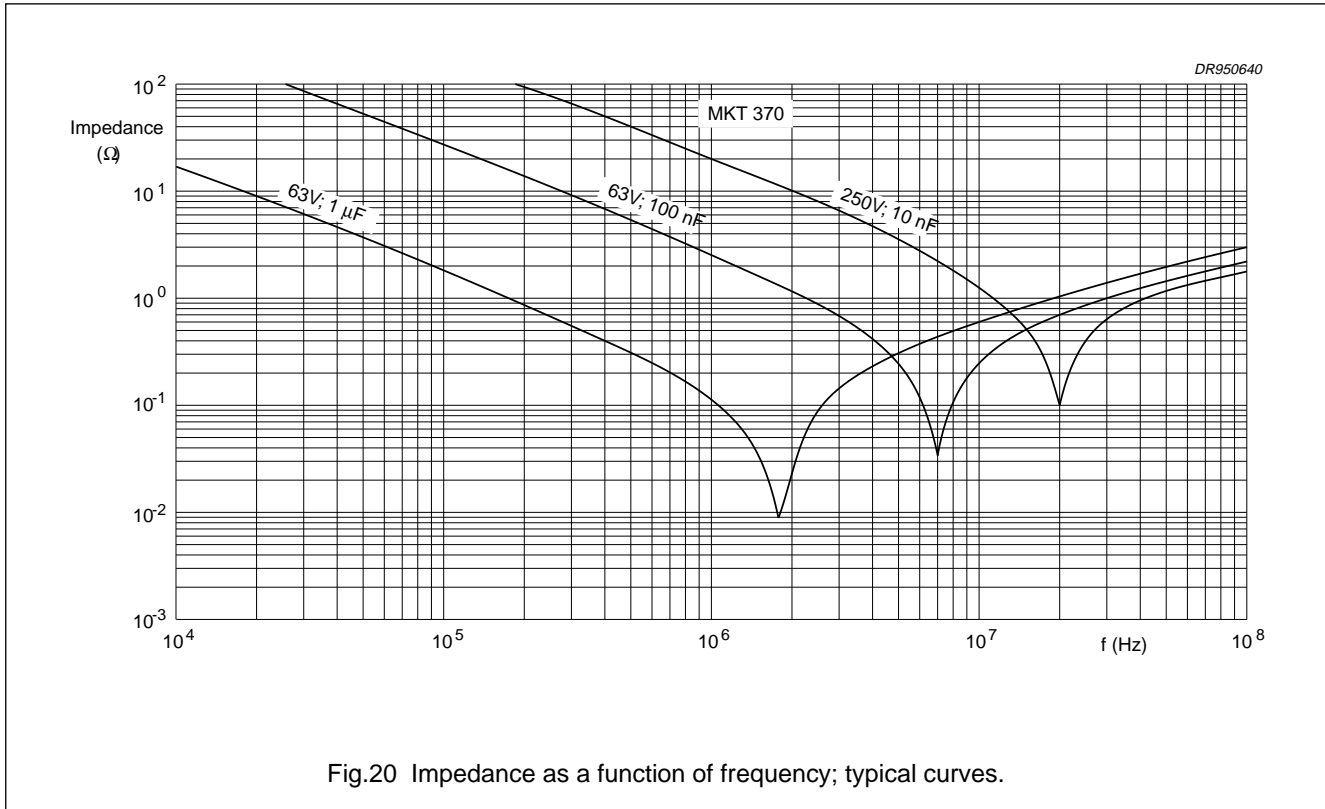
All capacitance values are specified at 1 kHz.



Metallized polyester film capacitors

MKT 370/371/372/373

Impedance



Temperature

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

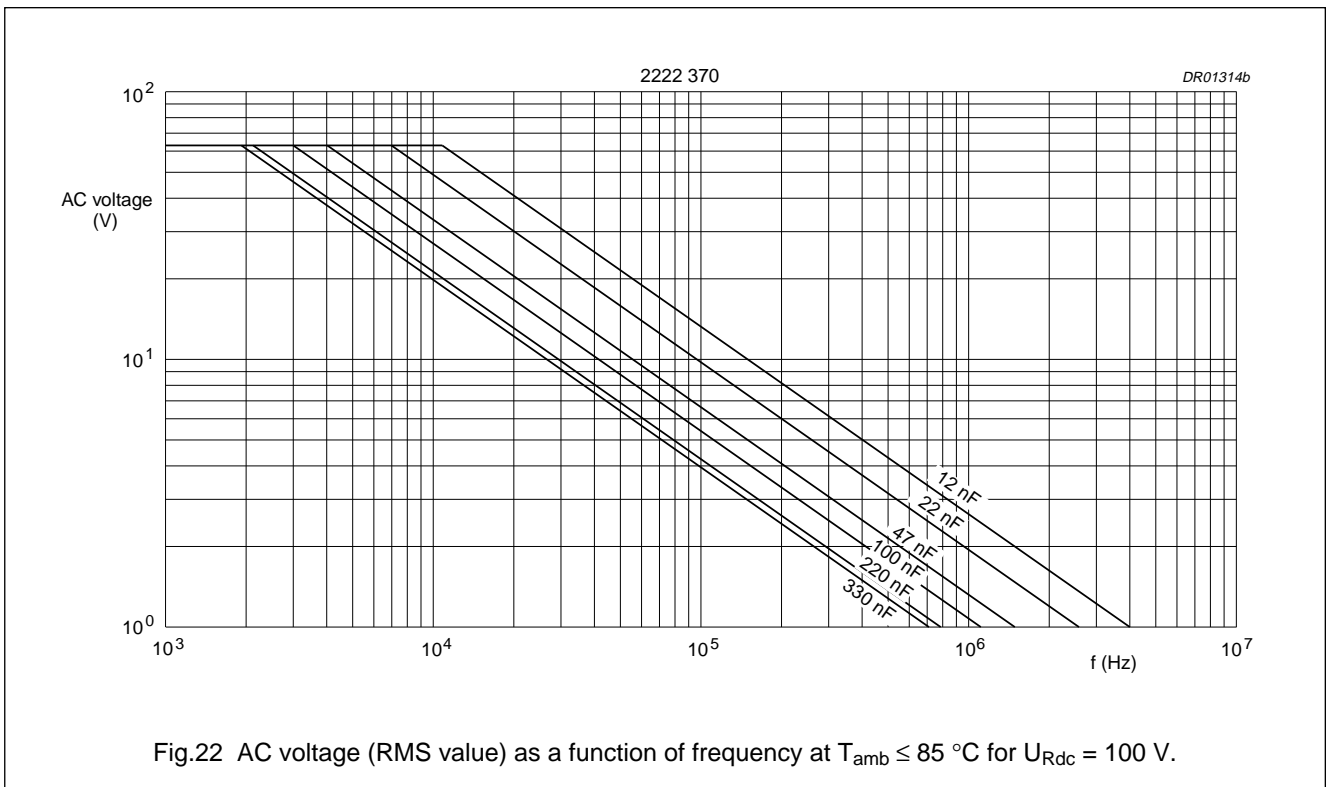
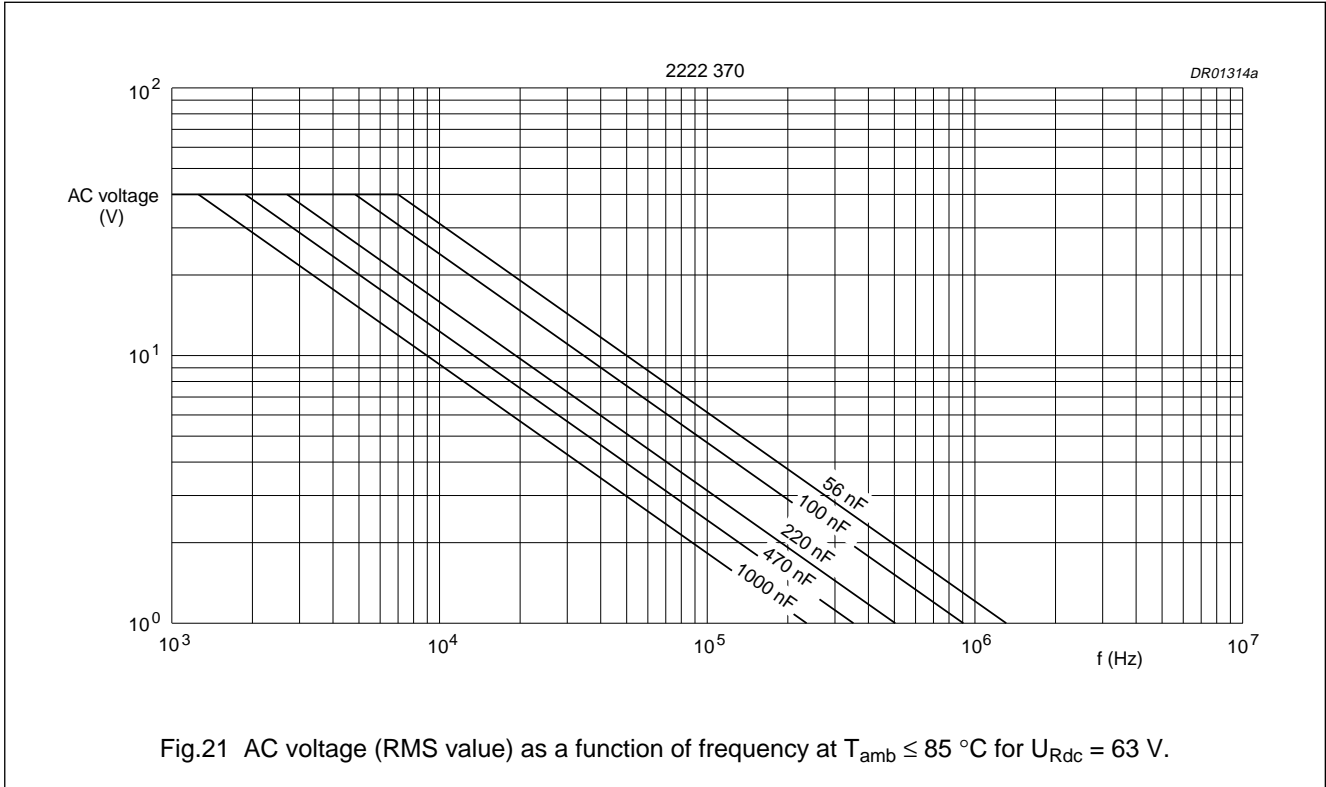
Voltage

- Category voltage: $U_c = 0.8 \times U_{Rdc}$
- Test voltage between leads: $1.6 \times U_{Rdc}$
- Test voltage between interconnected leads and case (foil method): $2 \times U_{Rdc}$ (min. 200 V).

Metallized polyester film capacitors

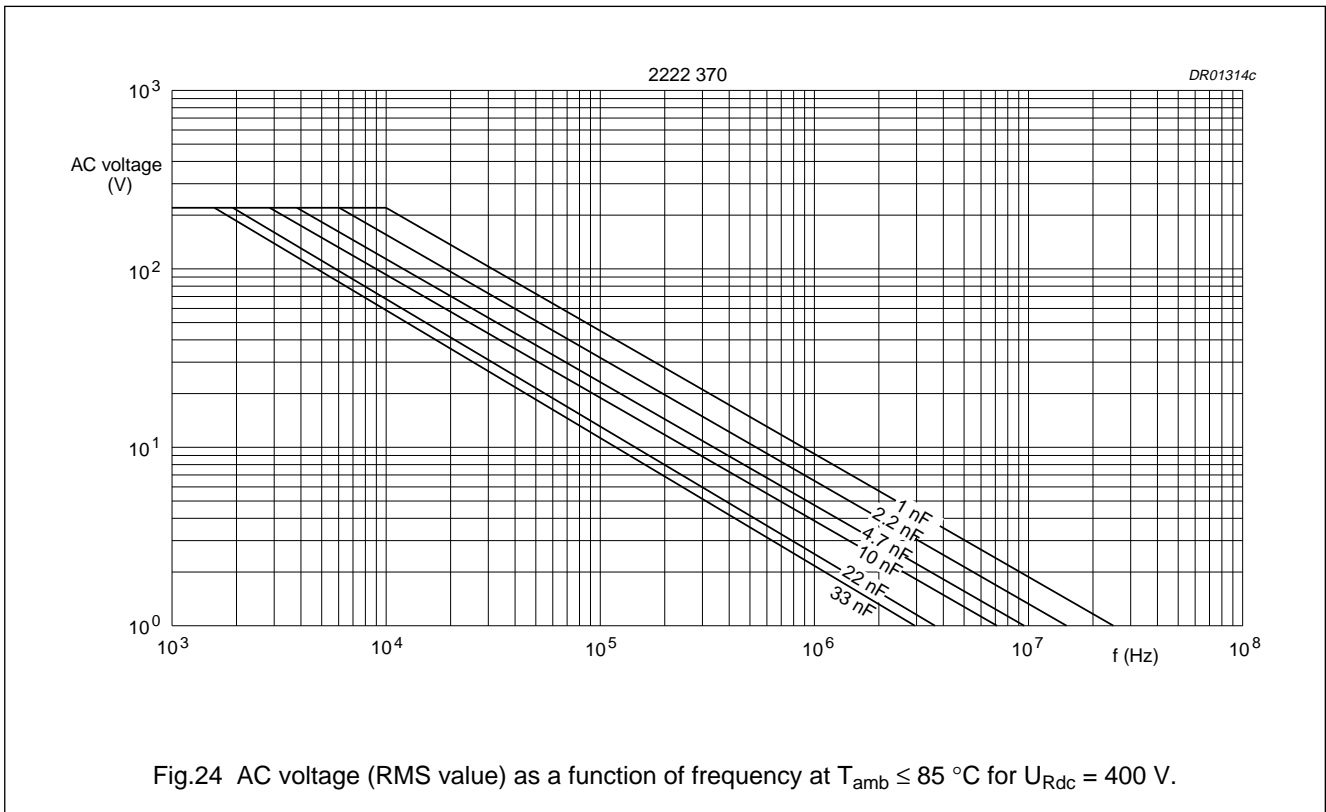
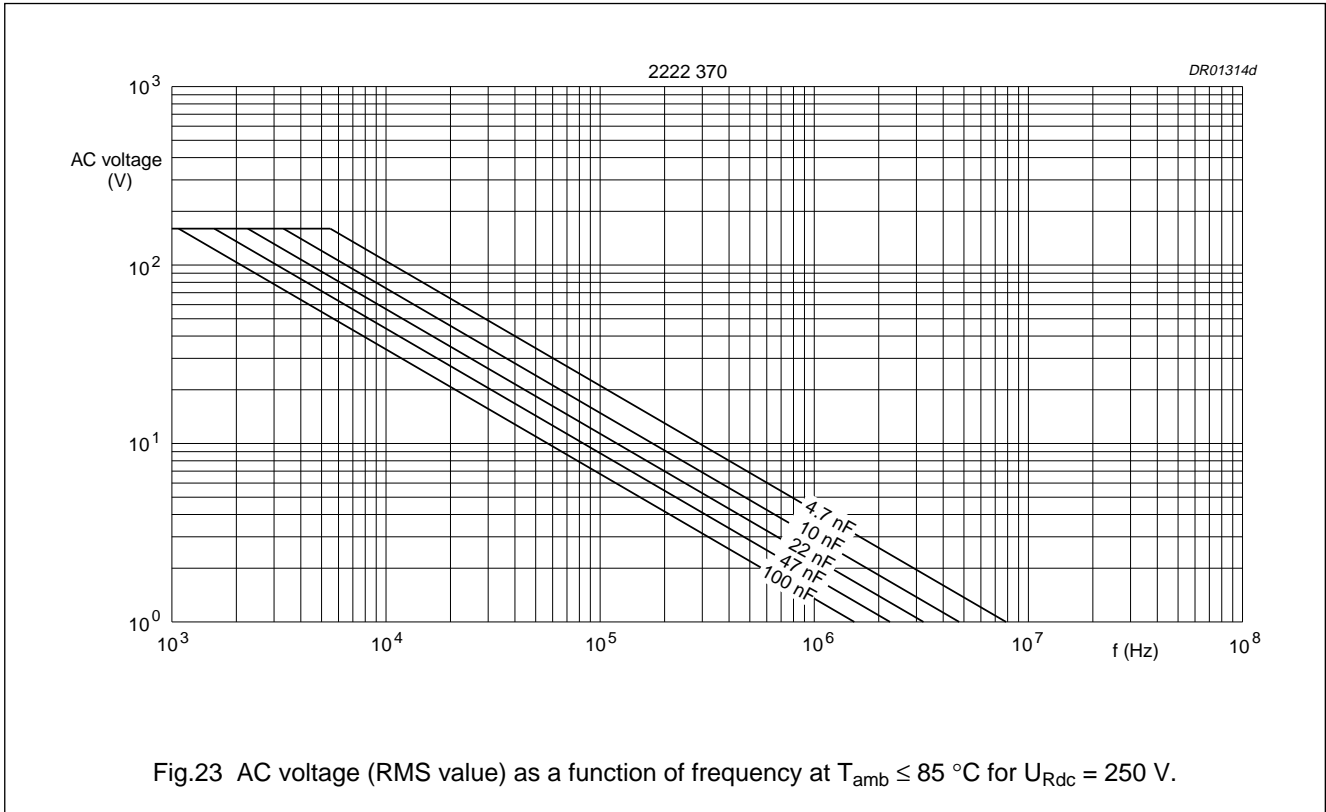
MKT 370/371/372/373

Maximum RMS voltage (sinewave) as a function of frequency for $T_{amb} \leq 85\text{ }^{\circ}\text{C}$



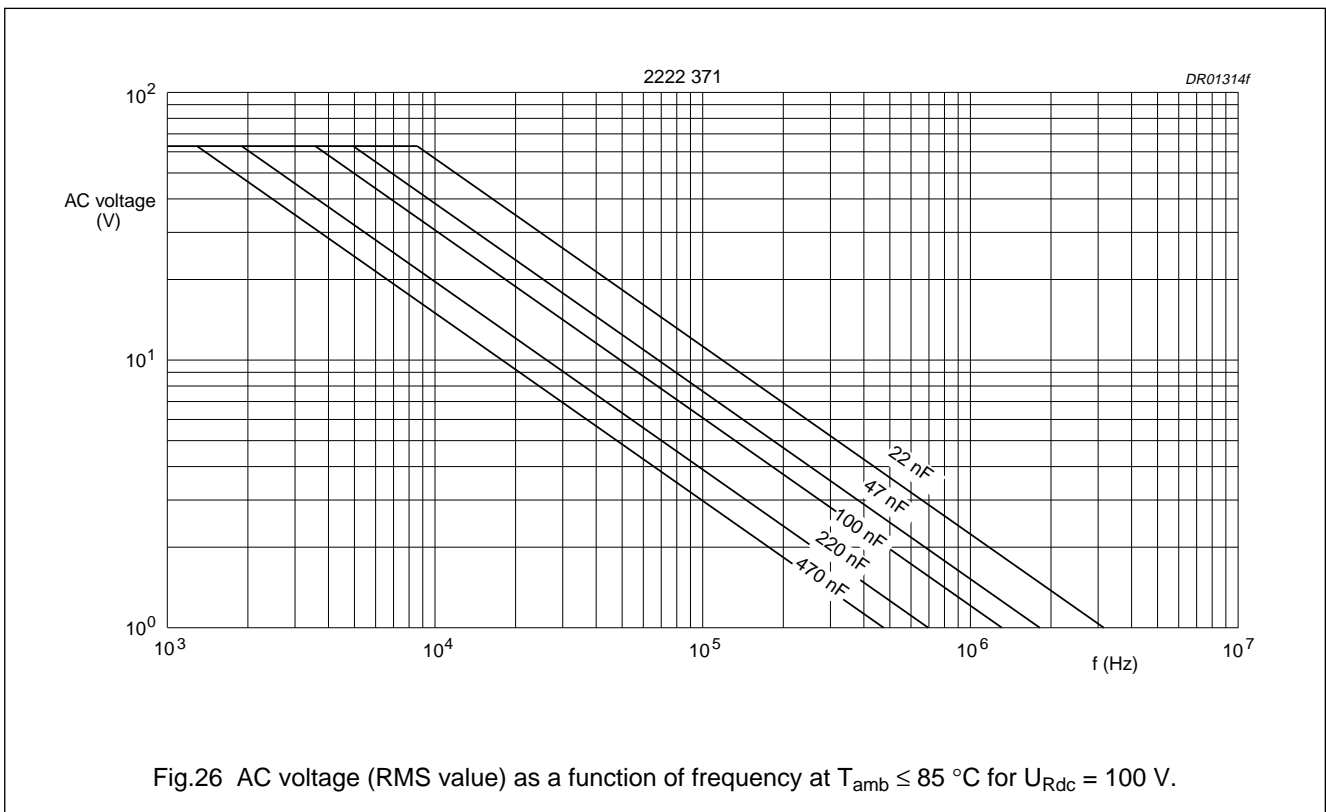
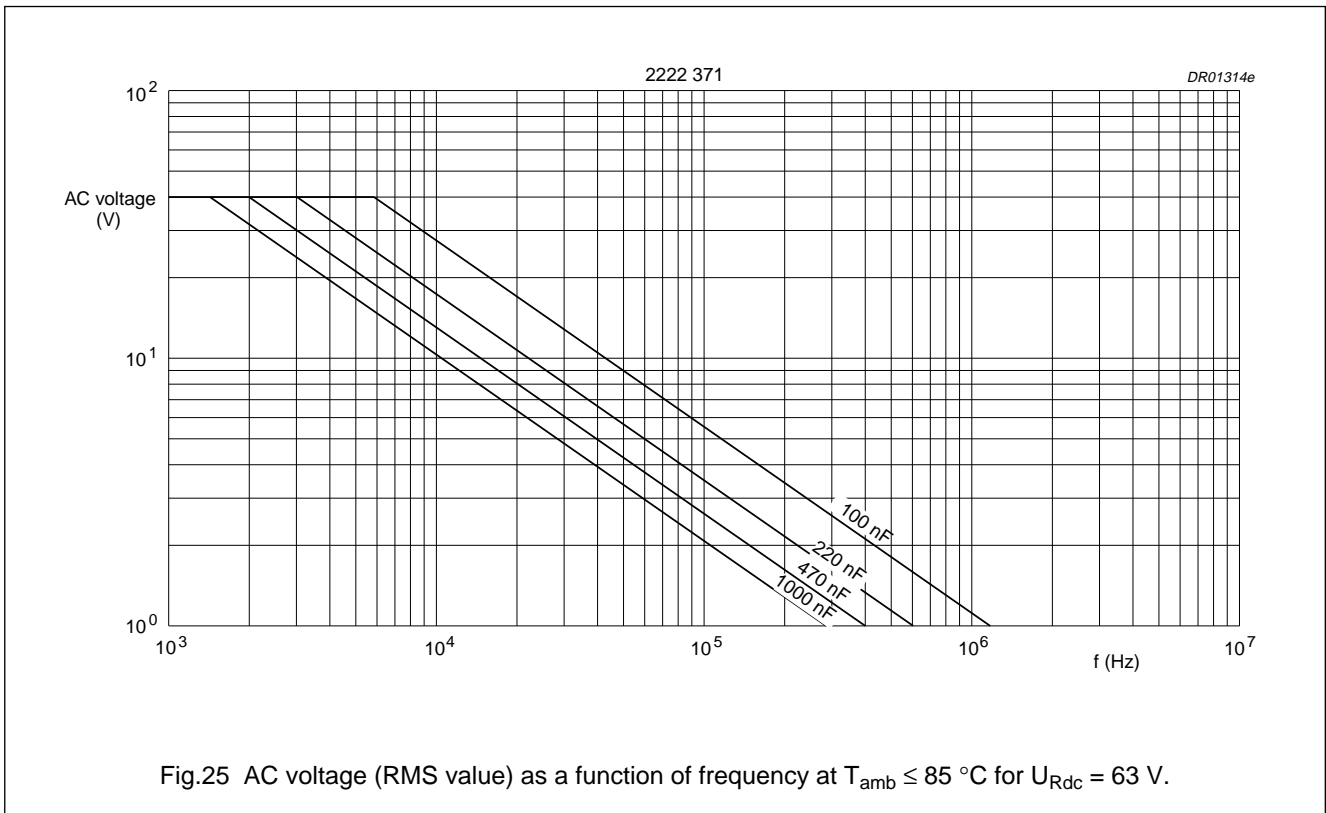
Metallized polyester film capacitors

MKT 370/371/372/373



Metallized polyester film capacitors

MKT 370/371/372/373



Metallized polyester film capacitors

MKT 370/371/372/373

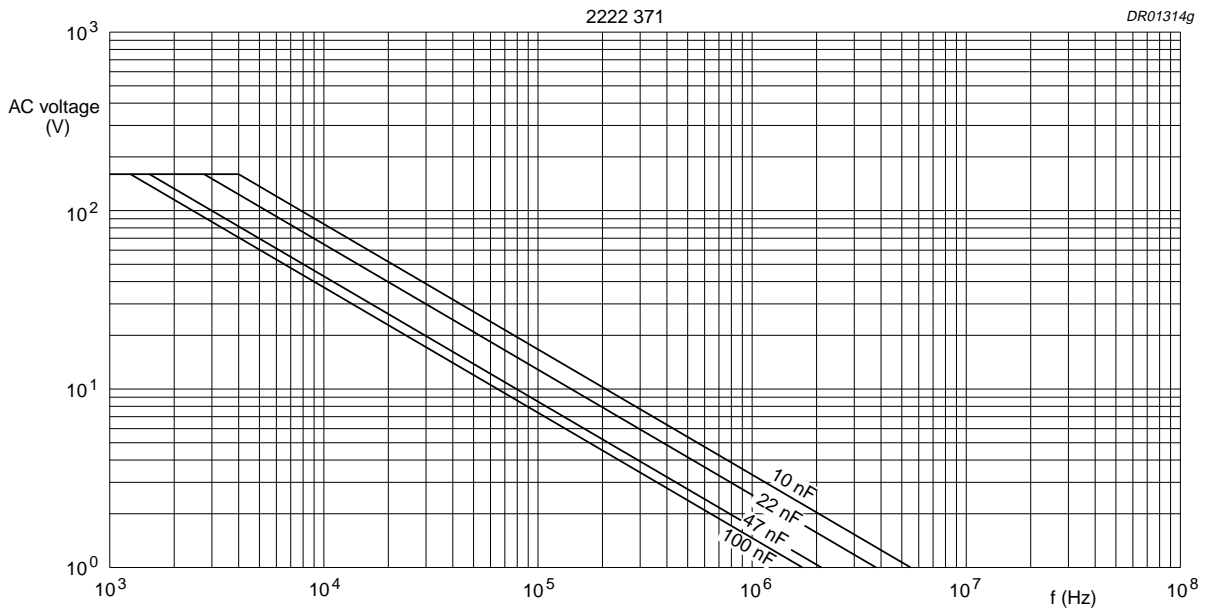


Fig.27 AC voltage (RMS value) as a function of frequency at $T_{amb} \leq 85^\circ\text{C}$ for $U_{Rdc} = 250\text{ V}$.

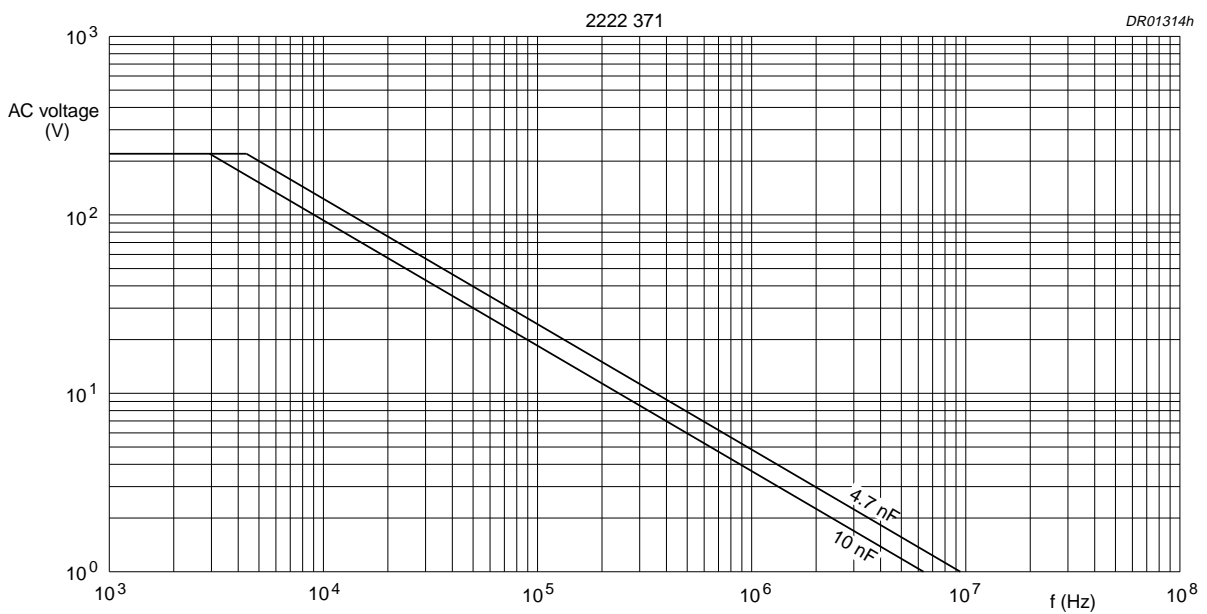


Fig.28 AC voltage (RMS value) as a function of frequency at $T_{amb} \leq 85^\circ\text{C}$ for $U_{Rdc} = 400\text{ V}$.

Metallized polyester film capacitors

MKT 370/371/372/373

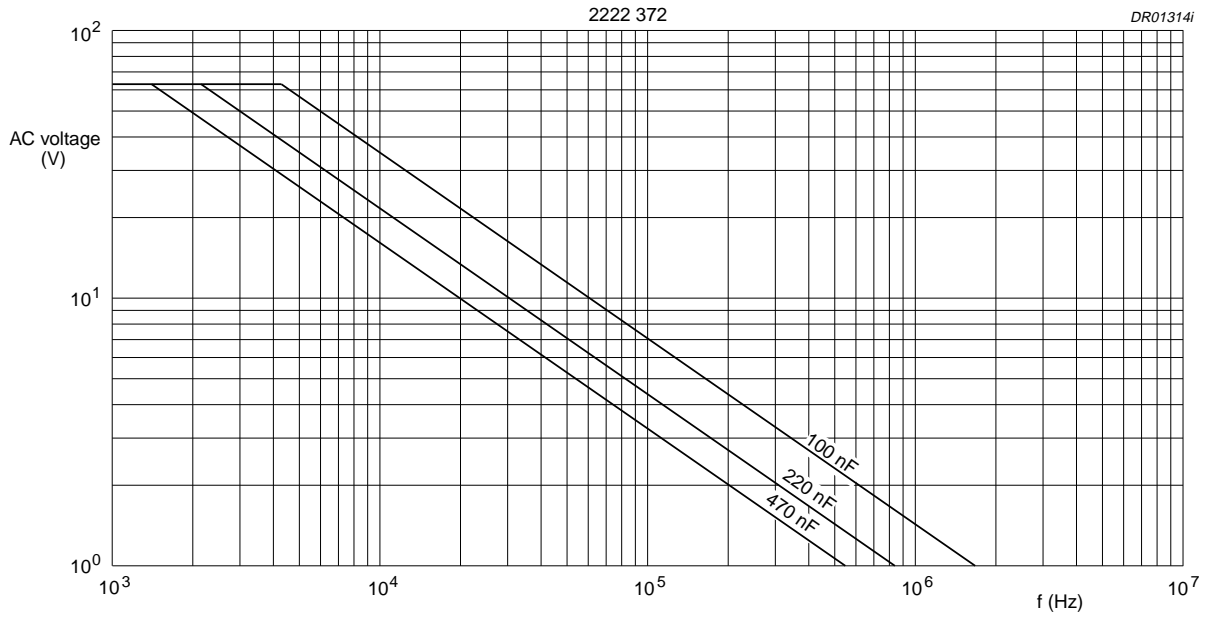


Fig.29 AC voltage (RMS value) as a function of frequency at $T_{amb} \leq 85 \text{ }^\circ\text{C}$ for $U_{Rdc} = 100 \text{ V}$.

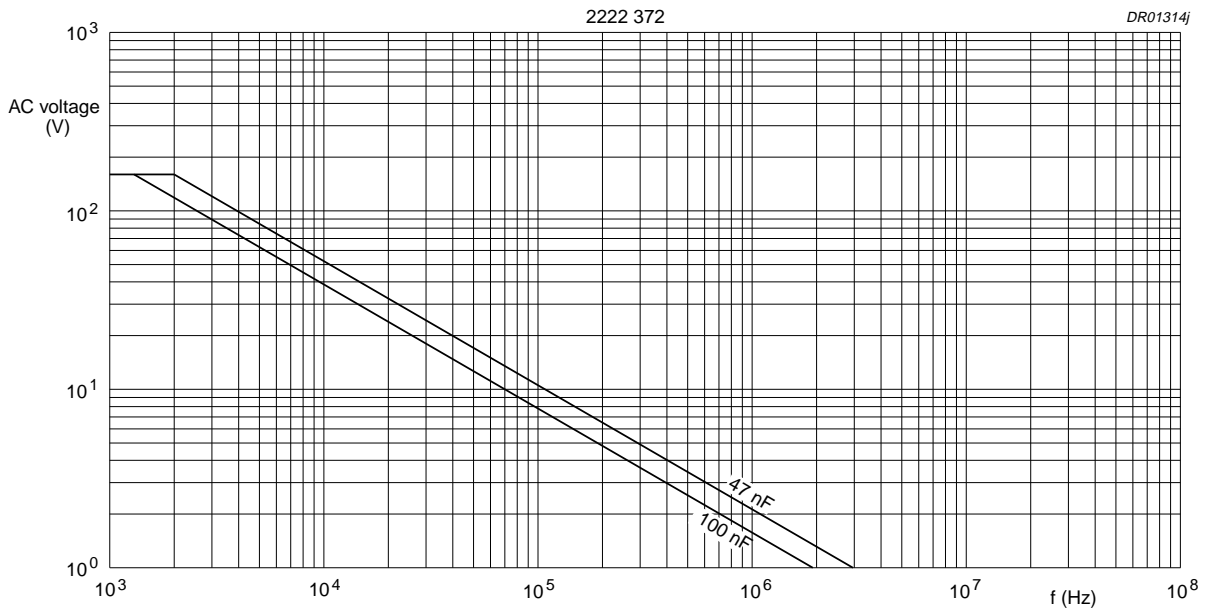
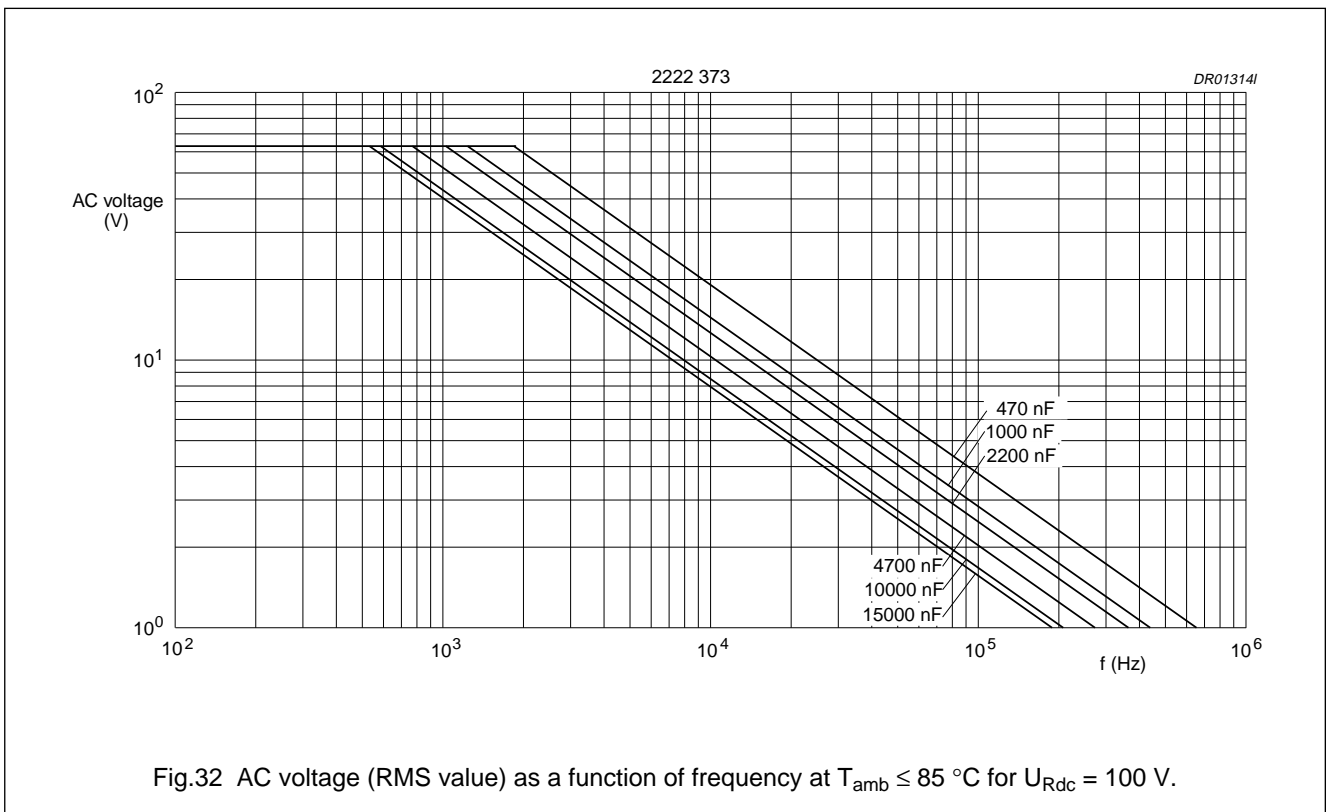
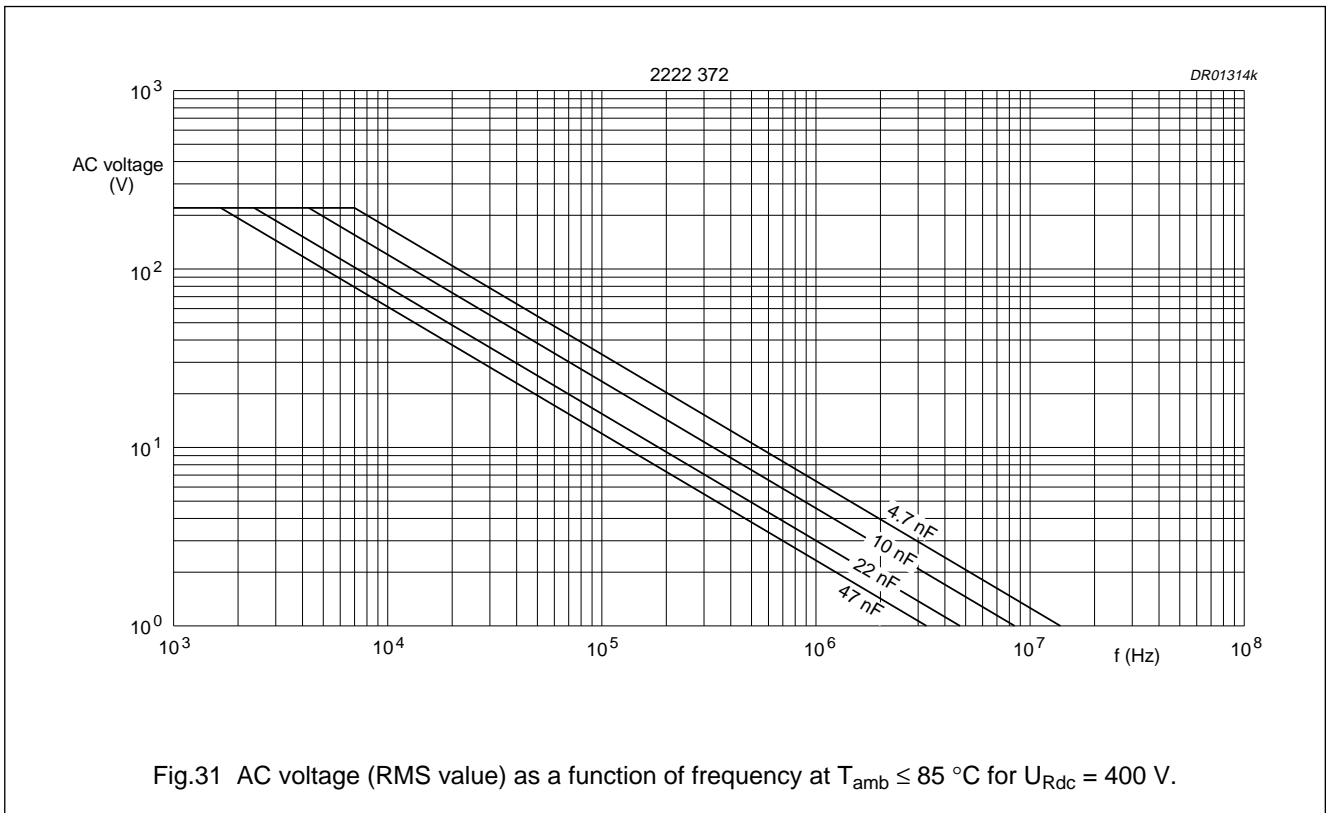


Fig.30 AC voltage (RMS value) as a function of frequency at $T_{amb} \leq 85 \text{ }^\circ\text{C}$ for $U_{Rdc} = 250 \text{ V}$.

Metallized polyester film capacitors

MKT 370/371/372/373



Metallized polyester film capacitors

MKT 370/371/372/373

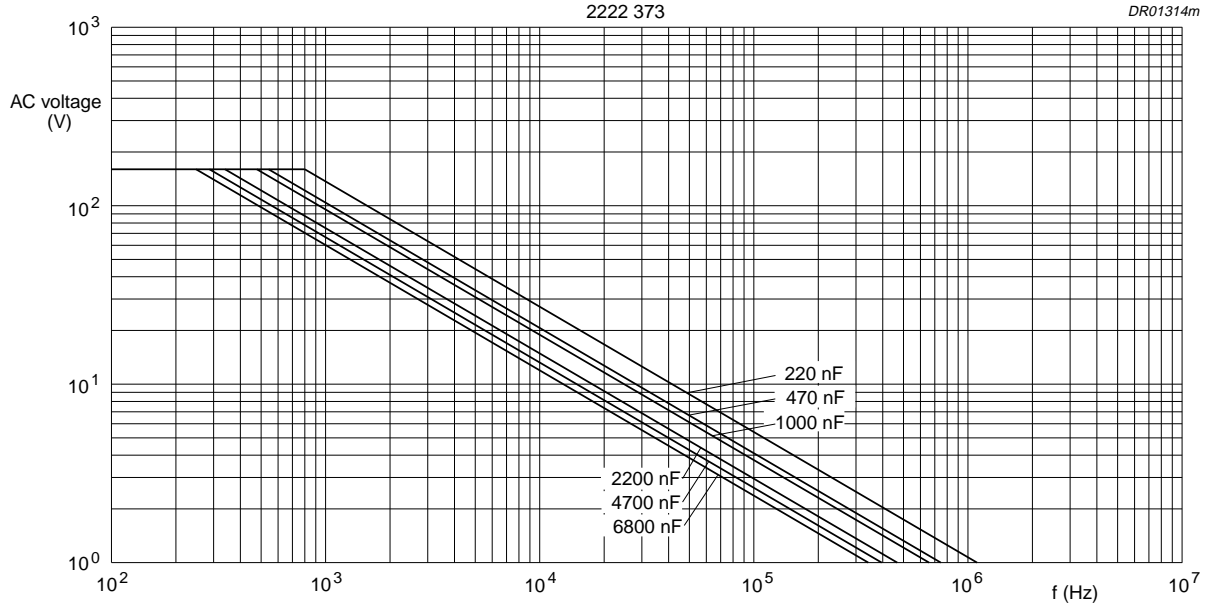


Fig.33 AC voltage (RMS value) as a function of frequency at T_{amb} ≤ 85 °C for U_{Rdc} = 250 V.

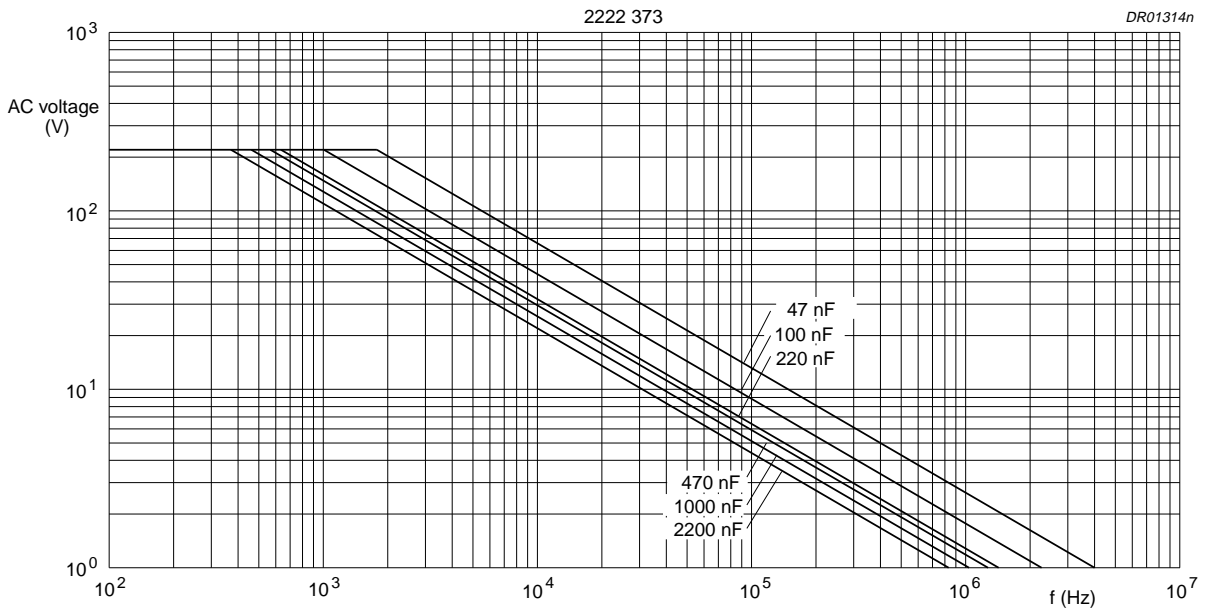


Fig.34 AC voltage (RMS value) as a function of frequency at T_{amb} ≤ 85 °C for U_{Rdc} = 400 V.

Metallized polyester film capacitors

MKT 370/371/372/373

Maximum RMS voltage (sinewave) as a function of frequency for $T_{amb} > 85\text{ }^{\circ}\text{C}$

The maximum RMS voltage in Figs 21 to 34 has to be multiplied by a factor given in Fig.35.

The power dissipation has to be checked, and must not exceed the maximum allowed power shown in Figs 38 and 39.

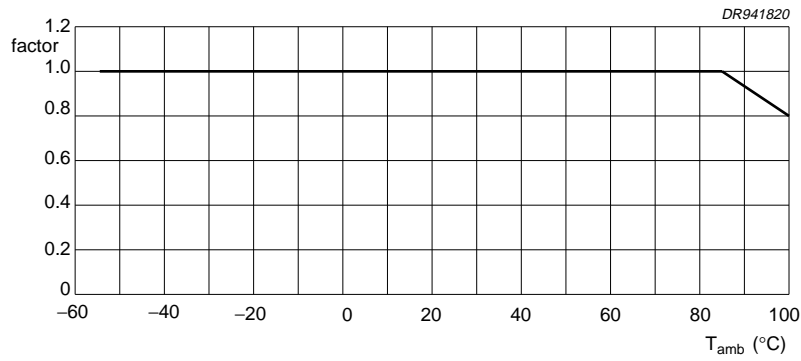


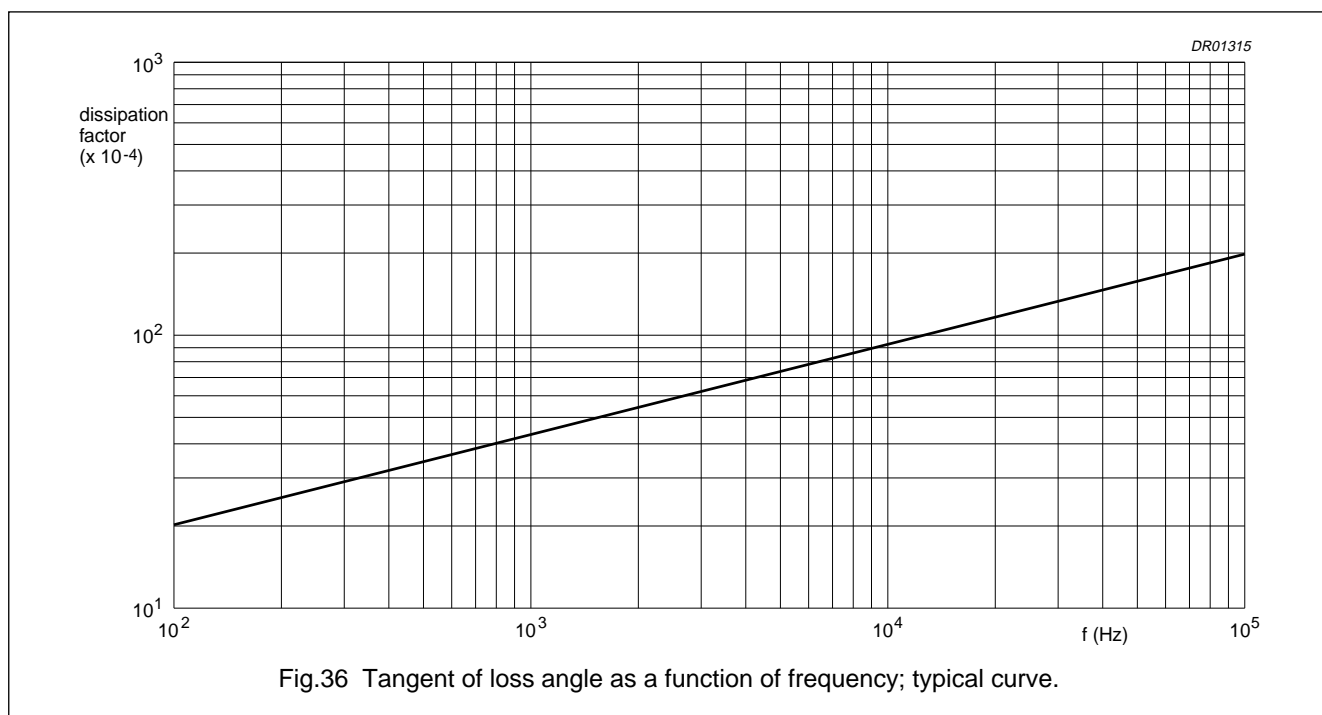
Fig.35 Multiplying factor as a function of temperature.

Metallized polyester film capacitors

MKT 370/371/372/373

Tangent of loss angle

STYLE	CAPACITANCE	TANGENT OF LOSS ANGLE		
		at 1 kHz	at 10 kHz	at 100 kHz
2222 370	$C \leq 0.1 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
	$0.1 \mu\text{F} < C \leq 0.47 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 300 \times 10^{-4}$
2222 371	$0.47 \mu\text{F} < C \leq 1 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	–
2222 372	$C \leq 0.1 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 250 \times 10^{-4}$
	$0.1 \mu\text{F} < C \leq 0.47 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	$\leq 300 \times 10^{-4}$
	$0.47 \mu\text{F} < C \leq 1 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 130 \times 10^{-4}$	–
2222 373	$1 \mu\text{F} < C \leq 10 \mu\text{F}$	$\leq 75 \times 10^{-4}$	$\leq 150 \times 10^{-4}$	–
	$C > 10 \mu\text{F}$	$\leq 75 \times 10^{-4}$	–	–



Rated voltage pulse slope $(dU/dt)_R$

RATED VOLTAGE U_R (V)	MAXIMUM RATED PULSE LOAD (V/μs) AS A FUNCTION OF PITCH ⁽¹⁾⁽²⁾					
	P = 5 mm	P = 7.5 mm	P = 10.0 mm	P = 15.0 mm	P = 22.5 mm	P = 27.5 mm
63	60	18	–	–	–	–
100	110	36	34	14	5	4
250	330	70	50	16	7	6
400	630	190	80	34	14	12

Notes

1. The maximum pulse load values are valid for voltages equal to the rated voltage. For lower voltages the given values may be multiplied by U_{Rdc} and divided by the applied voltage.
2. If the pulse requirement is satisfied, a check must be made to ensure that the maximum dissipation is not exceeded.

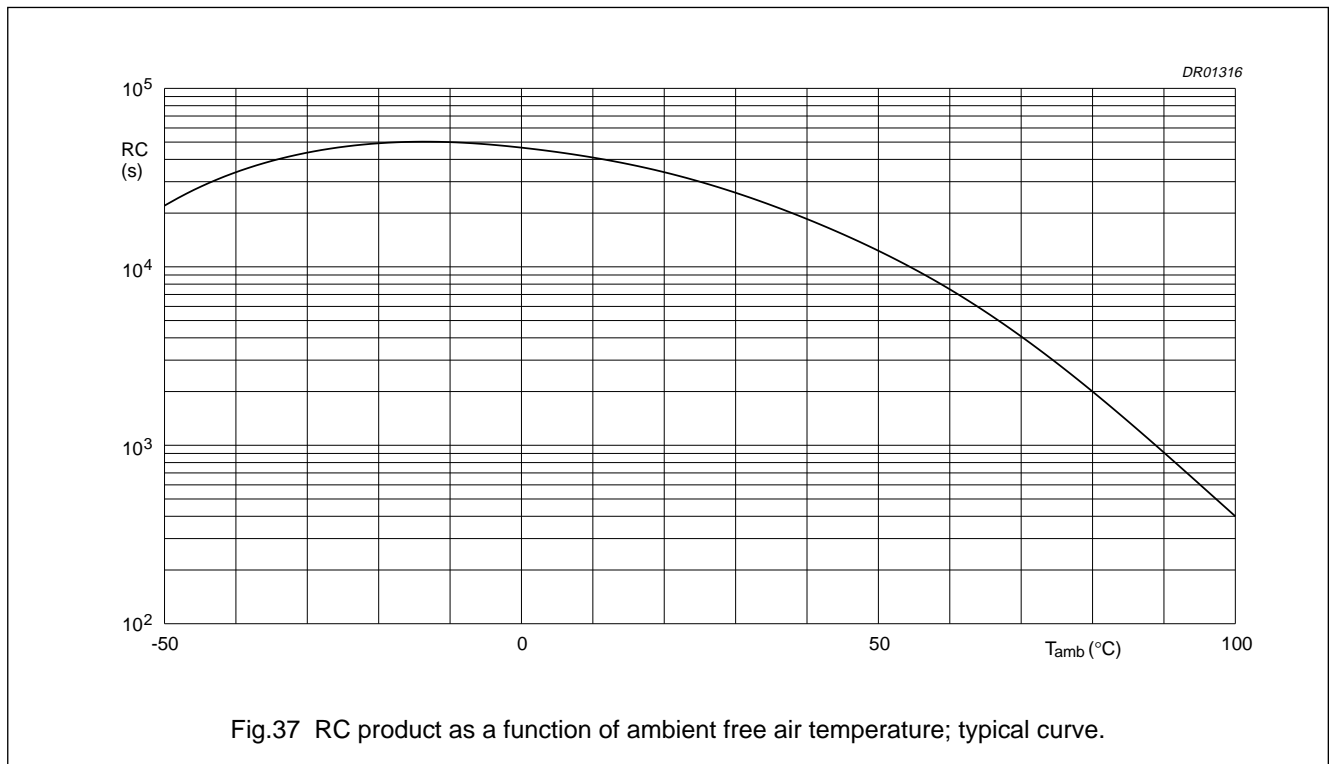
Metallized polyester film capacitors

MKT 370/371/372/373

Insulation resistance

The insulation resistance is measured after a voltage has been applied for 1 minute ± 5 seconds, the voltage being 10 ± 1 V for the 63 V version, and 100 ± 15 V for the 100, 250 and 400 V versions:

- Resistance between leads, for $C \leq 0.33 \mu\text{F}$:
 - 63 and 100 V versions: $>15000 \text{ M}\Omega$
 - 250 and 400 V versions: $>30000 \text{ M}\Omega$
- RC time between leads, for $C > 0.33 \mu\text{F}$:
 - 63 and 100 V versions: $>5000 \text{ s}$
 - 250 and 400 V versions: $>10000 \text{ s}$
- Resistance between interconnected leads and case (foil method): $>30000 \text{ M}\Omega$.



Metallized polyester film capacitors

MKT 370/371/372/373

Maximum dissipation

Power dissipation curves as a function of pitch and capacitor thickness (see Figs 38 and 39)

b _{max} (mm)	PITCH (mm)					
	5	7.5	10	15	22.5	27.5
2.5	1	2	–	–	–	–
3.0	–	4	–	–	–	–
3.5	3	–	–	–	–	–
4.0	–	5	7	–	–	–
4.5	4	–	–	–	–	–
5.0	5	7	10	10	–	–
6.0	6	–	–	11	14	–
7.0	–	–	–	12	15	–
8.5	–	–	–	13	16	–
9.0	–	–	–	–	–	18
10.0	–	–	–	–	17	–
11.0	–	–	–	–	–	18
13.0	–	–	–	–	–	19
15.0	–	–	–	–	–	20
18.0	–	–	–	–	–	21

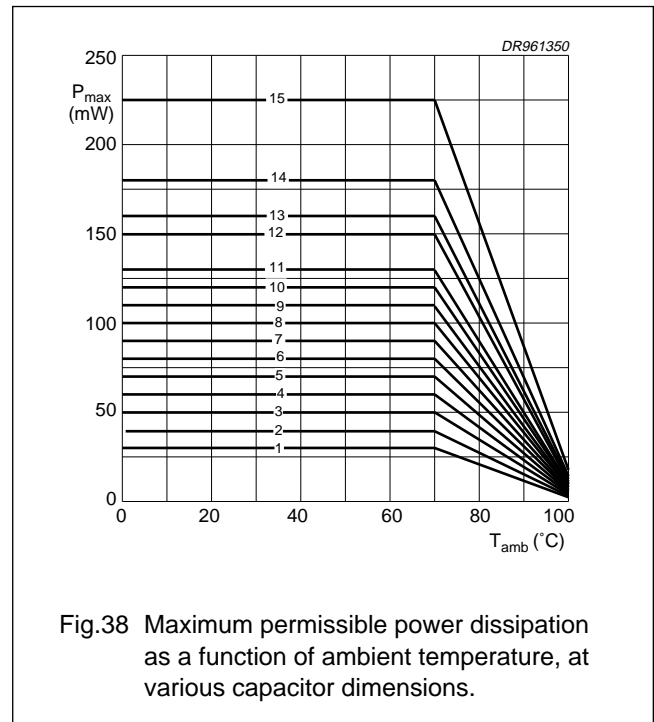


Fig.38 Maximum permissible power dissipation as a function of ambient temperature, at various capacitor dimensions.

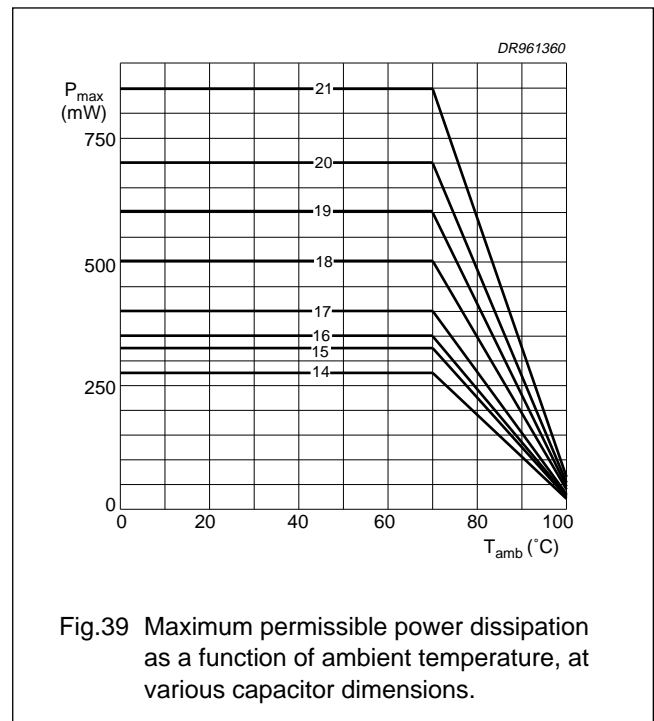


Fig.39 Maximum permissible power dissipation as a function of ambient temperature, at various capacitor dimensions.

Metallized polyester film capacitors

MKT 370/371/372/373

Application note

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 $2 \times \sqrt{2}$ times the rated AC voltage (U_{Rac}) to avoid the ionisation inception level.
3. The peak current (I_p) shall not exceed the maximum peak current, defined as maximum voltage pulse slope (dU/dt) multiplied by the capacitance:

$$I_{p\max} = C \left(\frac{dU}{dt} \right)_{\max}$$

Or the voltage pulse slope shall not exceed the rated voltage pulse slope. If the pulse voltage is lower than the rated voltage, the values (see Section "Rated voltage pulse slope (dU/dt)R" for more details) may be multiplied by U_{Rdc} and divided by the applied voltage.

4. The dissipated power shall not be greater than the maximum permissible power dissipation shown in Figs 38 and 39.
5. The free air ambient temperature for the capacitor does not exceed the category temperature.
6. Since all metallized polyethylene terephthalate film capacitors have an intrinsically active flammability risk after a capacitor breakdown (short circuit), it is recommended that for MKT styles the power to the component is limited to 10 times the maximum allowed power dissipation (P_{\max}) during the short circuit failure mode of the capacitor.

Metallized polyester film capacitors

MKT 370/371/372/373

MARKING

Product marking

CAPACITORS WITH PITCH ≤ 10 mm: STYLES 2222 370, 2222 371, 2222 372

The capacitors are marked by laser print on the top with the following information:

1. Capacitance code in accordance with "IEC 62": $n = nF$; $\mu = \mu F$
2. Tolerance on rated capacitance: $K = \pm 10\%$; $J = \pm 5\%$; and on the side with the following information:
 1. Year and week of manufacture (e.g. 9210).
 2. Rated voltage (DC) (e.g. 100 V).
 3. Code for dielectric material (MKT).
 4. Code for factory of origin (HQ)

CAPACITORS WITH PITCH 15 mm: STYLES 2222 373

The capacitors are marked by laser print on the top with the following information:

1. Rated capacitance code in accordance with "IEC 62": $n = nF$; $\mu = \mu F$
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 (PHILIPS)
 2. Code for factory of origin (HQ)
 3. Year and week of manufacture (e.g. 9210).

CAPACITORS WITH PITCH 22.5 AND 27.5 mm: STYLES 2222 373

The capacitors are marked on the top with the following information:

1. Rated capacitance code in accordance with "IEC 62": $n = nF$; $\mu = \mu F$
2. Tolerance on rated capacitance: $K = \pm 10\%$; $J = \pm 5\%$
3. Rated voltage (DC) (e.g. 100 V)
4. Manufacturer (PHILIPS)
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. 9210).

5. Manufacturer's type designation (e.g. 372)
6. Manufacturer (PHILIPS).

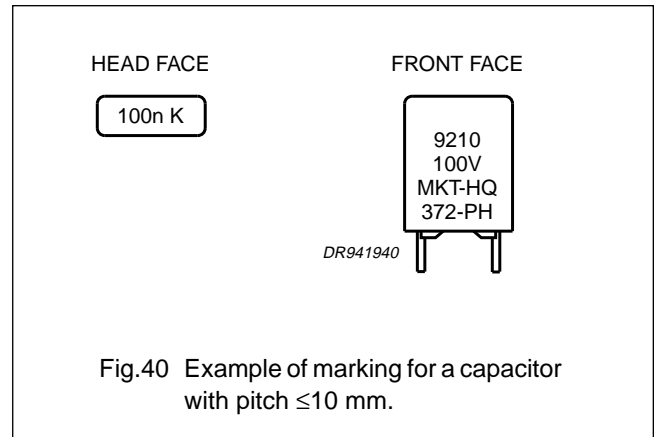


Fig.40 Example of marking for a capacitor with pitch ≤ 10 mm.

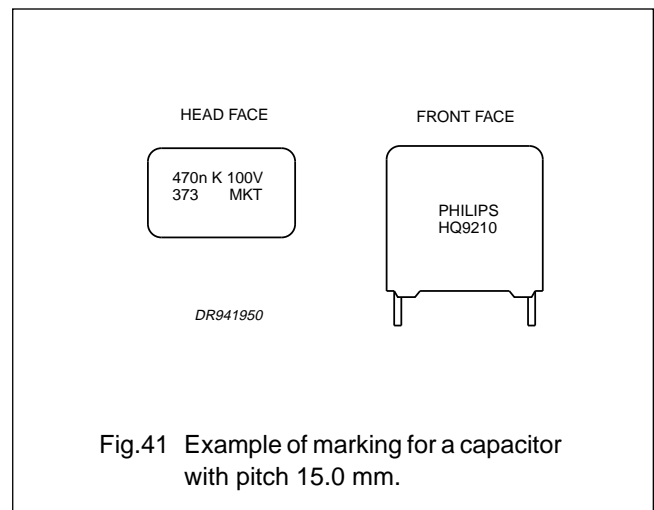


Fig.41 Example of marking for a capacitor with pitch 15.0 mm.

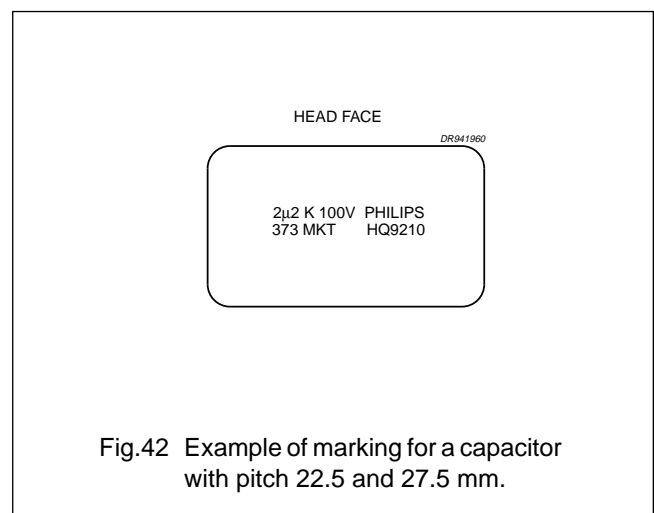


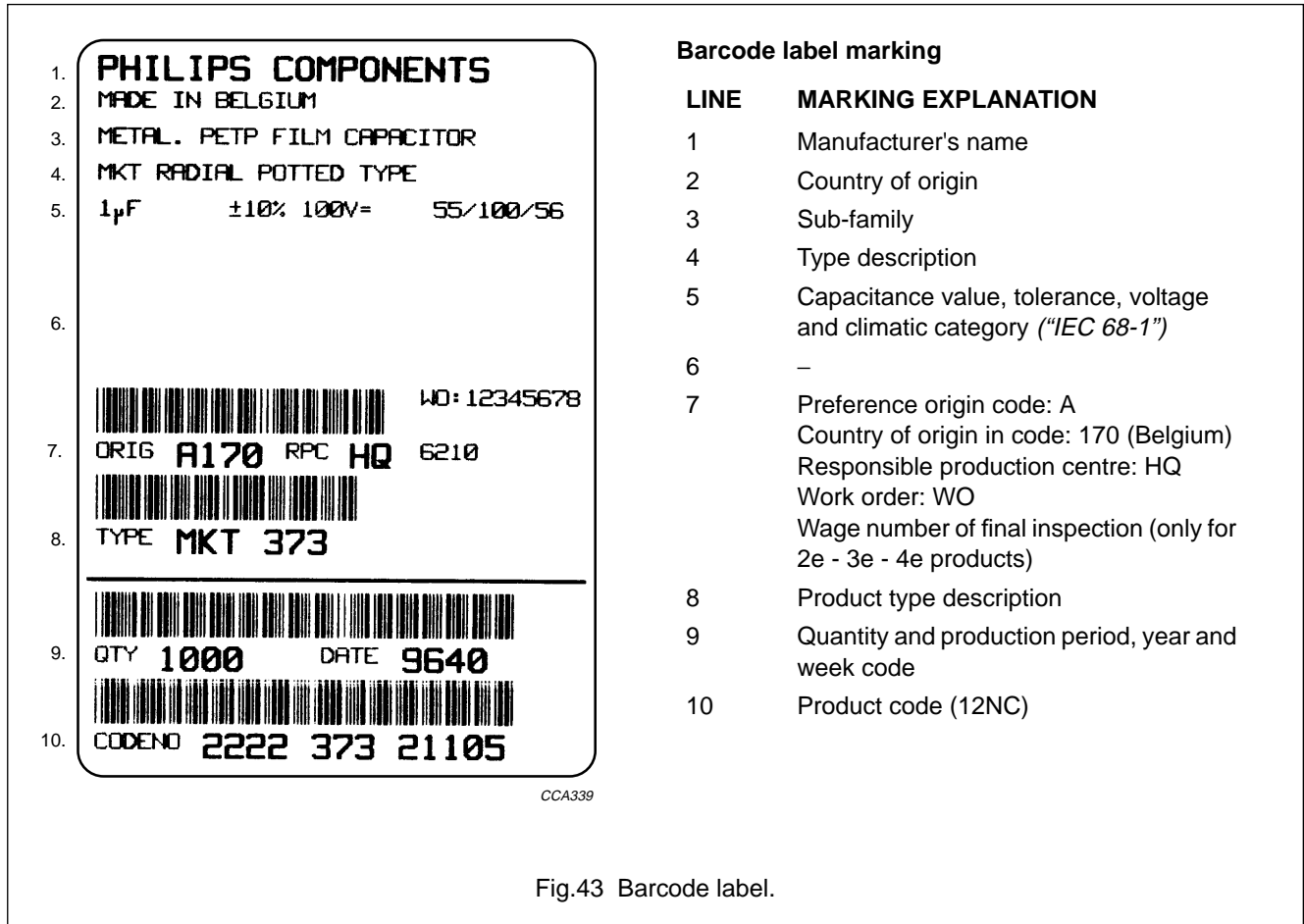
Fig.42 Example of marking for a capacitor with pitch 22.5 and 27.5 mm.

Metallized polyester film capacitors

MKT 370/371/372/373

Package marking

The package containing the capacitors is marked as shown in Fig.43.



CCA339

Fig.43 Barcode label.

Metallized polyester film capacitors

MKT 370/371/372/373

QUICK REFERENCE TEST REQUIREMENTS (see note 1)

TEST	PROCEDURE (quick reference)	REQUIREMENTS
Robustness of leads		
Tensile and bending: "IEC 68-2-21"	solder bath: 260 °C; 10 s isopropyl alcohol; 23 °C; 5 minutes	no visible damage legible marking
Resistance to soldering heat: "IEC 68-2-20"		$ \Delta C/C \leq 2\%$
Component solvent resistance		$\Delta \tan \delta \leq 30 \times 10^{-4}$; note 2
Robustness of component		
Vibration: "IEC 68-2-6"	10 to 55 Hz; amplitude 0.75 mm or acceleration 98 m/s ² ; 6 hours half sinewave; 490 m/s ² ; 11 ms	$ \Delta C/C \leq 3\%$
Shock: "IEC 68-2-27"		$\Delta \tan \delta \leq 30 \times 10^{-4}$; note 2
Climatic sequence		
Dry heat: "IEC 68-2-2"	16 hours; 100 °C 2 hours; -55 °C	$ \Delta C/C \leq 3\%$
Damp heat cyclic, test Db, first cycle: "IEC 68-2-30"		$\Delta \tan \delta \leq 50 \times 10^{-4}$; note 2
Cold: "IEC 68-2-1"		$R_{ins} \geq 50\%$ of specified value
Damp heat, test Db, remaining cycles: "IEC 68-2-30"		

Metallized polyester film capacitors

MKT 370/371/372/373

TEST	PROCEDURE (quick reference)	REQUIREMENTS
Other applicable tests		
Damp heat, steady state: "IEC 68-2-3"	56 days; 40 °C; 90 to 95% RH	$ \Delta C/C \leq 5\%$ $\Delta \tan \delta \leq 50 \times 10^{-4}$; note 2 $R_{ins} \geq 50\%$ of specified value
Endurance (DC): "IEC 384-2"	2000 hours; $1.25 \times U_{Rdc}$; 85 °C $1.25 \times U_{Cdc}$; 100 °C	$ \Delta C/C \leq 5\%$ $\Delta \tan \delta \leq 30 \times 10^{-4s}$; note 2 $R_{ins} \geq 50\%$ of specified value
Heat storage: "IEC 384-2"	2000 hours; 100 °C	$ \Delta C/C \leq 3\%$ $\Delta \tan \delta \leq 30 \times 10^{-4}$; note 2
Endurance (AC) for capacitors with ≥ 200 V (RMS): "IEC 384-2"	1000 h: $1.1 \times U_{Rac}$; 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
Resistance to detergents: "IEC 384-2"		$ \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 384-2"	body temperature: 100 °C; bath temperature: 260 °C; dwell time: 5 s	$ \Delta C/C \leq 2\%$ ($C \leq 10$ 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 695-2-2"	class C	no burning

Notes

1. For detailed information, see "Type specification".
2. Measuring frequency 10 kHz.