

Polyester Film Capacitors KT Radial Epoxy Lacquered Type

APPLICATIONS

Consumer and industrial. Especially where high currents and/or steep pulses occur. DC or AC voltage

MARKING

Manufacturer emblem; C-value; tolerance; rated voltage; code for dielectric material; code for factory of origin

DIELECTRIC

Polyester film

ELECTRODES

Aluminum foil

COATING

Flame retardant epoxy material (UL-class 94 V-0)

CONSTRUCTION

Film/foil mono construction

LEADS

Tinned wire



CAPACITANCE RANGE (E12 SERIES)

0.001 to 0.47 μF

CAPACITANCE TOLERANCE

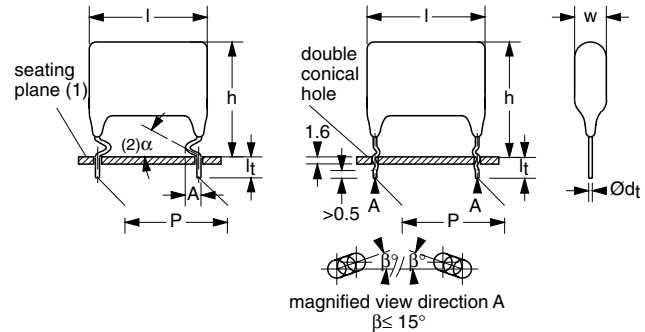
$\pm 20\%$; $\pm 10\%$

RATED (DC) VOLTAGE

100 V; 250 V; 400 V; 630 V

RATED (AC) VOLTAGE

50 V; 80 V; 125 V; 200 V



Dimensions in mm.

(1) Hole $\varnothing 0.8$ for $d_t = 0.6$ mm.

Hole $\varnothing 1.0$ for $d_t = 0.8$ mm.

(2) $0 \leq \alpha < 50^\circ$.

(3) $A = 2.0 \pm 0.5$ mm (pitch = 10.0 mm).

$A = 3.5 \pm 1.0$ mm (pitch = 15.0 and 22.5 mm).

CLIMATIC CATEGORY

40/100/21

RATED TEMPERATURE

85 $^\circ\text{C}$

MAXIMUM APPLICATION TEMPERATURE

100 $^\circ\text{C}$

REFERENCE SPECIFICATIONS

IEC 60384-11

PERFORMANCE GRADE

Grade 1 (long life)

FEATURES

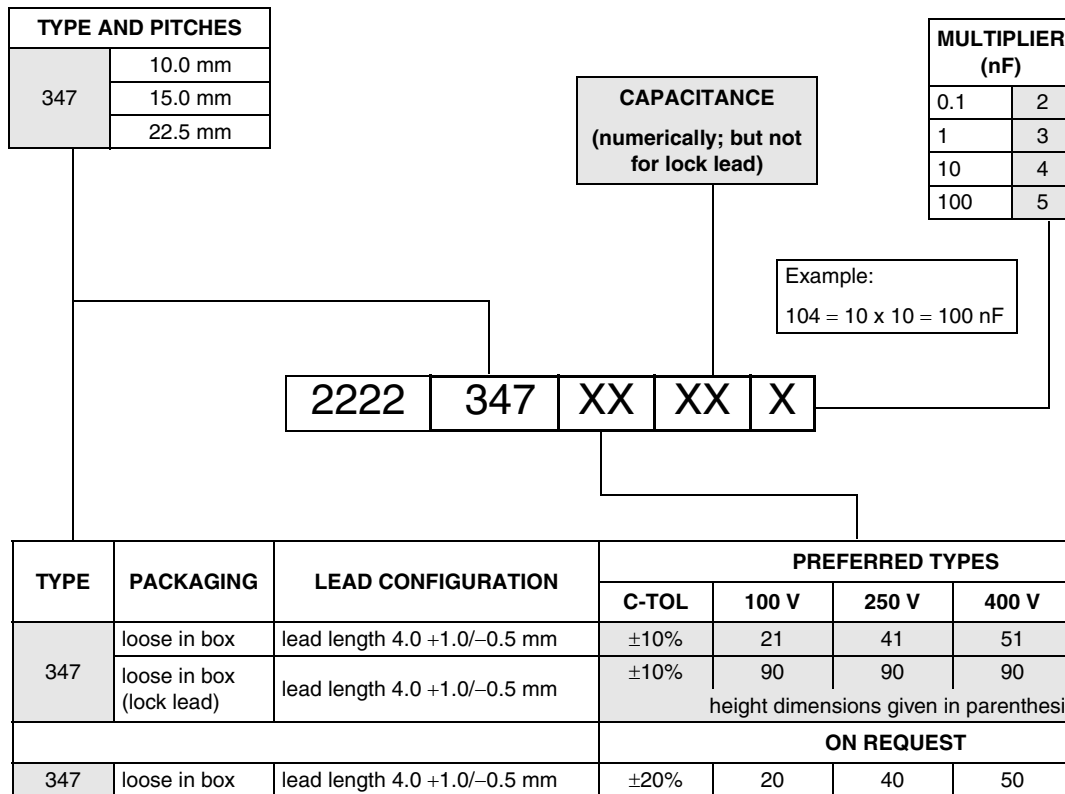
10 to 22.5 mm lead pitch. Supplied loose in box
Lead (Pb)-free product



DETAIL SPECIFICATION

For more detailed data and test requirements contact:

filmcaps.roeselare@vishay.com

**COMPOSITION OF CATALOG NUMBER****SPECIFIC REFERENCE DATA**

DESCRIPTION	VALUE			
Tangent of loss angle: $C \leq 0.47 \mu\text{F}$	at 1 kHz		at 10 kHz	
	$\leq 60 \times 10^{-4}$		$\leq 110 \times 10^{-4}$	
Rated voltage pulse slope (dU/dt) _R	at 100 V (DC)	at 250 V (DC)	at 400 V (DC)	at 630 V (DC)
	10000 V/μs	10000 V/μs	10000 V/μs	10000 V/μs
R between leads, for $C \leq 0.33 \mu\text{F}$ at 100 V; 1 minute	>50000 MΩ	>50000 MΩ	>50000 MΩ	>50000 MΩ
RC between leads, for $C > 0.33 \mu\text{F}$ at 100 V; 1 minute	>16500 s	>16500 s		
R between interconnected leads and case (foil method)	>30000 MΩ			
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	200 V; 1 minute	500 V; 1 minute	800 V; 1 minute	1260 V; 1 minute
Withstanding (DC) voltage between leads and case	200 V; 1 minute	500 V; 1 minute	800 V; 1 minute	1260 V; 1 minute

$U_{Rdc} = 100 \text{ V}$; $U_{Rac} = 50 \text{ V}$; $U_{p-p} = 140 \text{ V}$

C (μ F)	DIMENSIONS $w_{\max} \times h_{\max} \times l_{\max}$ (mm)	MASS (g)	CATALOG NUMBER 2222 347 AND PACKAGING			
			LOOSE IN BOX; $l_t = 4.0 +1.0/-0.5$ mm			
			C-tol = $\pm 10\%$	SPQ	C-tol = $\pm 10\%$	SPQ
			last 5 digits of catalog number		last 5 digits of catalog number	
Pitch = 10.0 $\pm$ 0.4 mm; $d_t = 0.60 \pm 0.06$ mm					lock lead	
0.015	5.5 $\times$ 13.0 (16.0) $\times$ 13.5	0.7	21153	1250	90238	1250
0.018			21183		90239	
0.022			21223		90241	
0.027			21273		90242	
0.033	6.0 $\times$ 13.5 (16.5) $\times$ 13.5	0.7	21333	2000	90236	2000
0.039	6.5 $\times$ 14.0 (17.0) $\times$ 13.5	0.8	21393	1750	90243	1750
0.047	7.0 $\times$ 14.5 (17.5) $\times$ 13.5	0.9	21473	1750	90244	1750
Pitch = 15.0 $\pm$ 0.4 mm; $d_t = 0.80 \pm 0.08$ mm					lock lead	
0.056	5.5 $\times$ 14.0 (17.0) $\times$ 19.0	1.2	21563	1500	90245	1500
0.068	6.0 $\times$ 14.5 (17.5) $\times$ 19.0	1.3	21683	1500	90235	1500
0.082	7.0 $\times$ 15.5 (18.5) $\times$ 19.0	1.5	21823	1250	90212	1250
0.1	7.5 $\times$ 16.0 (19.0) $\times$ 19.0	1.7	21104	1000	90224	1000
0.12	8.0 $\times$ 16.5 (19.5) $\times$ 19.0	1.9	21124	1000	90246	1000
0.15	8.5 $\times$ 17.0 (20.0) $\times$ 19.0	2.3	21154	900	90247	900
Pitch = 22.5 $\pm$ 0.4 mm; $d_t = 0.80 \pm 0.08$ mm					lock lead	
0.18	7.5 $\times$ 18.0 (21.0) $\times$ 27.0	2.8	21184	800	90248	800
0.22	7.5 $\times$ 18.5 (21.5) $\times$ 27.0	3.2	21224	800	90249	800
0.27	8.0 $\times$ 19.5 (22.5) $\times$ 27.0	3.8	21274	500	90251	500
0.33	9.0 $\times$ 20.0 (23.0) $\times$ 27.0	4.4	21334	450	90252	450
0.39	10.0 $\times$ 21.0 (24.0) $\times$ 27.0	5.1	21394	400	90253	400
0.47	11.0 $\times$ 22.0 (25.0) $\times$ 27.0	6.0	21474	350	90254	350

 $U_{Rdc} = 250 \text{ V}$; $U_{Rac} = 80 \text{ V}$; $U_{p-p} = 225 \text{ V}$

C (μF)	DIMENSIONS w _{max} × h _{max} × l _{max} (mm)	MASS (g)	CATALOG NUMBER 2222 347 AND PACKAGING			
			LOOSE IN BOX; l _t = 4.0 +1.0/-0.5 mm			
			C-tol = ±10%	SPQ	C-tol = ±10%	SPQ
			last 5 digits of catalog number		last 5 digits of catalog number	
Pitch = 10.0 ±0.4 mm; d _t = 0.60 ±0.06 mm					lock lead	
0.0082	5.5 × 13.0 (16.0) × 13.5	0.7	41822	2000	90255	1250
0.01			41103		90256	
0.012			41123		90257	
0.015			41153		90258	
0.018	6.0 × 13.5 (16.5) × 13.5	0.7	41183	2000	90259	2000
0.022	6.5 × 14.0 (17.0) × 13.5	0.8	41223	2000	90225	1750
0.027	7.0 × 14.5 (17.5 × 13.5	0.9	41273	2000	90261	1750
Pitch = 15.0 ±0.4 mm; d _t = 0.80 ±0.08 mm					lock lead	
0.033	5.5 × 14.0 (17.0) × 19.0	1.1	41333	2000	90213	1500
0.039	6.0 × 14.5 (17.5) × 19.0	1.3	41393	2000	90262	1500
0.047	7.0 × 15.5 (18.5) × 19.0	1.4	41473	2000	90214	1250



C (μ F)	DIMENSIONS $w_{\max} \times h_{\max} \times l_{\max}$ (mm)	MASS (g)	CATALOG NUMBER 2222 347 AND PACKAGING			
			LOOSE IN BOX; $l_t = 4.0 +1.0/-0.5$ mm			
			C-tol = $\pm 10\%$	SPQ	C-tol = $\pm 10\%$	SPQ
			last 5 digits of catalog number		last 5 digits of catalog number	
0.056	7.5×16.0 (19.0) $\times$ 19.0	1.6	41563	2000	90226	1000
0.068	8.0×16.5 (19.5) $\times$ 19.0	1.8	41683	2000	90234	1000
0.082	8.5×17.0 (20.0) $\times$ 19.0	2.1	41823	1000	90263	900
Pitch = 22.5 ± 0.4 mm; $d_t = 0.80 \pm 0.08$ mm					lock lead	
0.1	7.5×18.0 (21.0) $\times$ 27.0	2.7	41104	1000	90215	800
0.12	7.5×18.5 (21.5) $\times$ 27.0	3.0	41124	1000	90264	800
0.15	8.0×19.5 (22.5) $\times$ 27.0	3.5	41154	500	90216	500
0.18	9.0×20.0 (23.0) $\times$ 27.0	4.0	41184	500	90265	450
0.22	10.0×21.0 (24.0) $\times$ 27.0	4.5	41224	500	90217	400
0.27	11.0×22.0 (25.0) $\times$ 27.0	5.3	41274	500	90266	350

 $U_{Rdc} = 400$ V; $U_{Rac} = 125$ V; $U_{p-p} = 350$ V

C (μ F)	DIMENSIONS $w_{\max} \times h_{\max} \times l_{\max}$ (mm)	MASS (g)	CATALOG NUMBER 2222 347 AND PACKAGING			
			LOOSE IN BOX; $l_t = 4.0 +1.0/-0.5$ mm			
			C-tol = $\pm 10\%$	SPQ	C-tol = $\pm 10\%$	SPQ
			last 5 digits of catalog number		last 5 digits of catalog number	
Pitch = 10.0 $\pm$ 0.4 mm; $d_t = 0.60 \pm$ 0.06 mm			lock lead			
0.0047 0.0056 0.0068 0.0082	5.5 $\times$ 13.0 (16.0) $\times$ 13.5	0.7	51472	2000	90237	1250
51562			90267			
51682			90268			
51822			90269			
0.01	6.0 $\times$ 13.5 (16.5) $\times$ 13.5	0.7	51103	2000	90218	2000
0.012	6.5 $\times$ 14.0 (17.0) $\times$ 13.5	0.8	51123	2000	90221	1750
0.015	7.0 $\times$ 14.5 (17.5) $\times$ 13.5	0.9	51153	2000	90219	1750
Pitch = 15.0 $\pm$ 0.4 mm; $d_t = 0.80 \pm$ 0.08 mm			lock lead			
0.018	5.5 $\times$ 14.0 (17.0) $\times$ 19.0	1.1	51183	2000	90222	1500
0.022	6.0 $\times$ 14.5 (17.5) $\times$ 19.0	1.2	51223	2000	90223	1500
0.027	7.0 $\times$ 15.5 (18.5) $\times$ 19.0	1.4	51273	2000	90232	1250
0.033	7.5 $\times$ 16.0 (19.0) $\times$ 19.0	1.6	51333	2000	90227	1000
0.039	8.0 $\times$ 16.5 (19.5) $\times$ 19.0	1.8	51393	2000	90228	1000
0.047	8.5 $\times$ 17.0 (20.0) $\times$ 19.0	2.1	51473	1000	90229	900
Pitch = 22.5 $\pm$ 0.4 mm; $d_t = 0.80 \pm$ 0.08 mm			lock lead			
0.056	7.5 $\times$ 18.0 (21.0) $\times$ 27.0	2.5	51563	1000	90231	800
0.068	7.5 $\times$ 18.5 (21.5) $\times$ 27.0	2.9	51683	1000	90271	800
0.082	8.0 $\times$ 19.5 (22.5) $\times$ 27.0	3.2	51823	500	90272	500
0.1	9.0 $\times$ 20.0 (23.0) $\times$ 27.0	3.8	51104	500	90273	450
0.12	10.0 $\times$ 21.0 (24.0) $\times$ 27.0	4.4	51124	500	90274	400
0.15	11.0 $\times$ 22.0 (25.0) $\times$ 27.0	5.2	51154	500	90275	350

$U_{Rdc} = 630 \text{ V}$; $U_{Rac} = 200 \text{ V}$; $U_{p-p} = 560 \text{ V}$

C (μF)	DIMENSIONS $w_{\max} \times h_{\max} \times l_{\max}$ (mm)	MASS (g)	CATALOG NUMBER 2222 347 AND PACKAGING				
			LOOSE IN BOX; $l_t = 4.0 +1.0/-0.5 \text{ mm}$				
			C-tol = $\pm 10\%$	SPQ	C-tol = $\pm 10\%$	SPQ	
			last 5 digits of catalog number		last 5 digits of catalog number		
Pitch = 10.0 $\pm 0.4 \text{ mm}$; $d_t = 0.60 \pm 0.06 \text{ mm}$					lock lead		
0.001	5.5 $\times$ 13.0 (16.0) $\times$ 13.5	0.7	61102	2000	90276	1250	
0.0012			61122		90277		
0.0015			61152		90278		
0.0018			61182		90279		
0.0022			61222		90281		
0.0027			61272		90282		
0.0033			61332		90283		
0.0039			61392		90284		
0.0047	6.0 $\times$ 13.5 (16.5) $\times$ 13.5	0.7	61472	2000	90285	2000	
0.0056	6.5 $\times$ 14.0 (17.0) $\times$ 13.5	0.8	61562	2000	90286	1750	
0.0068	7.0 $\times$ 14.5 (17.5) $\times$ 13.5	0.9	61682	2000	90287	1750	
Pitch = 15.0 $\pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$					lock lead		
0.0082	5.5 $\times$ 14.0 (17.0) $\times$ 19.0	1.1	61822	2000	90288	1500	
0.01	6.0 $\times$ 14.5 (17.5) $\times$ 19.0	1.2	61103	2000	90289	1500	
0.012	7.0 $\times$ 15.5 (18.5) $\times$ 19.0	1.3	61123	2000	90291	1250	
0.015	7.5 $\times$ 16.0 (19.0) $\times$ 19.0	1.5	61153	2000	90292	1000	
0.018	8.0 $\times$ 16.5 (19.5) $\times$ 19.0	1.7	61183	2000	90293	1000	
0.022	8.5 $\times$ 17.0 (20.0) $\times$ 19.0	2.0	61223	1000	90294	900	
Pitch = 22.5 $\pm 0.4 \text{ mm}$; $d_t = 0.80 \pm 0.08 \text{ mm}$					lock lead		
0.027	7.5 $\times$ 18.0 (21.0) $\times$ 27.0	2.5	61273	1000	90295	800	
0.033	7.5 $\times$ 18.5 (21.5) $\times$ 27.0	2.8	61333	1000	90233	800	
0.039	8.0 $\times$ 19.5 (22.5) $\times$ 27.0	3.0	61393	500	90296	500	
0.047	9.0 $\times$ 20.0 (23.0) $\times$ 27.0	3.5	61473	500	90297	450	
0.056	10.0 $\times$ 21.0 (24.0) $\times$ 27.0	3.8	61563	500	90298	400	
0.068	11.0 $\times$ 22.0 (25.0) $\times$ 27.0	4.4	61683	500	90299	350	

CAPACITANCE

