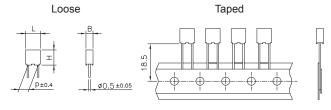
Not for new design. Use new F622 Series.









All dimensions are in mm.

METALLIZED POLYESTER FILM CAPACITOR HIGH PERFORMANCES - HIGH TEMPERATURE D.C. AND PULSE APPLICATIONS

STACKED VERSION

Typical applications: blocking, coupling, decoupling for a signal from DC to high frequency; pulse, logic and timing circuit, lamp capacitor for electronic compact lamps, inverter for LCD monitors, automotive DC motor suppression.

PRODUCT CODE: RSB

Pitch	Box thickness (B)	Maxim	s (mm)	
(mm)	(mm)	B max	H max	L max
5.0	<4.5	B +0.1	H +0.1	L +0.2
5.0	≥4.5	B +0.1	H +0.1	L +0.3

PRODUCT CODE SYSTEM

The part number, comprising 14 digits, is formed as follows:

	•	_	•	•	•	•	7	8	9	10	11	12	13	14
F	7	S	В		С								-	

Digit 1 to 3 Series code.

Digit 4 d.c. rated voltage:

> C = 50VD = 63VE= 100V I = 250V

P = 630V M =400V W =500V

Digit 5 Pitch: C = 5 mm

Digit 6 to 9 Digits 7 - 8 - 9 indicate the first three digits of

> Capacitance value and the 6th digit indicates the number of zeros that must be added to

obtain the Rated Capacitance in pF.

Digit 10 to 11 Mechanical version and/or packaging (table1)

Identifies the dimensions and electrical Digit 12

characteristics.

Digit 13 Internal use

Digit 14 Capacitance tolerance:

J=5%; K=10%; M=20%.

Table 1 (for more detailed information, please refer to page 14).

Standard packaging style	Lead length	Ordering code
	(mm)	(Digit 10 to 11)
AMMO-PACK		DQ
Reel Ø 355 mm		CK
Loose, short leads	4 +1.5	AA
Loose, long leads	17+1/-2	Z3

GENERAL TECHNICAL DATA

Dielectric: polyester film (polyethylene terephthalate).

Plates: aluminium layer deposited by evaporation under

vacuum.

Winding: non-inductive type.

Leads: tinned wire.

Protection: plastic case, thermosetting resin filled.

Box material is solvent resistant and flame

retardant according to UL94.

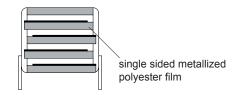
Series (RSB) capacitance, tolerance, D.C. rated Marking:

voltage.

Climatic category: 55/125/56 IEC 60068-1 Operating temperature range: -55 to +125°C

Related documents: IEC 60384-2

Winding scheme



09/2008 31





METALLIZED POLYESTER FILM CAPACITOR HIGH PERFORMANCES - HIGH TEMPERATURE D.C. AND PULSE APPLICATIONS

STACKED VERSION

p = 5 mm

PRODUCT CODE: RSB

Rated	50Vdc/30Vac		Max	Max K ₀	Part Number	Rated			dc/200Vac imensions		Max	Max K ₀	Part Number				
Cap.	S B	td dim H	ensioi L	ns p	dv/dt (V/ μs)	(V²/µs)		Сар.	В	sta aim H	ensior L	ns p	dv/dt (V/ μs)	(V²/ µs)			
2.2µF		11.0		5.0	200	20 E3	RSBCC42201	1000 pF	2.5	6.5	7.2	5.0	600	48 E4	RSBMC11000		
					May	May V		1500 pF	2.5	6.5	7.2	5.0	600	48 E4	RSBMC11500		
Rated Cap.			:/ 40Va nensio		Max dv/dt	Max K₀	Part Number	2200 pF	2.5	6.5	7.2	5.0	600	48 E4	RSBMC12200		
oup.	В	Н	L	р	(V/ µs)	(V ² /µs)		3300 pF	2.5	6.5	7.2	5.0	600	48 E4	RSBMC13300		
0.10 µF	2.5	6.5	7.2	5.0	250	31.5 E3	RSBDC31000	4700 pF	2.5	6.5	7.2	5.0	600	48 E4	RSBMC14700		
0.15 µF	2.5	6.5	7.2	5.0	250	31.5 E3	RSBDC31500	6800 pF	3.5	7.5	7.2	5.0	600	48 E4	RSBMC16800		
0.22 µF	2.5	6.5	7.2	5.0	250	31.5 E3	RSBDC32201	0.010 µF	3.5	7.5	7.2	5.0	600	48 E4	RSBMC21000		
0.33 µF	3.5	7.5	7.2	5.0	250	31.5 E3	RSBDC33300	0.015 µF	3.5	7.5	7.2	5.0	600	48 E4	RSBMC21500		
0.47 µF	3.5	7.5	7.2	5.0	250	31.5 E3	RSBDC34701	0.022 µF	4.5	9.5	7.2	5.0	600	48 E4	RSBMC22200		
0.68 µF	4.5	9.5	7.2	5.0	250	31.5 E3	RSBDC36801	0.033 µF	5.0	10.0	7.2	5.0	600	48 E4	RSBMC23300		
1.0 µF	5.0	10.0	7.2	5.0	250	31.5 E3	RSBDC41001	0.047 µF	6.0	11.0	7.2	5.0	600	48 E4	RSBMC24700		
1.5 µF	6.0	11.0	7.2	5.0	250	31.5 E3	RSBDC41501	Rated	50	U/da/	220\/2	*	Max	Max K	Part Number		
Rated	1	00Vd	c/63Va	ıc	Max	Max K	Part Number	Cap.		500Vdc/220Vac* Std dimensions					dv/dt	Wax N ₀	Fait Nullibei
Cap.	s	td dim	ensio		dv/dt				В	H	L	р	(V/ μs)	(V²/ µs)			
4700 5	В	Н	L	р	(V/ µs)	(V²/ µs)	D0DE04470 0	1000 pF	2.5	6.5	7.2	5.0	700	70 E4	RSBWC11000		
4700 pF	2.5	6.5	7.2	5.0	300	60 E3	RSBEC14700	1500 pF	2.5	6.5	7.2	5.0	700	70 E4	RSBWC11500		
6800 pF	2.5	6.5	7.2	5.0	300	60 E3	RSBEC16800	2200 pF	3.5	7.5	7.2	5.0	700	70 E4	RSBWC12200		
0.010 μF	2.5	6.5	7.2	5.0	300	60 E3	RSBEC21000	3300 pF	3.5	7.5	7.2	5.0	700	70 E4	RSBWC13300		
0.015 μF	2.5	6.5	7.2	5.0	300	60 E3	RSBEC21500	4700 pF	3.5	7.5	7.2	5.0	700	70 E4	RSBWC14700		
0.022 μF	2.5	6.5	7.2	5.0	300	60 E3	RSBEC22200	6800 pF	4.5	9.5	7.2	5.0	700	70 E4	RSBWC16800		
0.033 μF	2.5	6.5	7.2	5.0	300	60 E3	RSBEC23300	0.010 µF	5.0	10.0	7.2	5.0	700	70 E4	RSBWC21000		
0.047 μF	2.5	6.5	7.2	5.0	300	60 E3	RSBEC24700	0.015 µF	6.0	11.0	7.2	5.0	700	70 E4	RSBWC21500		
0.068 µF	2.5	6.5	7.2	5.0	300	60 E3	RSBEC26801										
					000	00 50		Rated	63	0Vdc/	220Va	c*	Max	Max K.	Part Number		
0.10 µF	3.5	7.5	7.2	5.0	300	60 E3	RSBEC31000	Rated Cap.	S	0Vdc/: td dime	ensioņ	s	Max dv/dt	Max K ₀	Part Number		
0.15 µF	3.5 4.5	7.5 9.5	7.2 7.2	5.0 5.0	300	60 E3	RSBEC31500	Сар.	S B	td dime	ension: L	s p	dv/dt (V/ μs)	(V²/ μs)			
0.15 μF 0.22 μF	3.5 4.5 5.0	7.5 9.5 10.0	7.2 7.2 7.2	5.0 5.0 5.0	300 300	60 E3 60 E3	RSBEC31500 RSBEC32200	Cap. 1000 pF	8 B 2.5	td dime H 6.5	ension: L 7.2	s p 5.0	dv/dt (V/ μs) 800	(V²/ μs) 100 E4	RSBPC11000		
0.15 μF 0.22 μF 0.33 μF	3.5 4.5 5.0 6.0	7.5 9.5 10.0 11.0	7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0	300 300 300	60 E3 60 E3 60 E3	RSBEC31500 RSBEC32200 RSBEC33300	Cap. 1000 pF 1500 pF	8 B 2.5 3.5	td dime H 6.5 7.5	7.2 7.2	5.0 5.0	dv/dt (V/ µs) 800 800	(V ² / μs) 100 E4 100 E4	RSBPC11000 RSBPC11500		
0.15 μF 0.22 μF	3.5 4.5 5.0	7.5 9.5 10.0	7.2 7.2 7.2	5.0 5.0 5.0	300 300	60 E3 60 E3	RSBEC31500 RSBEC32200	Cap. 1000 pF	8 B 2.5	td dime H 6.5	7.2 7.2 7.2 7.2	s p 5.0	dv/dt (V/ μs) 800	(V²/ μs) 100 E4	RSBPC11000		
0.15 μF 0.22 μF 0.33 μF	3.5 4.5 5.0 6.0 6.0	7.5 9.5 10.0 11.0 11.0	7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0	300 300 300 300 Max	60 E3 60 E3 60 E3	RSBEC31500 RSBEC32200 RSBEC33300	Cap. 1000 pF 1500 pF 2200 pF	S B 2.5 3.5 3.5	td dime H 6.5 7.5 7.5	7.2 7.2 7.2 7.2	5.0 5.0 5.0	dv/dt (V/ µs) 800 800 800	(V ² / μs) 100 E4 100 E4 100 E4	RSBPC11000 RSBPC11500 RSBPC12200 RSBPC13300 RSBPC14700		
0.15 μF 0.22 μF 0.33 μF 0.47 μF	3.5 4.5 5.0 6.0 6.0	7.5 9.5 10.0 11.0 11.0	7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0	300 300 300 300 Max dv/dt	60 E3 60 E3 60 E3 60 E3	RSBEC31500 RSBEC32200 RSBEC33300 RSBEC34701	Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF	S B 2.5 3.5 3.5 4.5 4.5 5.0	td dime H 6.5 7.5 7.5 9.5 9.5 10.0	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0	800 800 800 800 800 800 800 800	(V ² / µs) 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4	RSBPC11000 RSBPC11500 RSBPC12200 RSBPC13300 RSBPC14700 RSBPC16800		
0.15 μF 0.22 μF 0.33 μF 0.47 μF Rated Cap.	3.5 4.5 5.0 6.0 6.0	7.5 9.5 10.0 11.0 11.0 50Vdc	7.2 7.2 7.2 7.2 7.2 7.2 7.160V	5.0 5.0 5.0 5.0 5.0	300 300 300 300 300 Max dv/dt (V/ µs)	60 E3 60 E3 60 E3 60 E3 Max K ₀ (V ² / μs)	RSBEC31500 RSBEC32200 RSBEC33300 RSBEC34701 Part Number	Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF	S B 2.5 3.5 3.5 4.5 4.5	td dime H 6.5 7.5 7.5 9.5	7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0	dv/dt (V/ μs) 800 800 800 800 800	(V ² / µs) 100 E4 100 E4 100 E4 100 E4 100 E4	RSBPC11000 RSBPC11500 RSBPC12200 RSBPC13300 RSBPC14700		
0.15 µF 0.22 µF 0.33 µF 0.47 µF Rated Cap. 1000 pF	3.5 4.5 5.0 6.0 6.0 8 8 2.5	7.5 9.5 10.0 11.0 11.0 50Vdc td dim H 6.5	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0	300 300 300 300 300 Max dv/dt (V/ µs) 400	60 E3 60 E3 60 E3 60 E3 Max K_o (V ² / μs) 20 E4	RSBEC31500 RSBEC32200 RSBEC33300 RSBEC34701 Part Number RSBIC11000	Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF	S B 2.5 3.5 3.5 4.5 4.5 5.0 6.0	td dime H 6.5 7.5 7.5 9.5 9.5 10.0	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	## dv/dt (V/ \musin s) ## 800 ## 80	(V²/ µs) 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4	RSBPC11000 RSBPC11500 RSBPC12200 RSBPC13300 RSBPC14700 RSBPC16800		
0.15 µF 0.22 µF 0.33 µF 0.47 µF Rated Cap. 1000 pF 1500 pF	3.5 4.5 5.0 6.0 6.0 8 8 2.5 2.5	7.5 9.5 10.0 11.0 11.0 50Vdc std dim H 6.5 6.5	7.2 7.2 7.2 7.2 7.2 7.2 ension L 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0	300 300 300 300 300 Max dv/dt (V/ µs) 400 400	60 E3 60 E3 60 E3 60 E3 Max K ₀ (V ² / µs) 20 E4 20 E4	RSBEC31500 RSBEC32200 RSBEC33300 RSBEC34701 Part Number RSBIC11000 RSBIC11500	Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF Mechani	2.5 3.5 3.5 4.5 4.5 5.0 6.0	td dime H 6.5 7.5 7.5 9.5 9.5 10.0 11.0	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	dv/dt (V/ µs) 800 800 800 800 800 800 800 aging (Ta	(V²/ µs) 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4	RSBPC11000 RSBPC11500 RSBPC12200 RSBPC13300 RSBPC14700 RSBPC16800		
0.15 µF 0.22 µF 0.33 µF 0.47 µF Rated Cap. 1000 pF 1500 pF 2200 pF	3.5 4.5 5.0 6.0 6.0 8 8 2.5 2.5 2.5	7.5 9.5 10.0 11.0 11.0 50Vdc std dim H 6.5 6.5	7.2 7.2 7.2 7.2 7.2 7.2 ension L 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	300 300 300 300 300 Max dv/dt (V/ µs) 400 400	60 E3 60 E3 60 E3 60 E3 (V²/ μs) 20 E4 20 E4 20 E4	RSBEC31500 RSBEC32200 RSBEC33300 RSBEC34701 Part Number RSBIC11000 RSBIC11500 RSBIC12200	Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF	2.5 3.5 3.5 4.5 4.5 5.0 6.0	td dime H 6.5 7.5 7.5 9.5 9.5 10.0 11.0	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	dv/dt (V/ µs) 800 800 800 800 800 800 800 aging (Ta	(V²/ µs) 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4	RSBPC11000 RSBPC11500 RSBPC12200 RSBPC13300 RSBPC14700 RSBPC16800		
0.15 µF 0.22 µF 0.33 µF 0.47 µF Rated Cap. 1000 pF 1500 pF 2200 pF 3300 pF	3.5 4.5 5.0 6.0 6.0 8 2.5 2.5 2.5 2.5 2.5	7.5 9.5 10.0 11.0 11.0 50Vdc td dim H 6.5 6.5 6.5	7.2 7.2 7.2 7.2 7.2 6/160V nension L 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	300 300 300 300 300 Max dv/dt (V/ µs) 400 400 400	60 E3 60 E3 60 E3 60 E3 Max K₀ (V ² / μs) 20 E4 20 E4 20 E4	RSBEC31500 RSBEC32200 RSBEC33300 RSBEC34701 Part Number RSBIC11000 RSBIC11500 RSBIC12200 RSBIC13300	Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF Mechani	2.5 3.5 3.5 4.5 4.5 5.0 6.0	td dime H 6.5 7.5 7.5 9.5 9.5 10.0 11.0	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	dv/dt (V/ µs) 800 800 800 800 800 800 800 aging (Ta	(V²/ µs) 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4	RSBPC11000 RSBPC11500 RSBPC12200 RSBPC13300 RSBPC14700 RSBPC16800		
0.15 µF 0.22 µF 0.33 µF 0.47 µF Rated Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF	3.5 4.5 5.0 6.0 6.0 2.5 8 2.5 2.5 2.5 2.5 2.5	7.5 9.5 10.0 11.0 11.0 50Vdc 5d dim H 6.5 6.5 6.5 6.5	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	300 300 300 300 300 Max dv/dt (V/ µs) 400 400 400 400	60 E3 60 E3 60 E3 60 E3 Max K ₀ (V²/ μs) 20 E4 20 E4 20 E4 20 E4 20 E4	RSBEC31500 RSBEC32200 RSBEC33300 RSBEC34701 Part Number RSBIC11000 RSBIC11500 RSBIC12200 RSBIC13300 RSBIC14700	Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF Mechani	2.5 3.5 3.5 4.5 4.5 5.0 6.0	td dime H 6.5 7.5 7.5 9.5 9.5 10.0 11.0	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	dv/dt (V/ µs) 800 800 800 800 800 800 800 aging (Ta	(V²/ µs) 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4	RSBPC11000 RSBPC11500 RSBPC12200 RSBPC13300 RSBPC14700 RSBPC16800		
0.15 µF 0.22 µF 0.33 µF 0.47 µF Rated Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF	3.5 4.5 5.0 6.0 6.0 29 8 2.5 2.5 2.5 2.5 2.5 2.5 2.5	7.5 9.5 10.0 11.0 11.0 50Vdc 5td dim H 6.5 6.5 6.5 6.5 6.5	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	300 300 300 300 300 Max dv/dt (V/ µs) 400 400 400 400 400	60 E3 60 E3 60 E3 60 E3 Max K ₀ (V²/ μs) 20 E4 20 E4 20 E4 20 E4 20 E4 20 E4	RSBEC31500 RSBEC32200 RSBEC33300 RSBEC34701 Part Number RSBIC11000 RSBIC11500 RSBIC12200 RSBIC13300 RSBIC14700 RSBIC16800	Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF Mechani	2.5 3.5 3.5 4.5 4.5 5.0 6.0	td dime H 6.5 7.5 7.5 9.5 9.5 10.0 11.0	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	dv/dt (V/ µs) 800 800 800 800 800 800 800 aging (Ta	(V²/ µs) 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4	RSBPC11000 RSBPC11500 RSBPC12200 RSBPC13300 RSBPC14700 RSBPC16800		
0.15 µF 0.22 µF 0.33 µF 0.47 µF Rated Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF	3.5 4.5 5.0 6.0 6.0 8 2.5 2.5 2.5 2.5 2.5 2.5 2.5	7.5 9.5 10.0 11.0 11.0 50Vdc 5td dim H 6.5 6.5 6.5 6.5 6.5 6.5	7.2 7.2 7.2 7.2 7.2 6/160V ension L 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	300 300 300 300 300 Max dv/dt (V/ µs) 400 400 400 400 400 400 400	60 E3 60 E3 60 E3 60 E3 Max K ₀ (V²/ μs) 20 E4 20 E4 20 E4 20 E4 20 E4 20 E4 20 E4	RSBEC31500 RSBEC32200 RSBEC33300 RSBEC34701 Part Number RSBIC11000 RSBIC11500 RSBIC12200 RSBIC13300 RSBIC14700 RSBIC16800 RSBIC21000	Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF Mechani	2.5 3.5 3.5 4.5 4.5 5.0 6.0	td dime H 6.5 7.5 7.5 9.5 9.5 10.0 11.0	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	dv/dt (V/ µs) 800 800 800 800 800 800 800 aging (Ta	(V²/ µs) 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4	RSBPC11000 RSBPC11500 RSBPC12200 RSBPC13300 RSBPC14700 RSBPC16800		
0.15 µF 0.22 µF 0.33 µF 0.47 µF Rated Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF 0.015 µF	3.5 4.5 5.0 6.0 6.0 2! S B 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	7.5 9.5 10.0 11.0 11.0 50Vdc 5td dim H 6.5 6.5 6.5 6.5 6.5 6.5 6.5	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	300 300 300 300 300 Max dv/dt (V/ µs) 400 400 400 400 400 400 400 400	60 E3 60 E3 60 E3 Max K ₀ (V²/ μs) 20 E4 20 E4 20 E4 20 E4 20 E4 20 E4 20 E4 20 E4 20 E4	RSBEC31500 RSBEC32200 RSBEC33300 RSBEC34701 Part Number RSBIC11000 RSBIC11500 RSBIC12200 RSBIC14700 RSBIC16800 RSBIC21000 RSBIC21500	Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF Mechani	2.5 3.5 3.5 4.5 4.5 5.0 6.0	td dime H 6.5 7.5 7.5 9.5 9.5 10.0 11.0	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	dv/dt (V/ µs) 800 800 800 800 800 800 800 aging (Ta	(V²/ µs) 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4	RSBPC11000 RSBPC11500 RSBPC12200 RSBPC13300 RSBPC14700 RSBPC16800		
0.15 µF 0.22 µF 0.33 µF 0.47 µF Rated Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF 0.015 µF 0.022 µF	3.5 4.5 5.0 6.0 6.0 8 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 3.5	7.5 9.5 10.0 11.0 11.0 56 V dc 56 d dim H 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	300 300 300 300 300 Max dv/dt (V/ µs) 400 400 400 400 400 400 400 400 400	60 E3 60 E3 60 E3 60 E3 Max K ₀ (V²/ µs) 20 E4 20 E4 20 E4 20 E4 20 E4 20 E4 20 E4 20 E4 20 E4 20 E4	RSBEC31500 RSBEC32200 RSBEC33300 RSBEC34701 Part Number RSBIC11000 RSBIC11500 RSBIC12200 RSBIC14700 RSBIC16800 RSBIC21000 RSBIC21500 RSBIC22200	Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF Mechani	2.5 3.5 3.5 4.5 4.5 5.0 6.0	td dime H 6.5 7.5 7.5 9.5 9.5 10.0 11.0	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	dv/dt (V/ µs) 800 800 800 800 800 800 800 aging (Ta	(V²/ µs) 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4	RSBPC11000 RSBPC11500 RSBPC12200 RSBPC13300 RSBPC14700 RSBPC16800		
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0.15 µF 0.22 µF 0.33 µF 0.47 µF Rated Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF 0.015 µF 0.022 µF 0.033 µF 0.047 µF	3.5 4.5 5.0 6.0 6.0 8 2.5 2.5 2.5 2.5 2.5 2.5 2.5 3.5 3.5 4.5	7.5 9.5 10.0 11.0 11.0 56 56 6.5 6.5 6.5 6.5 6.5 6.5 6.5 7.5 7.5 9.5	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	300 300 300 300 300 300 Max dv/dt (V/ µs) 400 400 400 400 400 400 400 400 400 40	60 E3 60 E3 60 E3 60 E3 Max K ₀ (V ² / µs) 20 E4 20 E4	RSBEC31500 RSBEC32200 RSBEC33300 RSBEC34701 Part Number RSBIC11000 RSBIC11500 RSBIC12200 RSBIC14700 RSBIC21000 RSBIC21500 RSBIC22200 RSBIC23300 RSBIC23300 RSBIC24700	Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF Mechani	2.5 3.5 3.5 4.5 4.5 5.0 6.0	td dime H 6.5 7.5 7.5 9.5 9.5 10.0 11.0	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	dv/dt (V/ µs) 800 800 800 800 800 800 800 aging (Ta	(V²/ µs) 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4	RSBPC11000 RSBPC11500 RSBPC12200 RSBPC13300 RSBPC14700 RSBPC16800		
0.15 µF 0.22 µF 0.33 µF 0.47 µF Rated Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF 0.015 µF 0.022 µF 0.033 µF 0.047 µF 0.068 µF	3.5 4.5 5.0 6.0 6.0 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	7.5 9.5 10.0 11.0 11.0 56 6.5 6.5 6.5 6.5 6.5 6.5 7.5 7.5 9.5 9.5	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	300 300 300 300 300 300 Max dv/dt (V/ µs) 400 400 400 400 400 400 400 400 400 40	60 E3 60 E3 60 E3 60 E3 Max K ₀ (V ² / µs) 20 E4 20 E4	RSBEC31500 RSBEC32200 RSBEC33300 RSBEC34701 Part Number RSBIC11000 RSBIC11500 RSBIC12200 RSBIC1220-0 RSBIC21500 RSBIC22200 RSBIC22200 RSBIC23300 RSBIC24700 RSBIC24700 RSBIC26800	Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF Mechani	2.5 3.5 3.5 4.5 4.5 5.0 6.0	td dime H 6.5 7.5 7.5 9.5 9.5 10.0 11.0	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	dv/dt (V/ µs) 800 800 800 800 800 800 800 aging (Ta	(V²/ µs) 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4	RSBPC11000 RSBPC11500 RSBPC12200 RSBPC13300 RSBPC14700 RSBPC16800		
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0.15 µF 0.22 µF 0.33 µF 0.47 µF Rated Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF 0.015 µF 0.022 µF 0.033 µF 0.047 µF 0.068 µF 0.10 µF 0.15 µF	3.5 4.5 5.0 6.0 6.0 22 8 2.5 2.5 2.5 2.5 2.5 2.5 2.5 3.5 3.5 4.5 5.0 6.0	7.5 9.5 10.0 11.0 11.0 11.0 6.5 6.5 6.5 6.5 6.5 6.5 7.5 7.5 9.5 10.0 11.0	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	300 300 300 300 300 300 300 Max dv/dt (V/ µs) 400 400 400 400 400 400 400 400 400 40	60 E3 60 E3 60 E3 60 E3 60 E3 (V²/ μs) 20 E4 20 E4	RSBEC31500 RSBEC32200 RSBEC33300 RSBEC34701 Part Number RSBIC11000 RSBIC11500 RSBIC12200 RSBIC1220-0 RSBIC21500 RSBIC22200 RSBIC22200 RSBIC23300 RSBIC24700 RSBIC24700 RSBIC26800	Cap. 1000 pF 1500 pF 2200 pF 3300 pF 4700 pF 6800 pF 0.010 µF Mechani	2.5 3.5 3.5 4.5 4.5 5.0 6.0	td dime H 6.5 7.5 7.5 9.5 9.5 10.0 11.0	7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	dv/dt (V/ µs) 800 800 800 800 800 800 800 aging (Ta	(V²/ µs) 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4 100 E4	RSBPC11000 RSBPC11500 RSBPC12200 RSBPC13300 RSBPC14700 RSBPC16800		
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All dimensions are in mm.

Note 1: If the working voltage (V) is lower than the rated voltage (V_R), the capacitor may work at higher dv/dt. In this case the maximum value allowed is obtained multiplying the above value (see table dv/dt) with the ratio V_R /V.

The pulse characteristic K_0 depends on the voltage wave-form and in any case it cannot overcome the value given in the above table.

Note 2: The rated voltages from 250Vdc to 630Vdc are for pulse applications (i.e.: lamp capacitors).

*Not suitable for across-the-line applications. Please refer to Interference Suppression Capacitors (page 145).

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METALLIZED POLYESTER FILM CAPACITOR HIGH PERFORMANCES - HIGH TEMPERATURE D.C. AND PULSE APPLICATIONS

STACKED VERSION

p = 5 mm

PRODUCT CODE: RSB

ELECTRICAL CHARACTERISTICS

Rated voltage (V_R):

50 Vdc 63 Vdc 100 Vdc 250 Vdc 400 Vdc 500 Vdc

630 Vdc

Rated temperature (T_R): +85°C Temperature derated voltage:

for temperatures between +85°C and +125°C a decreasing factor of 1.25% per degree °C on the rated voltage V_R (d.c. and a.c.) has to be applied.

Capacitance range: 1000pF to 2.2µF

Capacitance values: E6 series (IEC 60063 Norm).

Capacitance tolerances (measured at 1 kHz):

±5% (J); ±10% (K); ±20% (M).

Total self-inductance (L): ≈7nH

max 1 nH per 1 mm lead and capacitor length.

Dissipation factor (DF): tgō 10⁴ at +25°C ±5°C

kHz	C ≤ 0.1µF	C > 0.1µF
1	≤ 80	≤ 80
10	≤ 120	≤ 120
100	≤ 250	

Insulation resistance:

Test conditions

Temperature: +25°C±5°C Voltage charge time: 1 min

Voltage charge:

50 Vdc for V_R <100 Vdc 100 Vdc for V_R ≥100 Vdc

Performance

For V_R ≤100 Vdc

 $\geq 15000 \text{ M}\Omega \text{ for } C \leq 0.33 \mu\text{F}$

 \geq 5000 s for C > 0.33 μ F and $\leq 1\mu$ F

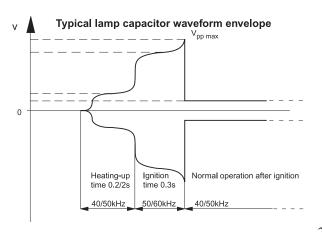
 \geq 1000 s for C > 1 μ F

For $V_R > 100 \text{ Vdc}$ $\geq 30000 \text{ M}\Omega$

Test voltage between terminations:

1.6xV_R applied for 2 s at +25°C±5°C.

Electrical characteristics for use as lamp capacitors in lighting applications.



TEST METHOD AND PERFORMANCE

Damp heat, steady state:

Test conditions

Temperature: +40°C±2°C
Relative humidity (RH): 93% ±2%
Test duration: 56 days

Performance

Capacitance change |∆C/C|: ≤ 5%

DF change (Δ tgd): $\leq 50x10^{-4}$ at 1kHz Insulation resistance: $\geq 50\%$ of initial limit.

Endurance:

Test conditions

Temperature: $+125^{\circ}\text{C} \pm 2^{\circ}\text{C}$ Test duration: 2000 h
Voltage applied: 1.25xV_{\odot}

Performance

Capacitance change $|\Delta C/C|$: $\leq 5\%$

DF change ($\Delta tg\delta$): $\leq 30x10^{-4}$ at 10kHz for C $\leq 1\mu$ F

≤ 20x10⁻⁴ at 1kHz for C> 1µF

Insulation resistance: ≥50% of initial limit.

Resistance to soldering heat:

Test conditions

Solder bath temperature: +260°C±5°C Dipping time (with heat screen):10 s ±1 s

Performance

Capacitance change |∆C/C|: ≤2%

DF change ($\triangle tg\bar{\delta}$): $\leq 30x10^{-4}$ at 10kHz for C $\leq 1\mu$ F $\leq 20x10^{-4}$ at 1kHz for C $\leq 1\mu$ F

Insulation resistance: ≥ initial limit.

Long term stability (after two years):

Storage: standard environmental conditions (see page 12).

Performance

Capacitance change $|\Delta C/C|$: $\leq 3\%$ for $C \leq 0.1 \mu F$

≤ 2%for C> 0.1µF

RELIABILITY:

Reference MIL HDB 217

Application conditions:

Temperature: $+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ Voltage: 0.5xV_{R} Failure rate: $\leq 1 \text{ FIT}$ (1 FIT = $1\text{x}10^{-9}$ failures/components x h)

Failure criteria:

(according to DIN 44122)

Short or open circuit

Capacitance change $|\Delta C/C|$: > 10%

DF change (Δ tg δ): > 2 x initial limit. Insulation resistance: < 0.005 x initial limit.

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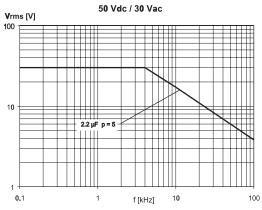
METALLIZED POLYESTER FILM CAPACITOR HIGH PERFORMANCES - HIGH TEMPERATURE D.C. AND PULSE APPLICATIONS

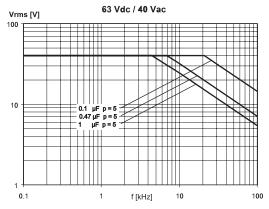
STACKED VERSION

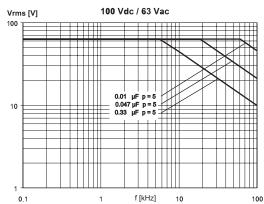
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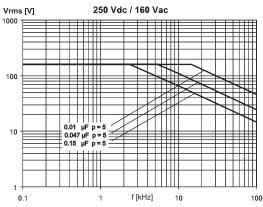
PRODUCT CODE: RSB

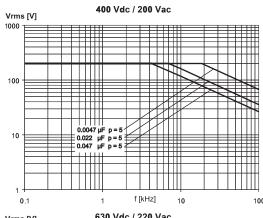
MAX. VOLTAGE (Vr.m.s.) VERSUS FREQUENCY (sinusoidal wave-form / Th ≤ 85°C)

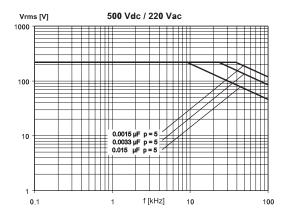


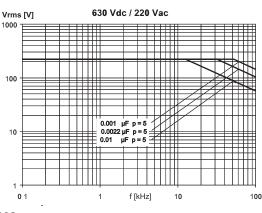












Note: p (pitch) in mm.





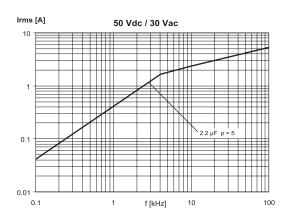
METALLIZED POLYESTER FILM CAPACITOR HIGH PERFORMANCES - HIGH TEMPERATURE D.C. AND PULSE APPLICATIONS

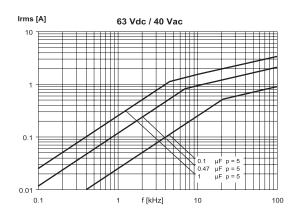
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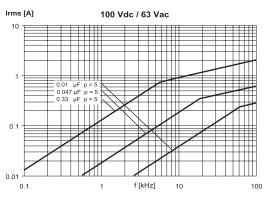
p = 5 mm

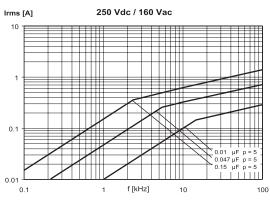
PRODUCT CODE: RSB

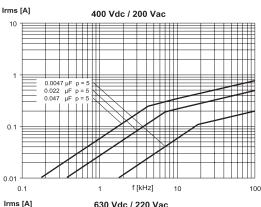
MAX. CURRENT (Ir.m.s.) VERSUS FREQUENCY (sinusoidal wave-form / Th ≤ 85°C)

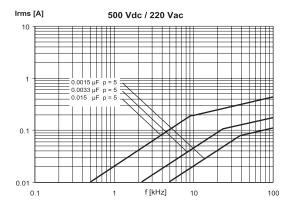


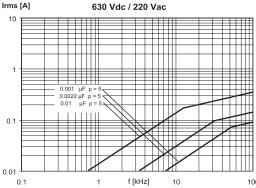












Note: p (pitch) in mm.

Statements of suitability for certain applications are based on our knowledge of typical operating conditions for such applications, but are not intended to constitute and we specifically disclaim - any warranty concerning suitability for a specific customer application or use. This Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by us with reference to the use of our products is given gratis, and we assume no obligation or liability for the advice given or results obtained.

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