

YPPB SERIES High pulse - High performance
Metallized polypropylene film capacitor

Main applications : Snubber, SCR commutating circuits, electronic ballasts, protection circuits in SMPSs, defectors circuits in TV sets, high voltage, high current and high pulse operation.

Dielectric : Polypropylene

Coating (flame retardant) : Solvent resistant plastic case with resin sealing (UL 94 V-0)

Terminals : Lead wire soldering on PCBs (please refer to article table)

Climatic category : 25/85/21 (IEC 60252-1)

Max. permissible ambient temperature : +70°C, operation at rated power, current, voltage and natural cooling (+85°C observing voltage and current de-rating)

Rated capacitance (Cr) : 0,1 μF to 10 μF (YPPB). Refer to article table

Capacitance tolerance (at 1kHz) : ±5% (code=J), ±10% (code=K) and ±20% (code=M). Other tolerances upon request

Rated voltage (Ur) : 250, 400, 630, 1000, 1600, 2000Vdc (+85°C), please refer to article table

Maximum peak current (Ipeak) : Refer to article table. Max. non repetitive Ipk = 1,5 x Ipeak

Dissipation factor (DF), max. : (tgd x10⁻⁴, measured at 25±5°C)



Freq.	Cr ≤ 0,1 μF	Cr > 1,0 μF
10kHz	5	6

Insulation resistance (IR) : Terminal to terminal → not less than 1,000 ΩF, Terminal to case → not less than 2,000M Ω

Test voltage between terminals (Ut) : 1,6xUr (DC) applied for 10s / 2xUr (DC) applied for 2s, at 25±5°C

Test voltage between terminals and case (Utc) : 3kV 50/60Hz applied for 60s at 25±5°C

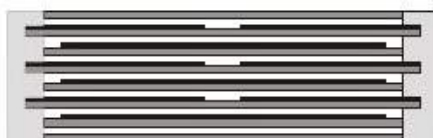
Comparative table of plastic film dielectric characteristics (typical values)				
Characteristic	Polyester	Polycarbonate	Polypropylene	Polystyrene
Relative dielectric constant (25°C, 1KHz)	3,3	2,8	2,2	2,5
Max working temperature (°C)	125	125	105	70
Loss factor (x10 ⁻⁴ , 1KHz/100KHz)	50/180	10/100	2/3	2/3
Insulation resistance (MΩ x μF, +20°C)	30	50	300	300
Temperature coefficient (ppm/°C)	-	+150	+200	-150
Dielectric strength (V/mm)	250	180	350	150
Water absorption (% in weight)	0,2	0,3	<0,01	0,1
Density (g/cm ³)	1,39	1,21	0,91	1,05

Capacitors winding

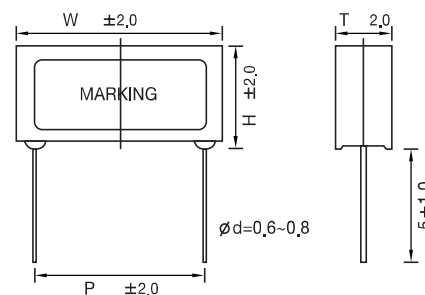
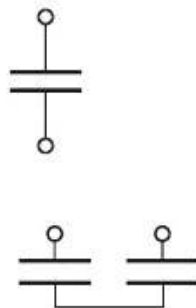
Obtained by volling process with a stated number of different types of films or films and metal foils, having characteristics, arrangement and sequence function of design targets, in order to obtain cylindrical rolls called windings.



Extended metallized film design



Extended metallized film design with internal series connection (series connection of 2 elements)



YPPB Specifications and Sizes

Code Number	Cap μF	Voltage		dv/dt	Dimensions $\pm 2\text{mm}$				
		Vdc	Vac	V/ μs	W	T	H	P	d
YPPB 250V104*	0,1	250	160	560	18	6	12	15	0,8
YPPB 250V224*	0,22	250	160	560	18	7,5	11	15	0,8
YPPB 250V105*	1	250	160	320	26,5	8,5	17	22,5	1
YPPB 250V125*	1,2	250	160	240	26,5	8,5	17	22,5	1
YPPB 250V205*	2	250	160	220	32	11	20	31	1
YPPB 250V305*	3	250	160	210	32	13	22	31	1
YPPB 250V405*	4	250	160	200	38	13	26	37	1
YPPB 250V505*	5	250	160	190	38	16	27	37	1
YPPB 250V605*	6	250	160	180	38	19	29	37	1
YPPB 250V705*	7	250	160	185	38	20	30	37	1
YPPB 250V106*	10	250	160	170	38	21	35	37	1

Code Number	Cap μF	Voltage		dv/dt	Dimensions $\pm 2\text{mm}$				
		Vdc	Vac	V/ μs	W	T	H	P	d
YPPB 400V104*	0,1	400	250	910	18	7,5	13,5	15	0,8
YPPB 400V224*	0,22	400	250	520	18	9,5	17,5	15	0,8
YPPB 400V105*	0,9	400	250	400	26,5	14	25	22,5	1
YPPB 400V125*	1	400	250	320	26,5	16,5	29	22,5	1
YPPB 400V205*	1,5	400	250	280	32	18	33	22,5	1
YPPB 400V305*	2	400	250	280	38	19	29	31	1
YPPB 400V405*	2,8	400	250	250	38	21	31	31	1
YPPB 400V505*	3,3	400	250	250	38	24	35	37	1
YPPB 400V605*	5	400	250	230	38	26	42	37	1
YPPB 400V705*	6,8	400	250	200	58	24	38	37	1
YPPB 400V106*	10	400	250	150	58	33	45	37	1

Code Number	Cap μF	Voltage		dv/dt	Dimensions $\pm 2\text{mm}$				
		Vdc	Vac	V/ μs	W	T	H	P	d
YPPB 630V104*	0,1	630	400	910	18	6	12	15	0,8
YPPB 630V224*	0,22	630	400	520	18	7,5	13,5	15	0,8
YPPB 630V105*	1	630	400	400	26,5	11,5	21,5	22,5	0,8
YPPB 630V125*	1,2	630	400	320	26,5	14	25	22,5	0,8
YPPB 630V205*	2	630	400	280	32	18	27	22,5	0,8
YPPB 630V305*	3	630	400	280	38	18	27	31	0,8
YPPB 630V405*	4	630	400	250	38	21	31	31	1
YPPB 630V505*	5	630	400	250	38	24	35	37	1
YPPB 630V605*	6,5	630	400	250	38	26	42	37	1
YPPB 630V705*	7	630	400	230	48	22	35	37	1
YPPB 630V106*	10	630	400	150	58	22	35	37	1

YPPB Specifications and Sizes

Code Number	Cap μF	Voltage		dv/dt	I _{peak}	ESR 25°C 100kHz	I _{rms}	Dimensions $\pm 2\text{mm}$
		V _{dc}	V _{ac}	V/ μs	A	m Ω	A	W x H x T
YPPB 1600V104*	0,1	1600	650	1000	100	10	9,4	43x30x22
YPPB 1600V154*	0,15	1600	650	1000	150	8	11,5	43x30x22
YPPB 1600V224*	0,22	1600	650	1000	220	7,5	13	43x30x22
YPPB 1600V334*	0,33	1600	650	800	264	7	14	43x30x22
YPPB 1600V474*	0,47	1600	650	800	376	6,6	16	43x37x28
YPPB 1600V564*	0,56	1600	650	800	448	6,2	18	43x37x28
YPPB 1600V684*	0,68	1600	650	800	544	6	19	43x37x28
YPPB 1600V754*	0,75	1600	650	500	375	5,8	20	43x37x28
YPPB 1600V105*	1	1600	650	500	500	3,2	23,8	43x45x33
YPPB 1600V125*	1,2	1600	650	500	600	2,8	25	43x45x33

Code Number	Cap μF	Voltage		dv/dt	I _{peak}	ESR 25°C 100kHz	I _{rms}	Dimensions $\pm 2\text{mm}$
		V _{dc}	V _{ac}	V/ μs	A	m Ω	A	W x H x T
YPPB 2000V104*	0,1	2000	700	1100	110	8	10	43x30x22
YPPB 2000V154*	0,15	2000	700	1100	165	7,5	11	43x30x22
YPPB 2000V224*	0,22	2000	700	850	187	7	13,8	43x30x22
YPPB 2000V334*	0,33	2000	700	850	280	6,4	16,9	43x37x28
YPPB 2000V474*	0,47	2000	700	850	400	6	19	43x37x28
YPPB 2000V564*	0,56	2000	700	600	336	5,5	21,5	43x37x28
YPPB 2000V684*	0,68	2000	700	600	408	5	24	43x45x33
YPPB 2000V754*	0,75	2000	700	600	450	4,2	25	43x45x33
YPPB 2000V105*	1	2000	700	600	550	3,1	29	43x45x33

(1) Change the * symbol with the needed capacitance tolerance code: J= $\pm 5\%$, K= $\pm 10\%$, M= $\pm 20\%$

(2) Maximum values at 100kHz, +70° C for case operating T= +85°C (YPPB only: at Tamb,)+70°C and T case)+85°C voltage and current de-rating must be observed), C tol. $\pm 10\%$

(3) Typical values at 100kHz.

(4) Not suitable for across the line application.