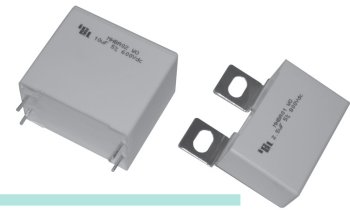


MHBA (MHB version **A**)
Metallized polypropylene film capacitor
MKP - Switching - High current
2/4 x Wire or lug terminals - Small size



Main applications

Switching capacitor for industrial and motor speed controls, high frequency electronic ballasts, switching mode power supplies, resonant circuits, induction heaters, AC applications

Dielectric

Polypropylene

Electrodes

Vacuum deposited metal layers

Coating

Solvent resistant plastic case with resin sealing (UL 94 V-0). Flame retardant execution

Construction

Extended metallized film (refer to general technical information)

Terminals

Tinned copper wire (lead-free). 2 x leads (S=5±1mm, L=25±5mm leads length), 4 x leads (SD=5,5±1,5mm) or lug terminals (lead-free) execution (please refer to article table)

Degree of protection

IP00

Installation

Whatever position assuring correct heat dissipation. Arrangement of many components with box walls in contact not admitted; suggested minimum distance between side by side elements ≥ 1/8 of the box thickness (B size). Box with lugs terminals must be free to correctly dissipate from all the body faces

Reference standard

IEC 61071, IEC 60068, RoHS compliant

Climatic category

40/85/56 (IEC 60068/1), GPD (DIN40040)

Operating temperature range (case)

-40°...+85°C (+100°C observing voltage and current de-rating)

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)

1µF to 60µF. Refer to article table

Capacitance tolerance (at 1kHz)

±10% (code=K), ±5% (code=J). Other tolerances upon request

Capacitance temperature coefficient

Refer to graphs in general technical information

Long term stability (at 1 kHz)

Capacitance variation ≤ ±1% after a period of 2 years at standard environmental conditions

Rated voltage (Ur)

370, 500, 600, 700, 800 Vdc

Temperature de-rated voltage

For operating temperature (case) > +85°C,
 Ur must be decreased 1,5% for every °C exceeding +85°C
 Urms must be decreased 2,5% for every °C exceeding +85°C

Permissible AC voltage (Urms)

160, 250, 330, 380, 400 Vac

Non recurrent surge voltage (Upk)

470, 625, 750, 875, 1050Vdc

Self inductance

≤ 1nH/mm of fixing pitch

Maximum pulse rise time

Refer to article table

Maximum peak current (Ipeak)

Refer to article table. Max. non repetitive Ipk = 1,5 x Ipeak

Dissipation factor (DF), max.

Tgδ x 10⁻⁴, measured at 25±5°C, 1kHz

Cr ≤ 5µF	5µF < Cr ≤ 15µF	Cr > 15µF
6	10	15

Insulation resistance (IR)

≥ 30000s when measured between terminals, at 25±°C, after 1 minute of electrification at 100Vdc

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

Damp heat test (steady state)

Test conditions:
 Temperature= +40±2°C
 Relative humidity=93±2%
 Test duration= 56 days

Performance:

Capacitance change ≤ ±2%
 DF change ≤ 0.0010 at 1kHz
 IR ≥ 50% of initial limit value

Typical capacitance change versus operating time

-3% after 30'000 hours at Urms or after 100'000 hours at Ur

Life expectancy

≥ 100'000 hours (Ur); 30'000 hours (Urms)

Failure quota

300/10⁹ component hours

Resistance to soldering heat test

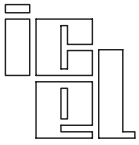
Test conditions:
 Solder bath temperature= +260±5°C
 Dipping time (with heat screen)= 10±1s

Performance:

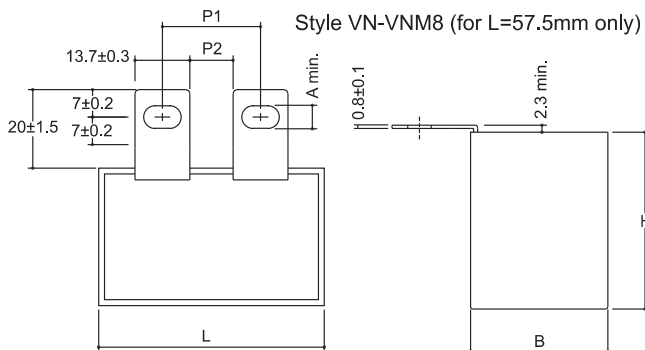
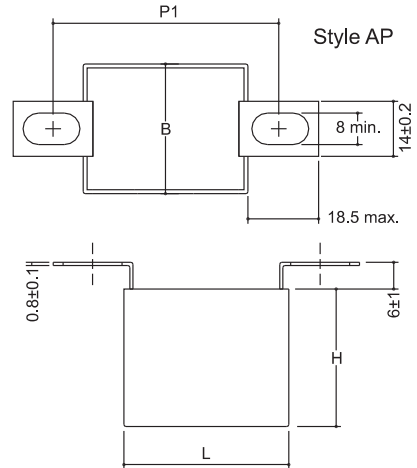
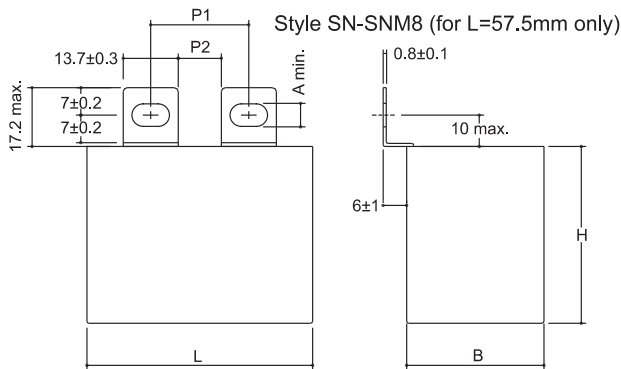
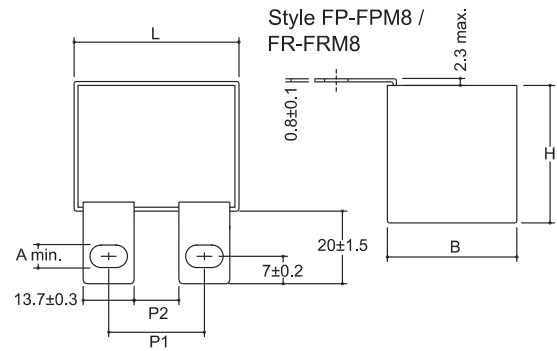
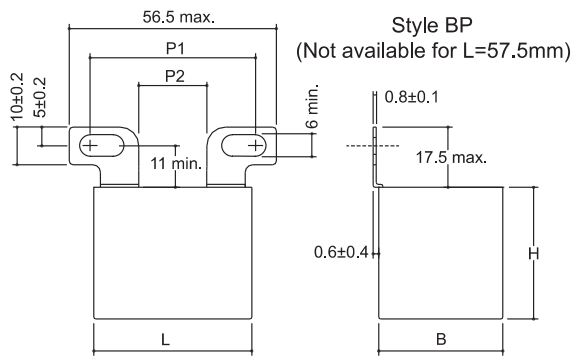
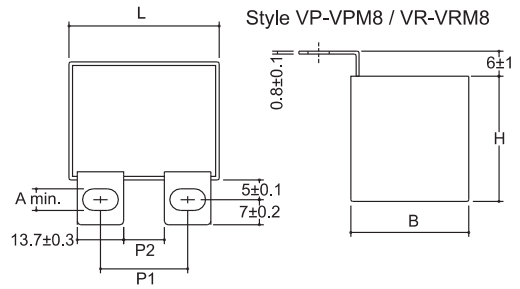
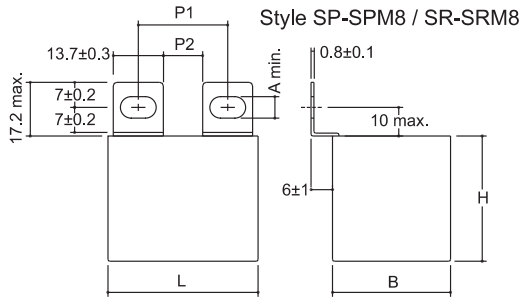
Capacitance change ≤ ±1%
 DF change ≤ 0.0010 at 1kHz
 IR ≥ 50% of initial limit value

Warning

This specification must be completed with the data given in the "General technical information" chapter



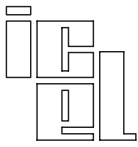
MHBA (MHB version **A**)
Metallized polypropylene film capacitor
MKP - Switching - High current
2/4 x Wire or lug terminals - Small size



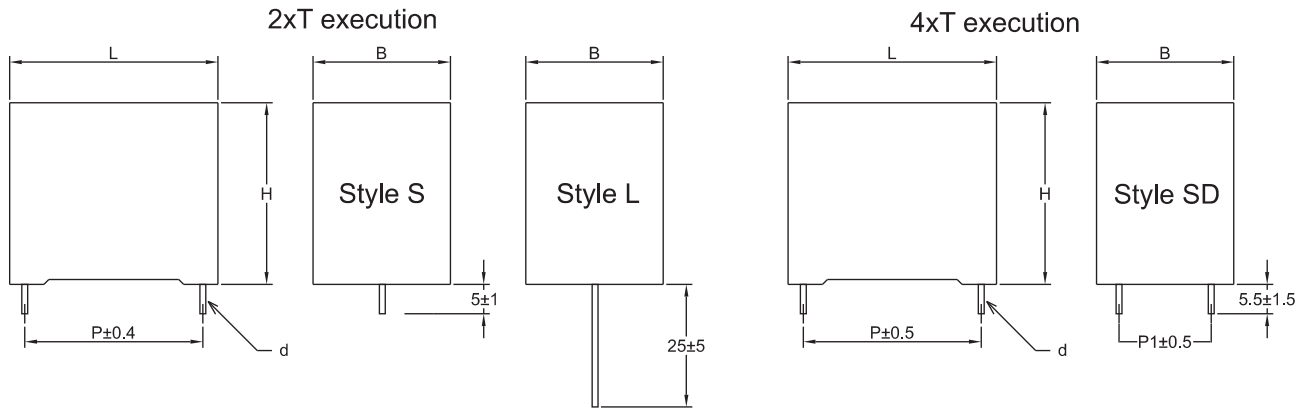
Fixing slot size (mm)	
SP, VP, FP, SR, VR, FR, SN, VN	A = 6 min
SPM8, VPM8, FPM8, SRM8, VRM8, FRM8, SNM8, VNM8	A = 8 min.

Fixing pitch and distance between lugs (mm)				
Lug style	L	P1		P2
		M6	M8	min.
SP-SPM8	42,5	23 ÷ 28	25 ÷ 26	11
VP-VPM8	57,5	37 ÷ 42	39 ÷ 40	24
FP-FPM8				
SR-SRM8	42,5	20 ÷ 25	22 ÷ 23	8
VR-VRM8	57,5	34 ÷ 39	36 ÷ 37	21
FR-FRM8				
SN-SNM8	42,5	Not available		
VN-VNM8	57,5	23 ÷ 28	25 ÷ 26	11
AP	42,5	-	51 ÷ 64	-
	57,5	-	65 ÷ 78	-
BP	42,5	32 ÷ 45	-	17
	57,5	Not available		

Note: standard fixing slots are for M6 screws; execution with slots for M8 screws upon request only (AP excluded)



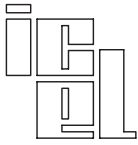
MHBA (MHB version **A**)
Metallized polypropylene film capacitor
MKP - Switching - High current
2/4 x Wire or lug terminals - Small size



MHBA article table (different values available upon request)

Ur	Urms	Upkr	Cap.	Dimension in mm							du/dt	Ipeak	Irms ⁽²⁾	ESR ⁽³⁾	ICEL Code ⁽¹⁾
Vdc	Vac	Vdc	µF	B	H	L	d	P	P1	V/µs	A	A	mΩ		
370	160	470	4	13	22	32	1	27,5	-	55	220	6,5	11,2	MHBA044400*H#	
370	160	470	5	14	28	32	1	27,5	-	55	275	7,5	9,9	MHBA044500*H#	
370	160	470	6,8	18	33	32	1,2	27,5	-	55	374	10,5	8,3	MHBA044680*H#	
370	160	470	6,8	18	33	32	1,2	27,5	5,1	55	374	12	7,6	MHBA044680*HSD	
370	160	470	10	22	37	32	1,2	27,5	-	55	550	13	6	MHBA045100*H#	
370	160	470	10	22	37	32	1,2	27,5	10,2	55	550	15	5,3	MHBA045100*HSD	
370	160	470	10	17	28	42,5	1,2	37,5	-	37,5	375	10,5	6,9	MHBA045100*J#	
370	160	470	10	17	28	42,5	see lugs drawing	37,5	375	37,5	375	12,5	6,1	MHBA045100*SS	
370	160	470	15	22	30	42,5	1,2	37,5	-	37,5	562,5	12,5	5,7	MHBA045150*J#	
370	160	470	15	22	30	42,5	1,2	37,5	10,2	37,5	562,5	14	5,1	MHBA045150*JSD	
370	160	470	15	22	30	42,5	see lugs drawing	37,5	562,5	37,5	562,5	15	5	MHBA045150*SS	
370	160	470	22	28	37	42,5	1,2	37,5	-	37,5	825	14	4,7	MHBA045220*J#	
370	160	470	22	28	37	42,5	1,2	37,5	10,2	37,5	825	17,5	4,1	MHBA045220*JSD	
370	160	470	22	28	37	42,5	see lugs drawing	37,5	825	37,5	825	19	4	MHBA045220*SS	
370	160	470	33	30	45	42,5	1,2	37,5	-	37,5	1237,5	14	4	MHBA045330*J#	
370	160	470	33	30	45	42,5	1,2	37,5	20,3	37,5	1237,5	21,5	3,4	MHBA045330*JSD	
370	160	470	33	30	45	42,5	see lugs drawing	37,5	1237,5	37,5	1237,5	23	3,3	MHBA045330*SS	
370	160	470	40	30	45	57,5	1,2	52,5	-	25	1000	14	4,5	MHBA045400*R#	
370	160	470	40	30	45	57,5	1,2	52,5	20,3	25	1000	22	3,9	MHBA045400*RSD	
370	160	470	40	30	45	57,5	see lugs drawing	25	1000	25	1000	24	3,8	MHBA045400*SS	
370	160	470	50	35	50	57,5	1,2	52,5	-	25	1250	14	3,9	MHBA045500*R#	
370	160	470	50	35	50	57,5	1,2	52,5	20,3	25	1250	25	3,3	MHBA045500*RSD	
370	160	470	50	35	50	57,5	see lugs drawing	25	1250	25	1250	28	3,2	MHBA045500*SS	
370	160	470	60	35	50	57,5	1,2	52,5	-	25	1500	14	3,6	MHBA045600*R#	
370	160	470	60	35	50	57,5	1,2	52,5	20,3	20	1500	26	3	MHBA045600*RSD	
370	160	470	60	35	50	57,5	see lugs drawing	20	1500	20	1500	29	2,9	MHBA045600*SS	
500	250	625	2	13	22	32	1	27,5	-	70	140	6	14,4	MHBA034200*H#	
500	250	625	2,2	13	22	32	1	27,5	-	70	154	6	13,6	MHBA034220*H#	
500	250	625	3,3	15	24,5	32	1	27,5	-	70	231	7	11	MHBA034330*H#	
500	250	625	4	18	33	32	1,2	27,5	-	70	280	8,5	9,9	MHBA034400*H#	
500	250	625	5	18	33	32	1,2	27,5	-	70	350	9,5	8,7	MHBA034500*H#	
500	250	625	5	18	33	32	1,2	27,5	5,1	70	350	11	8	MHBA034500*HSD	
500	250	625	6,8	22	37	32	1,2	27,5	-	70	476	12	7,7	MHBA034680*H#	
500	250	625	6,8	22	37	32	1,2	27,5	10,2	70	476	14	7	MHBA033680*HSD	
500	250	625	7,5	22	30	42,5	1,2	37,5	-	47,5	356,2	10	8,3	MHBA034750*H#	
500	250	625	7,5	22	30	42,5	see lugs drawing	47,5	356,2	47,5	356,2	11,5	7,5	MHBA034750*SS	
500	250	625	10	22	33,5	42,5	1,2	37,5	-	47,5	475	12	6,7	MHBA035100*J#	
500	250	625	10	22	33,5	42,5	1,2	37,5	10,2	47,5	475	13,5	6,1	MHBA035100*JSD	
500	250	625	10	22	33,5	42,5	see lugs drawing	47,5	475	47,5	475	14,5	6	MHBA035100*SS	
500	250	625	15	28	37	42,5	1,2	37,5	-	47,5	712,5	14	5,4	MHBA035150*J#	
500	250	625	15	28	37	42,5	1,2	37,5	20,3	47,5	712,5	16,5	4,8	MHBA035150*JSD	
500	250	625	15	28	37	42,5	see lugs drawing	47,5	712,5	47,5	712,5	17,5	4,7	MHBA035150*SS	
500	250	625	22	30	45	42,5	1,2	37,5	-	47,5	1045	14	4,5	MHBA035220*J#	
500	250	625	22	30	45	42,5	1,2	37,5	20,3	47,5	1045	19,5	3,9	MHBA035220*JSD	
500	250	625	22	30	45	42,5	see lugs drawing	47,5	1045	47,5	1045	21,5	3,8	MHBA035220*SS	
500	250	625	25	30	45	57,5	1,2	52,5	-	32,5	812,5	14	5	MHBA035250*R#	
500	250	625	25	30	45	57,5	1,2	52,5	20,3	32,5	812,5	20	4,4	MHBA035250*RSD	
500	250	625	25	30	45	57,5	see lugs drawing	32,5	812,5	32,5	812,5	22	4,3	MHBA035250*SS	
500	250	625	30	30	45	57,5	1,2	52,5	-	32,5	975	14	4,5	MHBA035300*R#	

⁽¹⁾Change the * symbol with the needed Cap. tol. code: J=±5%, K=±10%, the # symbol with S for 5mm, L for 25 mm lead length and SS symbols with needed lugs style - ⁽²⁾ Max. at 100kHz, +70°C for case operating T= +85°C (at T amb. >+70°C and T case>+85°C voltage and Irms de-rating must be observed), C tol. ±±10% - ⁽³⁾ Typical values at 100kHz - ⁽⁴⁾Not suitable for across the line application



MHBA (MHB version A)

Metallized polypropylene film capacitor

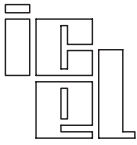
MKP - Switching - High current

2/4 x Wire or lug terminals - Small size

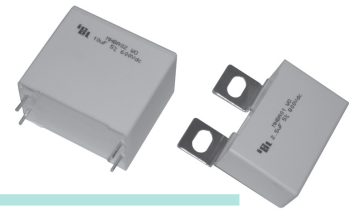


Ur	Urms	Upkr	Cap.	Dimension in mm							du/dt	Ipeak	Irms ⁽²⁾	ESR ⁽³⁾	ICEL Code ⁽¹⁾
Vdc	Vac	Vdc	µF	B	H	L	d	P	P1	V/µs	A	A	mΩ		
500	250	625	30	30	45	57,5	1,2	52,5	20,3	32,5	975	22	3,9	MHBA035300*RSD	
500	250	625	30	30	45	57,5	see lugs drawing			32,5	975	24	3,8	MHBA035300*SS	
500	250	625	40	35	50	57,5	1,2	52,5	-	32,5	1300	14	3,9	MHBA035400*R#	
500	250	625	40	35	50	57,5	1,2	52,5	20,3	32,5	1300	25	3,3	MHBA035400*RSD	
500	250	625	40	35	50	57,5	see lugs drawing			32,5	1300	28	3,2	MHBA035400*SS	
600	330	750	1,5	13	22	32	1	27,5	-	90	135	6	13	MHBA024150*H#	
600	330	750	2	15	24,5	32	1	27,5	-	90	180	7	11,3	MHBA024200*H#	
600	330	750	2,2	15	24,5	32	1	27,5	-	90	198	7	10,6	MHBA024220*H#	
600	330	750	2,5	14	28	32	1	27,5	-	90	225	8	10,1	MHBA024250*H#	
600	330	750	3,3	18	33	32	1,2	27,5	-	90	297	10	8,7	MHBA024330*H#	
600	330	750	3,3	18	33	32	1,2	27,5	5,1	90	297	11,5	8	MHBA024330*HSD	
600	330	750	4	18	33	32	1,2	27,5	-	90	360	11	7,7	MHBA024400*H#	
600	330	750	4	18	33	32	1,2	27,5	10,2	90	360	12,5	7	MHBA024400*HSD	
600	330	750	4	17	28	42,5	1,2	37,5	-	60	240	9,5	8,9	MHBA024400*J#	
600	330	750	4	17	28	42,5	see lugs drawing			60	240	11	8,2	MHBA024400*SS	
600	330	750	5	22	37	32	1,2	27,5	-	90	450	12	7	MHBA024500*H#	
600	330	750	5	22	37	32	1,2	27,5	10,2	90	450	14	6,3	MHBA024500*HSD	
600	330	750	5	22	30	42,5	1,2	37,5	-	60	300	11,5	7,3	MHBA024500*J#	
600	330	750	5	22	30	42,5	see lugs drawing			60	300	13	6,6	MHBA024500*SS	
600	330	750	6,8	22	33,5	42,5	1,2	37,5	-	60	408	12,5	6,4	MHBA024680*J#	
600	330	750	6,8	22	33,5	42,5	see lugs drawing			60	408	15	5,7	MHBA024680*SS	
600	330	750	10	28	37	42,5	1,2	37,5	-	60	600	14	5,4	MHBA025100*J#	
600	330	750	10	28	37	42,5	1,2	37,5	10,2	60	600	16,5	4,8	MHBA025100*JSD	
600	330	750	10	28	37	42,5	see lugs drawing			60	600	18	4,7	MHBA025100*SS	
600	330	750	15	30	45	42,5	1,2	37,5	-	60	900	14	4,4	MHBA025150*J#	
600	330	750	15	30	45	42,5	1,2	37,5	20,3	60	900	20	3,8	MHBA025150*JSD	
600	330	750	15	30	45	42,5	see lugs drawing			60	900	22	3,7	MHBA025150*SS	
600	330	750	20	30	45	57,5	1,2	52,5	-	40	800	14	4,7	MHBA025200*R#	
600	330	750	20	30	45	57,5	1,2	52,5	20,3	40	800	21	4,1	MHBA025200*R#	
600	330	750	20	30	45	57,5	see lugs drawing			40	800	23	4	MHBA025200*SS	
600	330	750	25	35	50	57,5	1,2	52,5	-	40	1000	14	4,2	MHBA025250*R#	
600	330	750	25	35	50	57,5	1,2	52,5	20,3	40	1000	24	3,6	MHBA025250*RSD	
600	330	750	25	35	50	57,5	see lugs drawing			40	1000	27	3,5	MHBA025250*SS	
700	380	875	1	13	22	32	1	27,5	-	110	110	5,5	15,5	MHBA064100*H#	
700	380	875	1,5	15	24,5	32	1	27,5	-	110	165	6,5	12,5	MHBA064150*H#	
700	380	875	2	14	28	32	1	27,5	-	110	220	7,5	10,6	MHBA064200*H#	
700	380	875	3	18	33	32	1,2	27,5	-	110	330	10	8,6	MHBA064300*H#	
700	380	875	3	18	33	32	1,2	27,5	5,1	110	330	11,5	7,9	MHBA064300*HSD	
700	380	875	3	17	28	42,5	1,2	37,5	-	75	225	9	9,9	MHBA064300*J#	
700	380	875	3	17	28	42,5	see lugs drawing			75	225	10,5	9,2	MHBA064300*SS	
700	380	875	4	22	37	32	1,2	27,5	-	110	440	12	7,4	MHBA064400*H#	
700	380	875	4	22	37	32	1,2	27,5	10,2	110	440	14	6,7	MHBA064400*HSD	
700	380	875	4	22	30	42,5	1,2	37,5	-	75	300	10,5	8,5	MHBA064400*J#	
700	380	875	4	22	30	42,5	see lugs drawing			75	300	12	7,8	MHBA064400*SS	
700	380	875	5	22	33,5	42,5	1,2	37,5	-	75	375	12	7,3	MHBA064500*J#	
700	380	875	5	22	33,5	42,5	see lugs drawing			75	375	13,5	6,6	MHBA064500*SS	
700	380	875	8	28	37	42,5	1,2	37,5	-	75	600	14	5,8	MHBA064800*J#	
700	380	875	8	28	37	42,5	1,2	37,5	10,2	75	600	16	5,2	MHBA064800*JSD	
700	380	875	8	28	37	42,5	see lugs drawing			75	600	17,5	5,1	MHBA064800*SS	
700	380	875	10	30	45	42,5	1,2	37,5	-	75	750	14	5,3	MHBA065100*J#	
700	380	875	10	30	45	42,5	1,2	37,5	20,3	75	750	18,5	4,7	MHBA065100*JSD	
700	380	875	10	30	45	42,5	see lugs drawing			75	750	20	4,6	MHBA065100*SS	
700	380	875	15	30	45	57,5	1,2	52,5	-	50	750	14	5,4	MHBA065150*R#	
700	380	875	15	30	45	57,5	1,2	52,5	20,3	50	750	19,5	4,8	MHBA065150*RSD	
700	380	875	15	30	45	57,5	see lugs drawing			50	750	22	4,7	MHBA065150*SS	
700	380	875	20	35	50	57,5	1,2	52,5	-	50	1000	14	4,7	MHBA065200*R#	
700	380	875	20	35	50	57,5	1,2	52,5	20,3	50	1000	22,5	4,1	MHBA065200*RSD	
700	380	875	20	35	50	57,5	see lugs drawing			50	1000	25	4	MHBA065200*SS	
800	400	1050	1	15	24,5	32	1	27,5	-	120	120	6,5	13,8	MHBA014100*H#	
800	400	1050	1,5	18	33	32	1	27,5	-	120	180	8,5	11,1	MHBA014150*H#	
800	400	1050	2,2	18	33	32	1	27,5	-	120	264	9,5	9,1	MHBA014220*H#	
800	400	1050	2,5	17	28	42,5	1,2	37,5	-	82,5	206,2	9	9,8	MHBA014250*J#	
800	400	1050	2,5	17	28	42,5	see lugs drawing			82,5	206,2	10,5	9,1	MHBA014250*SS	
800	400	1050	3	22	37	32	1,2	27,5	-	120	360	12	7,8	MHBA014300*H#	
800	400	1050	3	22	37	32	1,2	27,5	10,2	120	360	14	7,1	MHBA014300*HSD	
800	400	1050	3,3	22	30	42,5	1,2	37,5	-	82,5	272,2	11	8,3	MHBA014330*J#	
800	400	1050	3,3	22	30	42,5	see lugs drawing			82,5	272,2	12,5	7,6	MHBA014330*SS	
800	400	1050	4	22	33,5	42,5	1,2	37,5	-	82,5	330	12	7,3	MHBA014400*J#	
800	400	1050	4	22	33,5	42,5	see lugs drawing			82,5	330	13,5	6,6	MHBA014400*SS	

(1) Change the * symbol with the needed Cap. tol. code: J=±5%, K=±10%, the # symbol with S for 5mm, L for 25 mm lead length and SS symbols with needed lugs style - (2) Max. at 100kHz, +70°C for case operating T= +85°C (at T amb. >+70°C and T case>+85°C voltage and Irms de-rating must be observed), C tol. ≤±10% - (3) Typical values at 100kHz - (4) Not suitable for across the line application



MHBA (MHB version **A**)
Metallized polypropylene film capacitor
MKP - Switching - High current
2/4 x Wire or lug terminals - Small size



Ur Vdc	Urms Vac	Upkr Vdc	Cap. µF	B	H	Dimension in mm					du/dt V/µs	Ipeak A	Irms ⁽²⁾ A	ESR ⁽³⁾ mΩ	ICEL Code ⁽¹⁾
						L	d	P	P1						
800	400	1050	5	28	37	42,5	1,2	37,5	-	82,5	412,5	14	6,5	MHBA014500*J#	
800	400	1050	5	28	37	42,5	1,2	37,5	10,2	82,5	412,5	15,5	5,9	MHBA014500*JSD	
800	400	1050	5	28	37	42,5	see lugs drawing			82,5	412,5	16,5	5,8	MHBA014500\$\$	
800	400	1050	8	30	45	42,5	1,2	37,5	-	82,5	660	14	4,7	MHBA014800*J#	
800	400	1050	8	30	45	42,5	1,2	37,5	20,3	82,5	660	19,5	4,1	MHBA014800*JSD	
800	400	1050	8	30	45	42,5	see lugs drawing			82,5	660	21,5	4	MHBA014800*\$\$	
800	400	1050	10	30	45	57,5	1,2	52,5	-	55	550	14	5,9	MHBA015100*R#	
800	400	1050	10	30	45	57,5	1,2	52,5	10,2	55	550	18,5	5,3	MHBA015100*RSD	
800	400	1050	10	30	45	57,5	see lugs drawing			55	550	20	5,2	MHBA015100*\$\$	
800	400	1050	12,5	35	50	57,5	1,2	52,5	-	55	687,5	14	5,4	MHBA015125*R#	
800	400	1050	12,5	35	50	57,5	1,2	52,5	20,3	55	687,5	20	4,8	MHBA015125*RSD	
800	400	1050	12,5	35	50	57,5	see lugs drawing			55	687,5	22	4,7	MHBA015150*\$\$	
800	400	1050	15	35	50	57,5	1,2	52,5	-	55	825	14	5	MHBA015150*R#	
800	400	1050	15	35	50	57,5	1,2	52,5	20,3	55	825	22	4,4	MHBA015150*RSD	
800	400	1050	15	35	50	57,5	see lugs drawing			55	825	24	4,3	MHBA015150*\$\$	

⁽¹⁾Change the * symbol with the needed Cap. tol. code: J=±5%, K=±10%, the # symbol with S for 5mm, L for 25 mm lead length and \$\$ symbols with needed lugs style - ⁽²⁾ Max. at 100kHz, +70°C for case operating T= +85°C (at T amb. >+70°C and T case>+85°C voltage and Irms de-rating must be observed), C tol. ≤±10% - ⁽³⁾ Typical values at 100kHz - ⁽⁴⁾Not suitable for across the line application