

MHBS (MHB version S) *NEW in progress*

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, DC-link, SMPS, induction heaters, suitable for AC applications

Main characteristics

High voltage and high capacitance in small size with long life expectancy, high current and high frequency operation capability

Dielectric

Polypropylene

Electrodes

Vacuum deposited special 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 ($S=5\pm1\text{mm}$, $L=25\pm5\text{mm}$ leads length), 4 xleads ($SD=5,5\pm1,5\text{mm}$) 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 $\geq 1/8$ 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 (operation at rated power, rated current and natural cooling)

+70°C (+85°C observing voltage and current de-rating); no superimposed Irms must be applied at Tamb.>+95°C (at Tamb.>+95°C superimposed Irms must be= 0)

Rated capacitance (Cr)

0,68µF to 75µF. 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 $\leq \pm 1\%$ after a period of 2 years at standard environmental conditions

Rated voltage (Ur) at T=+85°C, case (continuous operation)

575, 700, 800, 900, 1000, 1100, 1275Vdc

Temperature de-rated voltage and current

For operating temperature (case) > +85°C,
Ur, Urms, Upkr and Upk must be decreased 1.5% for every °C exceeding +85°C.

For current de-rating please also refer to the $\Delta T/\text{Tamb.}$ data in function of the applied Irms listed in the article table

Permissible AC voltage (Urms) at T=+85°C, case (continuous operation)

240, 285, 315, 350, 400, 420, 440 Vac

Max. admissible voltage at T+70°C, case (continuous operation)

Please refer to the article table

Max. repetitive peak voltage (Upkr), up to T=+85°C, case (total: 1hour max./ day)

660, 805, 920, 1035, 1150, 1265, 1465 Vdc

Non Recurrent Surge Voltage (Upk), up to T=+85°C, case

750, 910, 1040, 1070, 1300, 1430, 1655Vdc

Self inductance

$\leq 1\text{nH/mm}$ 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

RMS Current (Irms)

Please refer to the article table; no superimposed Irms must be applied at Tamb.>+95°C (at Tamb.>+95°C Irms must be= 0)

Dissipation factor (DF), max.

Tgδ x10⁻⁴, measured at 25±5°C, 1kHz

≤ 6 for Cr $\leq 4.0\mu\text{F}$

≤ 8 for $4.0\mu\text{F} < \text{Cr} \leq 12.0\mu\text{F}$ ($P \leq 37.5\text{mm}$)

≤ 11 for $12.0\mu\text{F}$ ($P \leq 37.5\text{mm}$) $< \text{Cr} \leq 20.0\mu\text{F}$

≤ 14 for $20.0\mu\text{F} < \text{Cr} \leq 40.0\mu\text{F}$

≤ 17 for $\text{Cr} > 40\mu\text{F}$

Insulation resistance (IR)

$\geq 3000\text{s}$ (10000s typical) but need not exceed 3GΩ, when measured between terminals, at 25±5°C, after 1 minute of electrification at 100Vdc

Test voltage between terminals (Ut)

1,5xUr (DC) or 1,5xUrms (AC) applied for 10s, 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	Performance
Temperature= +40±2°C	Capacitance change $\leq \pm 3\%$
Relative humidity=93±2%	DF change $\leq 2 \times$ initial limit (1kHz)
Test duration= 56 days	IR $\geq 50\%$ of initial limit value

Typical capacitance change versus operating time (at Tcase=+70°C)

-5% after 30'000 hours at Urms or after 100'000 hours at Ur

Life expectancy

$\geq 60'000$ hours at Urms or $\geq 200'000$ hours at Ur with T(case) $\leq +70^\circ\text{C}$: expected life max. limit reference.

$\geq 30'000$ hours at Urms or $\geq 100'000$ hours at Ur with T(case)=+85°C: reference for expected life calculations at different operating conditions (and expected life at max. admissible voltage at +70°C, case).

$\geq 10'000$ hours at de-rated Urms (Urms x 0.8) or $\geq 30'000$ hours at de-rated Ur (Ur x 0.8) at T(case)=+100°C, NO superimposed Irms applied.

Failure quota

300/10⁹ component hours

Resistance to soldering heat test

Test conditions:

Solder bath temperature= +260±5°C

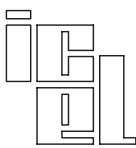
Dipping time (with heat screen)= 10±1s

Performance:

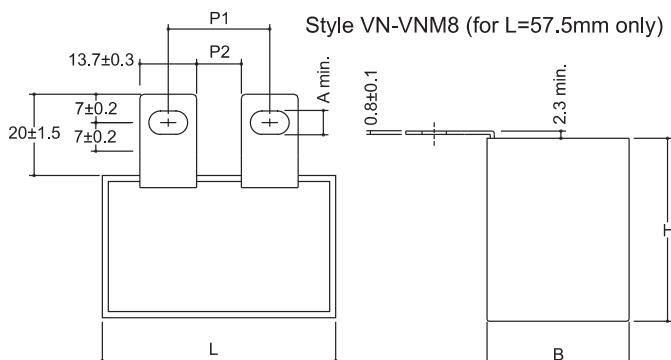
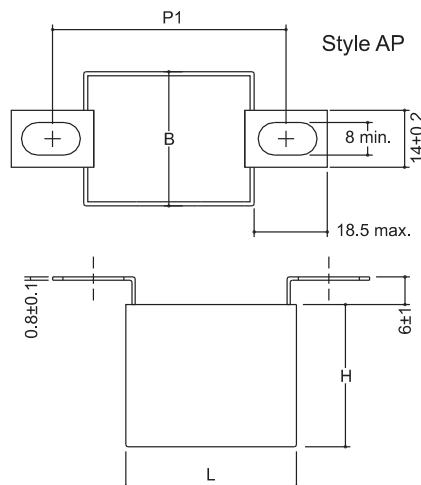
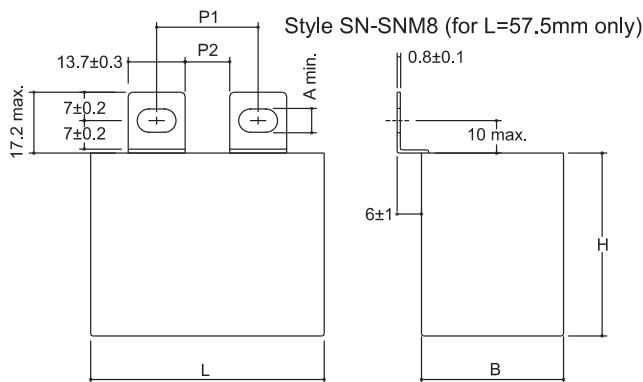
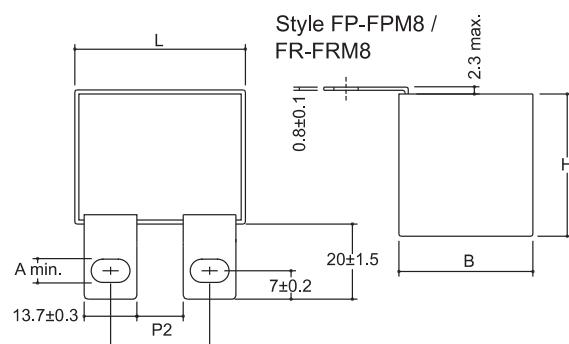
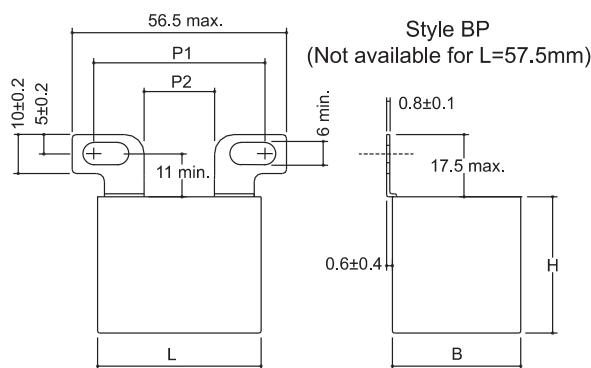
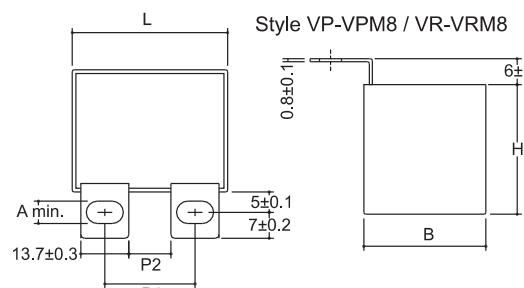
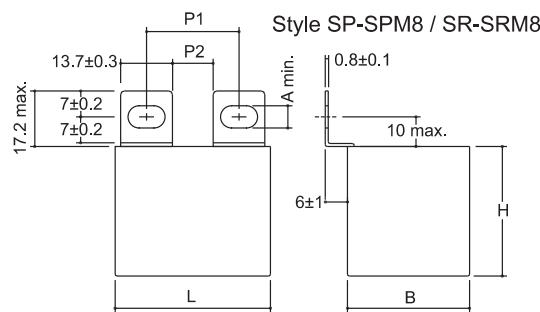
Capacitance change $\leq \pm 1\%$

DF change ≤ 0.0010 at 1kHz

IR $\geq 50\%$ of initial limit value



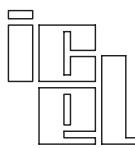
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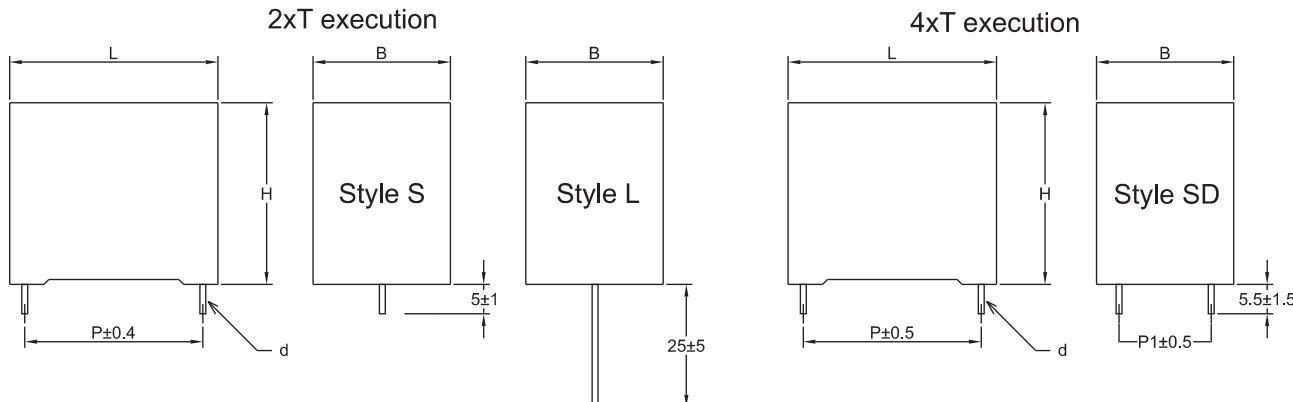
Fixing slot size (mm)	
SP, VP, FP, SR, VR, FR, SN, VN	A = 6 min
SPM8, VPM8, FPM8, SRM8 VRM8, FRM8, SNM8, VNM8	A = 8 min.

Fixing pitch and distance between lugs (mm)				
Lug style	L	P1		P2 min.
		M6	M8	
SP-SPM8	42,5	23 ÷ 28	25 ÷ 26	11
VP-VPM8	57,5	37 ÷ 42	39 ÷ 40	24
FP-FPM8	42,5	20 ÷ 25	22 ÷ 23	8
SR-SRM8	57,5	34 ÷ 39	36 ÷ 37	21
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)



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MHBS35....: Ur=575Vdc; Urms= 240Vac; Upkr= 660Vdc; Upk= 750Vdc

Max. admissible voltage at +70°C (case)= 630Vdc, 250Vac

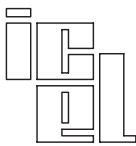
Cap. µF	B	H	Dimension in mm	L	d	P	P1	du/dt V/µs	Ipeak (A)	Irms max. (A) for Δt/Ta ⁽¹⁾	ESR ⁽²⁾ mΩ	ICEL Code ⁽³⁾
3,3	11	20	32	0,8	27,5	-	27	89,1	5	4	3	MHBS354330*H#
4,7	13	22	32	1,0	27,5	-	27	126,9	6	5	3,5	MHBS354470*H#
5	13	22	32	1,0	27,5	-	27	135	6	5	3,5	MHBS354500*H#
6,8	15	24,5	32	1,0	27,5	-	27	102,6	7	5,5	4	MHBS354680*H#
7,5	14	28	32	1,2	27,5	-	27	202,5	8	6	4,5	MHBS354750*H#
10	18	33	32	1,2	27,5	-	27	270	10	8	5,5	MHBS355100*H#
12	18	33	32	1,2	27,5	-	27	324	11	8,5	6	MHBS355120*H#
12	17	28	42,5	1,2	37,5	-	19	228	9,5	8	5,5	MHBS355120*J#
12	17	28	42,5	See lugs drawing		19	228	11	9	6,5	6,4	MHBS355120*YY
15	22	37	32	1,2	27,5	-	27	405	12	9,5	7	MHBS355150*H#
15	22	37	32	1,2	27,5	10,2	27	405	13,5	11	7,5	MHBS355150*HSD
15	22	30	42,5	1,2	37,5	-	19	285	11	9	6,5	MHBS355150*J#
15	22	30	42,5	See lugs drawing		19	285	14	11	8,5	5,6	MHBS355150*YY
20	20	40	41,5	1,2	37,5	-	19	380	13	10,5	7,5	MHBS355200*J#
20	20	40	41,5	1,2	37,5	10,2	19	380	15	12	8,6	MHBS355200*JSD
20	20	40	41,5	See lugs drawing		19	380	16	13	9	4,7	MHBS355200*YY
25	28	37	42,5	1,2	37,5	-	19	475	14	11,5	8,5	MHBS355250*J#
25	28	37	42,5	1,2	37,5	10,2	19	475	16	12,5	9	MHBS355250*JSD
25	28	37	42,5	See lugs drawing		19	475	17,5	14	10	4,2	MHBS355250*YY
30	28	37	42,5	1,2	37,5	-	19	570	14	12	8,5	MHBS355300*J#
30	28	37	42,5	1,2	37,5	10,2	19	570	16,5	13	9,5	MHBS355300*JSD
30	28	37	42,5	See lugs drawing		19	570	18,5	14,5	10,5	3,9	MHBS355300*YY
35	30	45	42,5	1,2	37,5	-	19	665	14	14	10	MHBS355350*J#
35	30	45	42,5	1,2	37,5	20,3	19	665	19	15,5	11	MHBS355350*JSD
35	30	45	42,5	See lugs drawing		19	665	21	16,5	12	3,5	MHBS355350*YY
40	30	45	42,5	1,2	37,5	-	19	760	14	14	10,5	MHBS355400*J#
40	30	45	42,5	1,2	37,5	20,3	19	760	20	16	11,5	MHBS355400*JSD
40	30	45	42,5	See lugs drawing		19	760	22	17,5	12,5	3,2	MHBS355400*YY
50	30	45	57,5	1,2	52,5	-	12,5	625	14	14	11	MHBS355500*R#
50	30	45	57,5	1,2	52,5	20,3	12,5	625	21	16,5	12	MHBS355500*RSD
50	30	45	57,5	See lugs drawing		12,5	625	23	18,5	13	3,6	MHBS355500*YY
60	30	45	57,5	1,2	52,5	-	12,5	750	14	14	11,5	MHBS355600*R#
60	30	45	57,5	1,2	52,5	20,3	12,5	750	22	17,5	12,5	MHBS355600*RSD
60	35	50	57,5	See lugs drawing		12,5	750	26	20,5	15	3,2	MHBS355600*YY
75	35	50	57,5	1,2	52,5	-	12,5	937,5	14	14	13	MHBS355750*R#
75	35	50	57,5	1,2	52,5	20,3	12,5	937,5	25	20	14,5	3,1
75	35	50	57,5	See lugs drawing		12,5	937,5	27,5	22	16	2,9	MHBS355750*YY

⁽¹⁾ at f=10kHz±60kHz, Irms rating for Δt/Ta (Ta= T ambient.)= +15°C is the absolute max. Irms applicable (ratings limited by terminals type and execution); for lug terminals execution, the power dissipation capability is calculated considering all the box walls and sealing surface able to dissipate and not in contact with any surface; Irms values are referred to max. tolerance on rated Capacitance=±10%

⁽²⁾ typical value at f=10kHz±60kHz; for operating frequency out of the 10kHz±60kHz range, ESR variation from typical data and related different power dissipation must be taken in consideration

⁽³⁾ change the "*" symbol with the desired capacitance tolerance code (±5%=J; ±10%=K); change the "#" symbol with S for 5mm and L for 25mm leads length terminals; change the "YY" symbol with the desired lug style

**Warning: this specification must be completed with the data given in the
“General technical information” chapter**



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MHBS40...: Ur=700Vdc; Urms= 285Vac; Upkr= 805Vdc; Upk= 910Vdc

Max. admissible voltage at +70°C (case)= 770Vdc, 300Vac

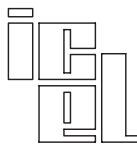
Cap. μF	Dimension in mm					du/dt V/us	Ipeak (A)	Irms max. (A) for Δt/Ta ⁽¹⁾			ESR ⁽²⁾ mΩ	ICEL Code ⁽³⁾	
	B	H	L	d	P	P1		+15°C	+10°C	+5°C			
2,5	11	20	32	0,8	27,5	-	31	77,5	5	4	3	14	MHBS404250*H#
3,3	13	22	32	1,0	27,5	-	31	102,3	5,5	4,5	3,5	12	MHBS404330*H#
4,7	15	24,5	32	1,0	27,5	-	31	145,7	6,5	5,5	4	10	MHBS404470*H#
5	15	24,5	32	1,2	27,5	-	31	155	7	5,5	4	9,7	MHBS404500*H#
7,5	14	25	42,5	1,2	37,5	-	21	157,5	7,5	6	4,5	9,2	MHBS404750*J#
10	18	33	32	1,2	27,5	-	31	310	11	8,5	6	6,7	MHBS405100*H#
12	22	37	32	1,2	27,5	10,2	31	372	12	9,5	7	5,8	MHBS405120*H#
12	22	37	32	1,2	27,5	-	21	252	11	9	6,5	6,4	MHBS405120*J#
12	22	30	42,5	1,2	37,5	-	21	252	13,5	11	7,5	5,2	MHBS405120*HSD
15	22	33,5	42,5	1,2	37,5	-	21	315	12,5	10	7	5,5	MHBS405150*J#
15	22	33,5	42,5	1,2	37,5	5,1	21	315	14	11	8	4,9	MHBS405150*JSD
15	22	33,5	42,5	See lugs drawing		21	315	15	12	8,5	4,7	MHBS405150*YY	
20	24	44	41,5	See lugs drawing		21	420	18,5	14,5	10,5	4	MHBS405200*YY	
20	28	37	42,5	1,2	37,5	-	21	420	14	12	8,5	4,8	MHBS405200*J#
20	28	37	42,5	1,2	37,5	10,2	21	420	16,5	13	9,5	4,2	MHBS405200*JSD
20	28	37	42,5	See lugs drawing		21	420	18	14,5	10,5	4	MHBS405200*YYA	
22	24	44	41,5	1,2	37,5	-	21	462	14	12,5	9	4,6	MHBS405220*J#
22	24	44	41,5	1,2	37,5	10,2	21	462	17,5	14	10	4	MHBS405220*JSD
22	24	44	41,5	See lugs drawing		21	462	18,5	15	10,5	3,8	MHBS405220*JYY	
22	28	37	42,5	1,2	37,5	-	21	462	14	12	8,5	4,6	MHBS405220*J#A
22	28	37	42,5	1,2	37,5	10,2	21	462	16,5	13,5	9,5	4	MHBS405220*JSDA
22	28	37	42,5	See lugs drawing		21	462	18,5	15	10,5	3,8	MHBS405220*JYYA	
25	24	44	41,5	1,2	37,5	-	21	525	14	13	9,5	4,3	MHBS405250*J#
25	24	44	41,5	1,2	37,5	10,2	21	525	18	14,5	10,5	3,7	MHBS405250*JSD
25	24	44	41,5	See lugs drawing		21	525	19,5	15,5	11	3,5	MHBS405250*JYY	
30	30	45	42,5	1,2	37,5	-	21	630	14	14	10,5	4	MHBS405300*J#
30	30	45	42,5	1,2	37,5	20,3	21	630	20	16	11,5	3,4	MHBS405300*JSD
30	30	45	42,5	See lugs drawing		21	630	22	17,5	12,5	3,2	MHBS405300*YY	
40	30	45	57,5	1,2	52,5	-	14,5	580	14	14	11	4,2	MHBS405400*R#
40	30	45	57,5	1,2	52,5	20,3	14,5	580	21,5	17	12,5	3,6	MHBS405400*RSD
40	30	45	57,5	See lugs drawing		14,5	580	23,5	19	13,5	3,4	MHBS405400*YY	
45	30	45	57,5	1,2	52,5	-	14,5	652,5	14	14	11,5	4	MHBS405450*R#
45	30	45	57,5	1,2	52,5	20,3	14,5	652,5	22	17,5	12,5	3,4	MHBS405450*RSD
45	30	45	57,5	See lugs drawing		14,5	652,5	24,5	19,5	14	3,2	MHBS405450*YY	
50	35	50	57,5	1,2	52,5	-	14,5	725	14	14	12,5	3,8	MHBS405500*R#
50	35	50	57,5	1,2	52,5	20,3	14,5	725	24,5	19,5	14	3,2	MHBS405500*RSD
50	35	50	57,5	See lugs drawing		14,5	725	27	21,5	15,5	3	MHBS405500*YY	
55	35	50	57,5	1,2	52,5	-	14,5	797,5	14	14	13	3,7	MHBS405550*R#
55	35	50	57,5	1,2	52,5	20,3	14,5	797,5	25	20	14,5	3,1	MHBS405550*RSD
55	35	50	57,5	See lugs drawing		14,5	797,5	27,5	22	16	2,9	MHBS405550*YY	
60	35	50	57,5	1,2	52,5	-	14,5	870	14	14	14	3,5	MHBS405600*R#
60	35	50	57,5	1,2	52,5	20,3	14,5	870	26	21	15	2,9	MHBS405600*RSD
60	35	50	57,5	See lugs drawing		14,5	870	28,5	23	16,5	2,7	MHBS405600*YY	

⁽¹⁾ at f=10kHz±60kHz, Irms rating for Δt/Ta (Ta= T ambient.)= +15°C is the absolute max. Irms applicable (ratings limited by terminals type and execution); for lug terminals execution, the power dissipation capability is calculated considering all the box walls and sealing surface able to dissipate and not in contact with any surface; Irms values are referred to max. tolerance on rated Capacitance=±10%

⁽²⁾ typical value at f=10kHz±60kHz; for operating frequency out of the 10kHz±60kHz range, ESR variation from typical data and related different power dissipation must be taken in consideration

⁽³⁾ change the "*" symbol with the desired capacitance tolerance code (±5%=J; ±10%=K); change the "#" symbol with S for 5mm and L for 25mm leads length terminals; change the "YY" symbol with the desired lug style

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MHBS45....: Ur=800Vdc; Urms= 315Vac; Upkr= 920Vdc; Upk= 1040Vdc

Max. admissible voltage at +70°C (case)= 880Vdc, 330Vac

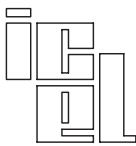
Cap. µF	Dimension in mm					du/dt V/us	Ipeak (A)	Irms max. (A) for Δt/Ta ⁽¹⁾	ESR ⁽²⁾ mΩ	ICEL Code ⁽³⁾			
	B	H	L	d	P								
2,2	11	20	32	0,8	27,5	-	36	79,2	4,5	4	3	14	MHBS454220*H#
3	13	22	32	1,0	27,5	-	36	108	5,5	4,5	3,5	11,6	MHBS454300*H#
4	15	24,5	32	1,0	27,5	-	36	144	6,5	5,5	4	9,8	MHBS454400*H#
5	14	25	42,5	1,2	37,5	-	24	120	7,5	6	4	10,3	MHBS454500*J#
6,8	18	33	32	1,2	27,5	-	36	244,8	9,5	7,5	5,5	7,6	MHBS454680*H#
7,5	18	33	32	1,2	27,5	-	36	270	10	8	5,5	7,1	MHBS454750*H#
7,5	17	28	42,5	1,2	37,5	-	24	180	9	7,5	5	8,2	MHBS454750*J#
7,5	17	28	42,5	See lugs drawing		24	180	10,5	8,5	6	7,4	MHBS454750*YY	
10	22	37	32	1,2	27,5	-	36	360	11,5	9,5	6,5	5,9	MHBS455100*H#
10	22	37	32	1,2	27,5	10,2	24	360	13	10	7,5	5,3	MHBS455100*HSD
10	22	30	42,5	1,2	37,5	-	24	240	10,5	8,5	6	7	MHBS455100*J#
10	22	30	42,5	1,2	37,5	5,1	24	240	11,5	9	6,5	6,4	MHBS455100*JSD
10	22	30	42,5	See lugs drawing		24	240	12,5	10	7,5	6,2	MHBS455100*YY	
12	22	33,5	42,5	1,2	37,5	-	24	288	12	9,5	6,5	6,4	MHBS455120*J#
12	22	33,5	42,5	1,2	37,5	5,1	24	288	13	10,5	7,5	5,8	MHBS455120*JSD
12	22	33,5	42,5	See lugs drawing		24	288	14	11	8	5,6	MHBS455120*YY	
15	20	40	41,5	1,2	37,5	-	24	360	13	10,5	7,5	5,6	MHBS455150*J#
15	20	40	41,5	1,2	37,5	10,2	24	360	15	12	8,5	5	MHBS455150*JSD
20	24	44	41,5	1,2	37,5	-	24	480	14	12	8,5	4,8	MHBS455200*J#
20	24	44	41,5	1,2	37,5	10,2	24	480	17	13,5	9,5	4,2	MHBS455200*JSD
22	30	45	42,5	1,2	37,5	-	24	528	14	13,5	9,5	4,6	MHBS455220*J#
22	30	45	42,5	1,2	37,5	20,3	24	528	18,5	15	10,5	4	MHBS455220*JSD
22	30	45	42,5	See lugs drawing		24	528	20	16	11,5	3,8	MHBS455220*YY	
25	30	45	42,5	1,2	37,5	-	24	600	14	14	10	4,3	MHBS455250*J#
25	30	45	42,5	See lugs drawing		24	600	19	15,5	11	3,7	MHBS455250*JSD	
25	30	45	42,5	See lugs drawing		24	600	21	17	12	3,5	MHBS455250*YY	
30	30	45	57,5	1,2	52,5	-	16,5	495	14	14	10,5	4,7	MHBS455300*R#
30	30	45	57,5	1,2	52,5	20,3	16,5	495	20	16	11,5	4,1	MHBS455300*RSD
30	30	45	57,5	See lugs drawing		16,5	495	22	17,5	12,5	3,9	MHBS455300*YY	
40	35	50	57,5	1,2	52,5	-	16,5	660	14	14	12,5	4	MHBS455400*R#
40	35	50	57,5	1,2	52,5	20,3	16,5	660	23,5	19,5	13,5	3,4	MHBS455400*RSD
40	35	50	57,5	See lugs drawing		16,5	660	26	21	15	3,2	MHBS455400*YY	
45	35	50	57,5	1,2	52,5	-	16,5	742,5	14	14	13	3,8	MHBS455450*R#
45	35	50	57,5	1,2	52,5	20,3	16,5	742,5	24,5	20	14,5	3,2	MHBS455450*RSD
45	35	50	57,5	See lugs drawing		16,5	742,5	27	22	15,5	3	MHBS455450*YY	
47	35	50	57,5	1,2	52,5	-	16,5	775,5	14	14	14	3,7	MHBS455470*R#
47	35	50	57,5	1,2	52,5	20,3	16,5	775,5	25	20,5	14,5	3,1	MHBS455470*RSD

⁽¹⁾ at f=10kHz±60kHz, Irms rating for Δt/Ta (Ta= T ambient.)= +15°C is the absolute max. Irms applicable (ratings limited by terminals type and execution); for lug terminals execution, the power dissipation capability is calculated considering all the box walls and sealing surface able to dissipate and not in contact with any surface; Irms values are referred to max. tolerance on rated Capacitance=±10%

⁽²⁾ typical value at f=10kHz±60kHz; for operating frequency out of the 10kHz±60kHz range, ESR variation from typical data and related different power dissipation must be taken in consideration

⁽³⁾ change the “**” symbol with the desired capacitance tolerance code (±5% =J; ±10% =K); change the “#” symbol with S for 5mm and L for 25mm leads length terminals; change the “YY” symbol with the desired lug style

**Warning: this specification must be completed with the data given in the
“General technical information” chapter**



MHBS (MHB version **S**) **NEW** *in progress*
Metallized polypropylene film capacitor
MKP - Switching - High current
2/4 x Wire or lug terminals - Small size



MHBS50....: Ur=900Vdc; Urms= 350Vac; Upkr= 1035Vdc; Upk= 1170VdcMax.

Max. voltage at +70°C= 1000Vdc, 370Vac

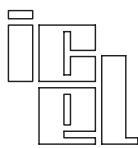
Cap. μF	B	H	L	d	P	P1	du/dt V/μs	Ipeak (A)	Irms max. (A) for Δt/Ta ⁽¹⁾	ESR ⁽²⁾ mΩ	ICEL Code ⁽³⁾		
2,2	13	22	32	1,0	27,5	-	41,5	91,3	5,5	4,5	3	13,1	MHBS504220*H#
2,5	13	22	32	1,0	27,5	-	41,5	103,7	5,5	4,5	3	12,2	MHBS504250*H#
3	15	24,5	32	1,0	27,5	-	41,5	124,5	6,5	5	3,5	11,2	MHBS504300*H#
3,3	14	28	32	1,2	27,5	-	41,5	137	7	5,5	4	10,6	MHBS504330*H#
4,7	14	25	42,5	1,2	37,5	-	28	131,6	7,5	6	4	10,6	MHBS504470*J#
7,5	22	37	32	1,2	27,5	-	41,5	311,2	11	9	6	6,9	MHBS504750*H#
7,5	22	37	32	1,2	27,5	10,2	41,5	311,2	12	9,5	6,5	6,3	MHBS504750*HSD
7,5	22	30	42,5	1,2	37,5	-	28	210	10	8	5,5	8	MHBS504750*J#
7,5	22	30	42,5	See lugs drawing		-	28	210	12,5	10	7	7,2	MHBS504750*YY
10	22	33,5	42,5	1,2	37,5	-	28	280	11,5	9	6,5	6,7	MHBS505100*J#
10	22	33,5	42,5	1,2	37,5	5,1	28	280	13	10,5	7,5	6,1	MHBS505100*JSD
10	22	33,5	42,5	See lugs drawing		-	28	280	13,5	11	8	5,9	MHBS505100*YY
15	24	44	41,5	1,2	37,5	-	28	420	14	11,5	8,5	5,3	MHBS505150*J#
15	24	44	41,5	1,2	37,5	10,2	28	420	16,5	13	9	4,7	MHBS505150*JSD
15	24	44	41,5	See lugs drawing		-	28	420	17,5	14	10	4,5	MHBS505150*YY
15	28	37	42,5	1,2	37,5	-	28	420	14	11,5	8	5,3	MHBS505150*J#A
15	28	37	42,5	1,2	37,5	10,2	28	420	15,5	12,5	9	4,7	MHBS505150*JSDA
15	28	37	42,5	See lugs drawing		-	28	420	17	13,5	10	4,5	MHBS505150*YYA
20	30	45	42,5	1,2	37,5	-	28	560	14	13,5	9,5	4,5	MHBS505200*J#
20	30	45	42,5	1,2	37,5	20,3	28	560	18,5	15	10,5	3,9	MHBS505200*JSD
20	30	45	42,5	See lugs drawing		-	28	560	20,5	16,5	11,5	3,7	MHBS505200*YY
25	30	45	57,5	1,2	52,5	-	18,5	462,5	14	14	10,5	5	MHBS505250*R#
25	30	45	57,5	1,2	52,5	20,3	18,5	462,5	19,5	16	11,5	4,4	MHBS505250*RSD
25	30	45	57,5	See lugs drawing		-	18,5	462,5	21,5	17,5	12,5	4,2	MHBS505250*YY
35	35	50	57,5	1,2	52,5	-	18,5	647,5	14	14	12	4,1	MHBS505350*R#
35	35	50	57,5	1,2	52,5	20,3	18,5	647,5	23,5	19	13,5	3,5	MHBS505350*RSD
35	35	50	57,5	See lugs drawing		-	18,5	647,5	26	21	15	3,3	MHBS505350*YY

⁽¹⁾ at f=10kHz±60kHz, Irms rating for Δt/Ta (Ta= T ambient.)= +15°C is the absolute max. Irms applicable (ratings limited by terminals type and execution); for lug terminals execution, the power dissipation capability is calculated considering all the box walls and sealing surface able to dissipate and not in contact with any surface; Irms values are referred to max. tolerance on rated Capacitance=±10%

⁽²⁾ typical value at f=10kHz±60kHz; for operating frequency out of the 10kHz±60kHz range, ESR variation from typical data and related different power dissipation must be taken in consideration

⁽³⁾ change the “**” symbol with the desired capacitance tolerance code (±5%=J; ±10%=K); change the “#” symbol with S for 5mm and L for 25mm leads length terminals; change the “YY” symbol with the desired lug style

**Warning: this specification must be completed with the data given in the
“General technical information” chapter**



MHBS (MHB version S) **NEW** *in progress*
Metallized polypropylene film capacitor
MKP - Switching - High current
2/4 x Wire or lug terminals - Small size



MHBS55...: =1000Vdc; Urms= 400Vac; Upkr= 1150Vdc; Upk= 1300Vdc

Max. admissible voltage at +70°C (case)= 1100Vdc, 420Vac

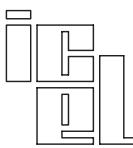
Cap. μF	B	H	L	d	P	P1	du/dt V/μs	Ipeak (A)	Irms max. (A) for Δt/Ta +15°C +10°C +5°C	ESR ⁽²⁾ mΩ	ICEL Code ⁽³⁾	
1,5	11	20	32	0,8	27,5	-	47	70,5	4,5 5,5 6	3,5 4,5 5	2,5 3 3,5	16,4 13,3 11,9
2,0	13	22	32	1,0	27,5	-	47	96	5,5	4,5	3	10,6
2,5	15	24,5	32	1,0	27,5	-	47	117,5	7	5,5	4	10,7
3	14	28	32	1,2	27,5	-	47	141	7,5	6	4	10,7
4	14	25	42,5	1,2	37,5	-	31	124	9	7	5	8,3
4,7	18	33	32	1,2	27,5	-	47	220,9	8,5	7	5	9,6
4,7	17	28	42,5	1,2	37,5	-	31	145,7	9,5	8	5,5	8,7
4,7	17	28	42,5	See lugs drawing		31	145,7	9,5	8	5,5	8,7	MHBS554470*YY
5	18	33	32	1,2	27,5	-	47	235	9	7	5	8
5	17	28	42,5	1,2	37,5	-	31	155	8,5	7	5	9,3
5	17	28	42,5	See lugs drawing		31	155	10	8	5,5	8,5	MHBS554500*YY
6,8	22	37	32	1,2	27,5	-	47	319,6	11	8,5	6	6,9
6,8	22	37	32	1,2	27,5	10,2	47	319,6	12,5	10	6,5	6,3
6,8	22	30	42,5	1,2	37,5	-	31	210,8	10	8	6	7,8
6,8	22	30	42,5	See lugs drawing		31	210,8	12	9,5	7	7	MHBS554680*YY
7,5	22	33,5	42,5	1,2	37,5	-	31	232,5	11	8,5	6,5	7,4
7,5	22	33,5	42,5	1,2	37,5	5,1	31	232,5	12	9,5	7	6,8
7,5	22	33,5	42,5	See lugs drawing		31	232,5	13	10,5	7,5	6,6	MHBS554750*YY
9	20	40	41,5	1,2	37,5	-	31	279	12	9,5	7	6,6
9	20	40	41,5	1,2	37,5	10,2	31	279	14	11	7,5	6
9	20	40	41,5	See lugs drawing		31	279	15	12	8	5,8	MHBS554900*YY
10	20	40	41,5	1,2	37,5	-	31	310	13	10,5	7,5	6,3
10	20	40	41,5	1,2	37,5	10,2	31	310	14,5	11,5	8	5,7
12	24	44	41,5	1,2	37,5	-	31	372	14	11	8	5,7
12	24	44	41,5	1,2	37,5	10,2	31	372	16	13	8,5	5,1
12	24	44	41,5	See lugs drawing		31	372	17	13,5	9,5	4,9	MHBS555120*YY
12	28	37	42,5	1,2	37,5	-	31	372	13,5	11	8	5,7
12	28	37	42,5	1,2	37,5	10,2	31	372	15	12	8,5	5,1
12	28	37	42,5	See lugs drawing		31	372	16,5	13	9,5	4,9	MHBS555120*YY
15	30	45	42,5	1,2	37,5	20,3	31	465	17,5	14	10	4,4
15	30	45	42,5	See lugs drawing		31	465	19,5	15,5	11	4,2	MHBS555150*YY
22	30	45	57,5	1,2	52,5	-	21	462	14	14	10	4,9
22	30	45	57,5	1,2	52,5	20,3	21	462	19,5	15,5	11,5	4,3
22	30	45	57,5	See lugs drawing		21	462	21,5	17	12,5	4,1	MHBS555220*YY
30	35	50	57,5	1,2	52,5	-	21	630	14	14	12	4,1
30	35	50	57,5	1,2	52,5	20,3	21	630	23,5	19	13,5	3,5
30	35	50	57,5	See lugs drawing		21	630	26	21	15	3,3	MHBS555300*YY

⁽¹⁾ at f=10kHz±60kHz, Irms rating for Δt/Ta (Ta= T ambient.)= +15°C is the absolute max. Irms applicable (ratings limited by terminals type and execution); for lug terminals execution, the power dissipation capability is calculated considering all the box walls and sealing surface able to dissipate and not in contact with any surface; Irms values are referred to max. tolerance on rated Capacitance=±10%

⁽²⁾ typical value at f=10kHz±60kHz; for operating frequency out of the 10kHz±60kHz range, ESR variation from typical data and related different power dissipation must be taken in consideration

⁽³⁾ change the “**” symbol with the desired capacitance tolerance code (±5%=J; ±10%=K); change the “#” symbol with S for 5mm and L for 25mm leads length terminals; change the “YY” symbol with the desired lug style

**Warning: this specification must be completed with the data given in the
“General technical information” chapter**



MHBS (MHB version **S**) **NEW** *in progress*
Metallized polypropylene film capacitor
MKP - Switching - High current
2/4 x Wire or lug terminals - Small size



MHBS60....: Ur=1100Vdc; Urms= 420Vac; Upkr= 1265Vdc; Upk= 1430Vdc

Max. admissible voltage at +70°C= 1200Vdc, 440Vac

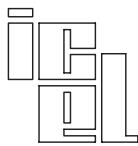
Cap. μF	B	H	L	d	P	P1	du/dt V/μs	Ipeak (A)	Irms max. (A) for Δt/Ta ⁽¹⁾	ESR ⁽²⁾ mΩ	ICEL Code ⁽³⁾		
1,2	11	20	32	0,8	27,5	-	50	60	4,5	3,5	2,5	16,5	MHBS604120*H#
1,5	13	22	32	1,0	27,5	-	50	75	5	4	3	14,5	MHBS604150*H#
2	15	24,5	32	1,0	27,5	-	50	100	6	5	3,5	12,4	MHBS604200*H#
2,2	15	24,5	32	1,0	27,5	-	50	110	6	5	3,5	11,7	MHBS604220*H#
2,5	14	28	32	1,2	27,5	-	50	125	7	5,5	4	10,6	MHBS604250*H#
3	14	25	42	1,2	37,5	-	34	102	7	5,5	4	11,8	MHBS604300*J#
3,3	18	33	32	1,2	27,5	-	50	165	8,5	7	5	9,2	MHBS604330*H#
4	18	33	32	1,2	27,5	-	50	200	9	7,5	5,5	8,1	MHBS604400*H#
4	17	28	42,5	1,2	37,5	-	34	136	8,5	6,5	4,5	9,9	MHBS604400*J#
4	17	28	42,5	See lugs drawing		-	34	136	9,5	7,5	5,5	9,1	MHBS604400*YY
4,7	22	37	32	1,2	27,5	-	50	235	10,5	8,5	6	7,4	MHBS604470*H#
4,7	22	37	32	1,2	27,5	10,2	50	235	12	9,5	6,5	6,8	MHBS604470*HSD
4,7	22	30	42,5	1,2	37,5	-	34	159,8	10	8	5,5	8,3	MHBS604470*J#
4,7	22	30	42,5	See lugs drawing		-	34	159,8	11,5	9,5	6,5	7,5	MHBS604470*YY
5	22	37	32	1,2	27,5	-	50	250	10,5	8,5	6	7,2	MHBS604500*H#
5	22	37	32	1,2	27,5	10,2	50	250	12	9,5	6,5	6,6	MHBS604500*HSD
5	22	30	42,5	1,2	37,5	-	34	170	10	8	5,5	8,1	MHBS604470*J#
5	22	30	42,5	See lugs drawing		-	34	170	11,5	9,5	6,5	7,3	MHBS604470*YY
6,8	22	33,5	42,5	1,2	37,5	-	34	231,2	11	9	6,5	6,9	MHBS604680*J#
6,8	22	33,5	42,5	1,2	37,5	5,1	34	231,2	12,5	10	7	6,3	MHBS604680*JSD
6,8	22	33,5	42,5	See lugs drawing		-	34	231,2	13,5	11	7,5	6,1	MHBS604680*YY
7,5	22	33,5	42,5	1,2	37,5	-	34	255	11,5	9,5	6,5	6,5	MHBS604750*J#
7,5	22	33,5	42,5	1,2	37,5	10,2	34	255	13	10,5	7,5	5,9	MHBS604750*JSD
7,5	20	40	41,5	See lugs drawing		-	34	255	14	11,5	8	5,7	MHBS604750*YY
10	24	44	41,5	1,2	37,5	-	34	340	14	11,5	8	5,5	MHBS605100*J#
10	24	44	41,5	1,2	37,5	10,2	34	340	16	13	9	4,9	MHBS605100*JSD
10	24	44	41,5	See lugs drawing		-	34	340	17,5	14	9,6	4,7	MHBS605100*YY
10	28	37	42,5	1,2	37,5	-	34	340	14	11	8	5,5	MHBS605100*J#A
10	28	37	42,5	1,2	37,5	10,2	34	340	15,5	12	8,5	4,9	MHBS605100*JSDA
10	28	37	42,5	See lugs drawing		-	34	340	17	13,5	9,5	4,7	MHBS605100*YYA
12	30	45	42,5	1,2	37,5	-	34	408	14	13	9	5	MHBS605120*J#
12	30	45	42,5	1,2	37,5	20,3	34	408	17,5	14	10	4,4	MHBS605120*JSD
12	30	45	42,5	See lugs drawing		-	34	408	19,5	15,5	11	4,2	MHBS605120*YY
20	30	45	57,5	1,2	52,5	-	23	460	14	14	10,5	4,6	MHBS605200*R#
20	30	45	57,5	1,2	52,5	20,3	23	460	20,5	16,5	11,5	4	MHBS605200*RSD
20	30	45	57,5	See lugs drawing		-	23	460	22,5	18	13	3,8	MHBS605200*YY
22	35	50	57,5	1,2	52,5	-	23	506	14	14	12	4,4	MHBS605220*R#
22	35	50	57,5	1,2	52,5	20,3	23	506	22,5	18,5	13	3,8	MHBS605220*RSD
22	35	50	57,5	See lugs drawing		-	23	506	24,5	20	14,5	3,6	MHBS605220*YY
25	35	50	57,5	1,2	52,5	-	23	575	14	14	14	4,2	MHBS605250*R#
25	35	50	57,5	1,2	52,5	20,3	23	575	23,5	19	13,5	3,6	MHBS605250*RSD
25	35	50	57,5	See lugs drawing		-	23	575	25,5	21	15	3,4	MHBS605250*YY

⁽¹⁾ at f=10kHz±60kHz, Irms rating for Δt/Ta (Ta= T ambient.)= +15°C is the absolute max. Irms applicable (ratings limited by terminals type and execution); for lug terminals execution, the power dissipation capability is calculated considering all the box walls and sealing surface able to dissipate and not in contact with any surface; Irms values are referred to max. tolerance on rated Capacitance=±10%

⁽²⁾ typical value at f=10kHz±60kHz; for operating frequency out of the 10kHz±60kHz range, ESR variation from typical data and related different power dissipation must be taken in consideration

⁽³⁾ change the “*” symbol with the desired capacitance tolerance code (±5%=J; ±10%=K); change the “#” symbol with S for 5mm and L for 25mm leads length terminals; change the “YY” symbol with the desired lug style

**Warning: this specification must be completed with the data given in the
“General technical information” chapter**



MHBS (MHB version S) **NEW** *in progress*
Metallized polypropylene film capacitor
MKP - Switching - High current
2/4 x Wire or lug terminals - Small size



MHBS70....: Ur=1275Vdc; Urms= 440Vac; Upkr= 1465Vdc; Upk= 1655Vdc

Max. admissible voltage at +70°C (case)= 1400Vdc, 460Vac

Cap. μF	Dimension in mm					du/dt V/us	Ipeak (A)	Irms max. (A) for Δt/Ta ⁽¹⁾	ESR ⁽²⁾ mΩ	ICEL Code ⁽³⁾
	B	H	L	d	P					
0,68	11	20	32	0,8	27,5	-	61	41,5	4	3,5
1	13	22	32	1,0	27,5	-	61	61	5	3,5
1,5	15	24,5	32	1,0	27,5	-	61	91,5	6	3,5
2	18	33	32	1,2	27,5	-	61	122	8	6,5
2,2	18	33	32	1,2	27,5	-	61	134,2	8	6,5
2,2	14	25	42,5	1,2	37,5	-	41	90,2	7	5,5
2,5	18	33	32	1,2	27,5	-	61	152,5	8,5	7
3	18	33	32	1,2	27,5	-	61	183	9	7,5
3	17	28	42,5	1,2	37,5	-	41	123	8	6,5
3	17	28	42,5	See lugs drawing		-	41	123	9,5	7,5
3,3	22	37	32	1,2	27,5	-	61	201,3	10	8
3,3	22	37	32	1,2	27,5	10,2	61	201,3	11,5	9
3,3	22	30	42,5	1,2	37,5	-	41	135,3	9	7,5
3,3	22	30	42,5	See lugs drawing		-	41	135,3	10,5	8,5
4	22	37	32	1,2	27,5	-	61	244	11	9
4	22	37	32	1,2	27,5	10,2	61	244	12,5	10
4	22	30	42,5	1,2	37,5	-	41	164	10	8
4	22	30	42,5	See lugs drawing		-	41	164	11,5	9
4,7	22	33,5	42,5	1,2	37,5	-	41	192,7	10,5	8,5
4,7	22	33,5	42,5	1,2	37,5	5,1	41	192,7	12	9,5
4,7	22	33,5	42,5	See lugs drawing		-	41	192,7	12,5	10
5	22	33,5	42,5	1,2	37,5	-	41	205	10,5	8,5
5	22	33,5	42,5	1,2	37,5	5,1	41	205	12	9,5
5	22	33,5	42,5	See lugs drawing		-	41	205	12,5	10
6,8	24	44	41,5	1,2	37,5	-	41	278,8	13	10,5
6,8	24	44	41,5	1,2	37,5	10,2	41	278,8	15	12
6,8	24	44	41,5	See lugs drawing		-	41	278,8	16	13
7,5	24	44	41,5	1,2	37,5	-	41	307,5	13,5	11
7,5	24	44	41,5	1,2	37,5	10,2	41	307,5	15,5	12,5
7,5	24	44	41,5	1,2	37,5	5,1	41	307,5	16,5	13,5
7,5	24	44	41,5	See lugs drawing		-	41	307,5	16,5	13,5
7,5	28	37	42,5	1,2	37,5	-	41	307,5	13	10,5
7,5	28	37	42,5	1,2	37,5	10,2	41	307,5	14,5	11,5
7,5	28	37	42,5	See lugs drawing		-	41	307,5	16	13
10	30	45	42,5	1,2	37,5	-	41	410	14	13
10	30	45	42,5	1,2	37,5	20,3	41	410	17,5	14
10	30	45	42,5	See lugs drawing		-	41	410	19	15,5
12	30	45	57,5	1,2	52,5	-	28	336	14	13,5
12	30	45	57,5	1,2	52,5	20,3	28	336	18	14,5
12	30	45	57,5	See lugs drawing		-	28	336	19,5	15,5
15	30	45	57,5	1,2	52,5	-	28	420	14	14
15	30	45	57,5	1,2	52,5	20,3	28	420	19	15,5
15	30	45	57,5	See lugs drawing		-	28	420	21	17
20	35	50	57,5	1,2	52,5	-	28	560	14	14
20	35	50	57,5	1,2	52,5	20,3	28	560	22,5	18,5
20	35	50	57,5	See lugs drawing		-	28	560	25	20

⁽¹⁾ at f=10kHz±60kHz, Irms rating for Δt/Ta (Ta= T ambient.)= +15°C is the absolute max. Irms applicable (ratings limited by terminals type and execution); for lug terminals execution, the power dissipation capability is calculated considering all the box walls and sealing surface able to dissipate and not in contact with any surface; Irms values are referred to max. tolerance on rated Capacitance=±10%

⁽²⁾ typical value at f=10kHz±60kHz; for operating frequency out of the 10kHz±60kHz range, ESR variation from typical data and related different power dissipation must be taken in consideration

⁽³⁾ change the “**” symbol with the desired capacitance tolerance code (±5% =J; ±10% =K); change the “#” symbol with S for 5mm and L for 25mm leads length terminals; change the “YY” symbol with the desired lug style

**Warning: this specification must be completed with the data given in the
“General technical information” chapter**