F861 EMI Capacitors Class X2, 310 VAC

Construction

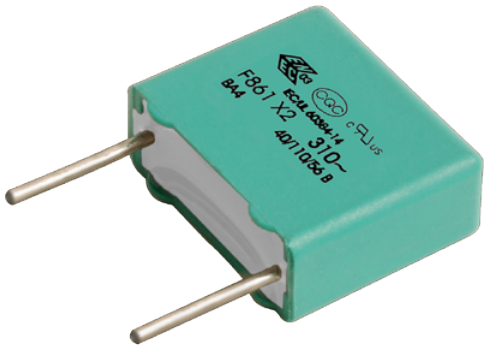
Metallized polypropylene film encapsulated with self-extinguishing resin in a box of material recognized to UL 94 V–0.

Benefits

- Approvals: ENEC, UL, cUL, CQC (pending)
- Rated Voltage: 310 VAC 50/60Hz
- Capacitance Range: 0.001–45µF
- Pitch: 7.5 - 52.5 mm
- Capacitance Tolerance: ± 20% standard, ± 10% option, ± 5% on request
- Climatic category 40/110/56, IEC 60068-1
- Tape & reel in Accordance with IEC 60286-2
- RoHS compliance and lead-free terminations
- Operating temperature range of -40˚C to +110˚C
- 100% screening factory test at 1900 VDC

Applications

For worldwide use as electromagnetic interference suppressor in all X2 and across-the-line applications. Not for use in series with the mains.



Ordering Information

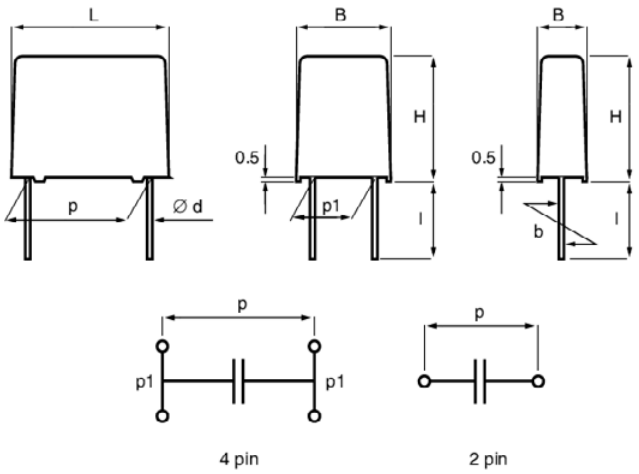
F	861	BC	104	M	310	C
Capacitor Class	Series	Box Code	Capacitance Code (pF)	Capacitance Tolerance	Voltage (AC)	Packing Option and Leadform
F = Film	X2, metallized Polypropylene	see Box Code Table	First two digits represent significant figures. Third digit specifies number of zeros.	J = ±5% K = ±10% M = ±20%	310	C = leadlength <10mm A = leadlength ≥10mm H = 4 pin

Ordering Options Table

Packing Style	Comment	Ordering Code	C Spec 1
Bulk	Lead length 4 mm +2/-0 (Standard)	C	
Bulk	Lead length 6 mm -0/+1	C	L60J
Bulk	Lead length 15 mm -0/+1	A	LF0J
Bulk	Lead length max	A	
Bulk 4 pin	Lead length 4 mm +2/-0 (pitch 52.5 mm only)	H	
Pizza Pack	Lead length 4.0 mm -0/+2	Z	
Ammo Pack	H0 = 18 – 18.5 mm	R	
Tape & Reel	Reel 360 mm H0 = 18 – 18.5 mm	L	
Tape & Reel	Reel 500mm H0 = 18 – 18.5 mm	P	
Other options on request			

Dimension Table

p	p1	d	b	sdt l	max l
7.5 ± 0.4		0.6	± 0.4	4	20
10.0 ± 0.4		0.6	± 0.4	4	20
15.0 ± 0.4		0.8	± 0.4	4	30
22.5 ± 0.4		0.8	± 0.4	4	30
27.5 ± 0.4		0.8	± 0.4	4	30
37.5 ± 0.4		1.0	± 0.7	4	30
52.5 ± 0.4	20.3 ± 0.4	1.0	± 0.7	4	30
Tolerance in Leadlength			< 30mm +2 / -0		
			30mm +5 / -0		

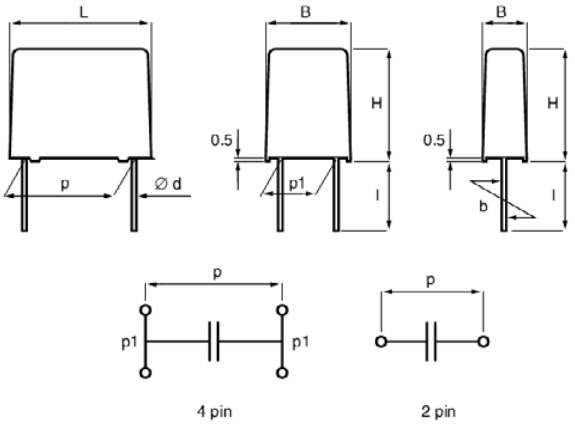


Box Code Table

Box Code	Pitch	Outer Dimension		
		B	H	L
AG	10.0	4.0	9.0	13.0
AK	10.0	5.0	11.0	13.0
AP	10.0	6.0	12.0	13.0
AO	10.0	7.0	17.0	13.0
AL	10.0	9.5	7.5	13.0
AE	10.0	4.0	8.0	13.0
BB	15.0	4.0	10.0	18.0
BC	15.0	5.0	11.0	18.0
BE	15.0	5.5	12.5	18.0
BG	15.0	6.0	12.0	18.0
BI	15.0	6.0	17.5	18.0
BK	15.0	7.5	13.5	18.0

Box Code Table con't

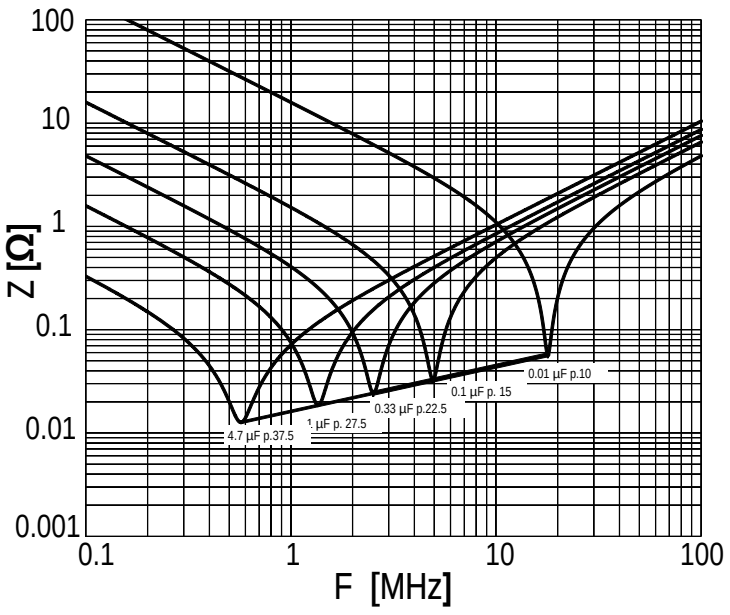
Box Code	Pitch	Outer Dimension		
		B	H	L
BO	15.0	7.5	18.5	18.0
BP	15.0	8.5	14.5	18.0
BT	15.0	9.0	12.5	18.0
BS	15.0	10.0	16.0	18.0
BY	15.0	11.0	19.0	18.0
BZ	15.0	12.0	20.0	18.0
BR	15.0	13.0	12.0	18.0
DB	22.5	6.0	14.5	26.0
DI	22.5	7.0	16.0	26.0
DH	22.5	8.0	16.0	26.0
DJ	22.5	8.5	17.0	26.0
DM	22.5	9.0	18.5	26.0
DO	22.5	10.0	18.5	26.0
DP	22.5	11.0	20.0	26.0
DU	22.5	13.0	22.0	26.0
DY	22.5	15.5	24.5	26.0
FB	27.5	9.0	17.0	31.5
FC	27.5	11.0	20.0	31.5
FI	27.5	13.0	25.0	31.5
FN	27.5	14.0	28.0	31.5
FO	27.5	17.0	40.0	31.5
FR	27.5	17.5	28.0	31.5
FS	27.5	19.0	29.0	31.5
FY	27.5	22.0	37.0	31.5
FH	27.5	21.0	12.5	31.5
FQ	27.5	27.5	16.0	31.5
FT	27.5	31.0	19.0	31.5
RB	37.5	11.0	22.0	41.0
RF	37.5	13.0	24.0	41.0
RH	37.5	15.0	26.0	41.0
RC	37.5	16.0	28.5	41.0
RD	37.5	19.0	32.0	41.0
RP	37.5	21.0	38.0	41.0
RO	37.5	24.0	44.0	41.0
RU	37.5	30.0	45.0	41.0
RV	37.5	24.0	15.0	41.0
RW	37.5	24.0	19.0	41.0
GD	52.5	30.0	45.0	57.5
GE	52.5	35.0	50.0	57.5



Technical Data

Rated Voltage	310 VAC 50/60Hz			
Capacitance Range	0.001–45 µF			
Capacitance Tolerance	± 20% standard, ± 10% option, ± 5% on request			
Temperature Range	-40 to +110°C			
Climatic Category	40/110/56			
Approvals	ENEC, UL, cUL, CQC (pending)			
Dissipation Factor	Maximum Values at +23°C			
		C ≤ 0.1 µF	0.1 µF < C ≤ 1 µF	c > 1µF
	1 kHz	0.1%	0.1%	0.1%
Test Voltage Between Terminals	The 100% screening factory test is carried out at 1900 VDC. The voltage level is selected to meet the requirements in applicable equipment standards. All electrical characteristics are checked after the test. It's not permitted to repeat this Test as there is a risk to damage the Capacitor. KEMET is not liable in such case for any failures			
Insulation Resistance	C ≤ 0.33 µF: ≥ 30 000 MΩ			
	C > 0.33 µF : ≥ 10 000 s			
In DC applications	Recommended Voltage ≤ 760 VDC			

Impedance Graph



Environmental Test Data

Test	IEC Publication	Procedure
Endurance	EN/IEC 60384-14	1.25 x U_R VAC 50Hz, once every hour increase to 1000 VAC for 0.1 s, 1000 h at upper rated temperature
Vibration	IEC 60068–2–6 Test Fc	3 directions at 2 hours each 10 - 55 Hz at 0.75 mm or 98m/s^2
Bump	IEC 60068-2-29 Test Eb	1000 bumps at 390 m/s^2
Change of Temperature	IEC 60068-2-14 Test Na	Upper and lower rated temperature 5 cycles
Active Flammability	EN/IEC 60384-14	
Passive Flammability	EN/IEC 60384-14	
Damp Heat Steady State	IEC 60068-2-78 Test Cab	+40°C and 90 - 95% R.H., 56 days

Environmental Compliance

All KEMET EMI capacitors are RoHS compliant and Halogen Free

RoHS Compliant

Halogen Free

Approvals

Certification Body	Specification	File Number
	EN/IEC 60384-14	
UL	UL 60384-14	
cUL	UL 60384-14	
CQC	GB/T 14472	pending

Table 1 – Ratings & Part Number Reference

Lead Space	Cap Value (µF)	Box Code	B (mm)	H (mm)	L (mm)	dV/dt (V/µsec)	Part Number
7.5	0.001	KF	3	8	10	500	F861KF102(1)310(2)
7.5	0.0012	KF	3	8	10	500	F861KF122(1)310(2)
7.5	0.0015	KF	3	8	10	500	F861KF152(1)310(2)
7.5	0.0018	KF	3	8	10	500	F861KF182(1)310(2)
7.5	0.0022	KF	3	8	10	500	F861KF222(1)310(2)
7.5	0.0025	KF	3	8	10	500	F861KF252(1)310(2)
7.5	0.0027	KF	3	8	10	500	F861KF272(1)310(2)
7.5	0.0033	KF	3	8	10	500	F861KF332(1)310(2)
7.5	0.0039	KF	3	8	10	500	F861KF392(1)310(2)
7.5	0.0047	KF	3	8	10	500	F861KF472(1)310(2)
7.5	0.0056	KF	3	8	10	500	F861KF562(1)310(2)
7.5	0.0068	KF	3	8	10	500	F861KF682(1)310(2)
7.5	0.0082	KF	3	8	10	500	F861KF822(1)310(2)
7.5	0.01	KG	4	8	10	500	F861KG103(1)310(2)
7.5	0.012	KG	4	8	10	500	F861KG123(1)310(2)
7.5	0.015	KH	4	9	10	500	F861KH153M310(2)*
7.5	0.018	KJ	5	10.5	10	500	F861KJ183(1)310(2)
7.5	0.022	KJ	5	10.5	10	500	F861KJ223(1)310(2)
7.5	0.025	KJ	5	10.5	10	500	F861KJ253(1)310(2)
7.5	0.027	KJ	5	10.5	10	500	F861KJ273(1)310(2)
7.5	0.033	KJ	5	10.5	10	500	F861KJ333M310(2)*
7.5	0.033	KM	6	12	10.5	500	F861KM333(1)310(2)
7.5	0.039	KM	6	12	10.5	500	F861KM393(1)310(2)
7.5	0.047	KM	6	12	10.5	500	F861KM473M310(2)*
10	0.001	AE	4	8	13	500	F861AE102(1)310(2)
10	0.0012	AE	4	8	13	500	F861AE122(1)310(2)
10	0.0015	AE	4	8	13	500	F861AE152(1)310(2)
10	0.0018	AE	4	8	13	500	F861AE182(1)310(2)
10	0.0018	AL	9.5	7.5	13	500	F861AL182(1)310(2)
10	0.0022	AE	4	8	13	500	F861AE222(1)310(2)
10	0.0022	AL	9.5	7.5	13	500	F861AL222(1)310(2)
10	0.0025	AE	4	8	13	500	F861AE252(1)310(2)
10	0.0025	AL	9.5	7.5	13	500	F861AL252(1)310(2)
10	0.0027	AE	4	8	13	500	F861AE272(1)310(2)
10	0.0027	AL	9.5	7.5	13	500	F861AL272(1)310(2)
10	0.0033	AE	4	8	13	500	F861AE332(1)310(2)
10	0.0033	AL	9.5	7.5	13	500	F861AL332(1)310(2)
10	0.0039	AE	4	8	13	500	F861AE392(1)310(2)
10	0.0039	AL	9.5	7.5	13	500	F861AL392(1)310(2)
10	0.0047	AE	4	8	13	500	F861AE472(1)310(2)
10	0.0047	AL	9.5	7.5	13	500	F861AL472(1)310(2)
10	0.0056	AE	4	8	13	500	F861AE562(1)310(2)
10	0.0056	AL	9.5	7.5	13	500	F861AL562(1)310(2)
10	0.0068	AE	4	8	13	500	F861AE682(1)310(2)
10	0.0068	AL	9.5	7.5	13	500	F861AL682(1)310(2)
10	0.0082	AE	4	8	13	500	F861AE822(1)310(2)
10	0.0082	AL	9.5	7.5	13	500	F861AL822(1)310(2)
10	0.01	AE	4	8	13	500	F861AE103(1)310(2)
10	0.01	AL	9.5	7.5	13	500	F861AL103(1)310(2)
10	0.012	AE	4	8	13	500	F861AE123(1)310(2)
10	0.015	AE	4	8	13	500	F861AE153(1)310(2)
10	0.015	AL	9.5	7.5	13	500	F861AL153(1)310(2)
10	0.018	AE	4	8	13	500	F861AE183(1)310(2)
10	0.018	AL	9.5	7.5	13	500	F861AL183(1)310(2)
10	0.022	AE	4	8	13	500	F861AE223(1)310(2)
10	0.022	AL	9.5	7.5	13	500	F861AL223(1)310(2)
10	0.025	AE	4	8	13	500	F861AE253(1)310(2)
Lead Space	**Cap Value (µF)**	**Box Code**	**B (mm)**	**H (mm)**	**L (mm)**	**dV/dt (V/µsec)**	**Part Number**

Other part number options:

(1) Where the 10th character equal to, J (±5% tolerance), K (±10% tolerance) and M (±20% tolerance).

(2) Refer to Ordering Options Table for Ordering Code.

**Where the 10th character equal to M (±20% tolerance) is only available in M (±20% tolerance).*

Table 1 – Ratings & Part Number Reference con't

Lead Space	Cap Value (µF)	Box Code	B (mm)	H (mm)	L (mm)	dV/dt (V/µsec)	Part Number
10	0.025	AL	9.5	7.5	13	500	F861AL253(1)310(2)
10	0.027	AE	4	8	13	500	F861AE273(1)310(2)
10	0.027	AL	9.5	7.5	13	500	F861AL273(1)310(2)
10	0.033	AE	4	8	13	500	F861AE333(1)310(2)
10	0.033	AL	9.5	7.5	13	500	F861AL333(1)310(2)
10	0.039	AE	4	8	13	500	F861AE393(1)310(2)
10	0.039	AL	9.5	7.5	13	500	F861AL393(1)310(2)
10	0.047	AE	4	8	13	500	F861AE473M310(2)*
10	0.047	AL	9.5	7.5	13	500	F861AL473(1)310(2)
10	0.056	AG	4	9	13	500	F861AG563(1)310(2)
10	0.056	AL	9.5	7.5	13	500	F861AL563(1)310(2)
10	0.068	AK	5	11	13	500	F861AK683(1)310(2)
10	0.068	AL	9.5	7.5	13	500	F861AL683(1)310(2)
10	0.082	AK	5	11	13	500	F861AK823(1)310(2)
10	0.082	AL	9.5	7.5	13	500	F861AL823(1)310(2)
10	0.1	AK	5	11	13	500	F861AK104M310(2)*
10	0.1	AL	9.5	7.5	13	500	F861AL104(1)310(2)
10	0.1	AP	6	12	13	500	F861AP104(1)310(2)
10	0.12	AL	9.5	7.5	13	500	F861AL124(1)310(2)
10	0.12	AP	6	12	13	500	F861AP124(1)310(2)
10	0.15	AO	7	17	13	500	F861AO154(1)310(2)
10	0.15	AP	6	12	13	500	F861AP154M310(2)*
10	0.18	AO	7	17	13	500	F861AO184(1)310(2)
10	0.22	AO	7	17	13	500	F861AO224(1)310(2)
10	0.25	AO	7	17	13	500	F861AO254(1)310(2)
10	0.27	AO	7	17	13	500	F861AO274(1)310(2)
15	0.0027	BB	4	10	18	400	F861BB272(1)310(2)
15	0.0033	BB	4	10	18	400	F861BB332(1)310(2)
15	0.0039	BB	4	10	18	400	F861BB392(1)310(2)
15	0.0047	BB	4	10	18	400	F861BB472(1)310(2)
15	0.0056	BB	4	10	18	400	F861BB562(1)310(2)
15	0.0068	BB	4	10	18	400	F861BB682(1)310(2)
15	0.0082	BB	4	10	18	400	F861BB822(1)310(2)
15	0.01	BB	4	10	18	400	F861BB103(1)310(2)
15	0.012	BB	4	10	18	400	F861BB123(1)310(2)
15	0.015	BB	4	10	18	400	F861BB153(1)310(2)
15	0.018	BB	4	10	18	400	F861BB183(1)310(2)
15	0.022	BB	4	10	18	400	F861BB223(1)310(2)
15	0.025	BB	4	10	18	400	F861BB253(1)310(2)
15	0.027	BB	4	10	18	400	F861BB273(1)310(2)
15	0.033	BB	4	10	18	400	F861BB333(1)310(2)
15	0.039	BB	4	10	18	400	F861BB393(1)310(2)
15	0.047	BB	4	10	18	400	F861BB473(1)310(2)
15	0.056	BB	4	10	18	400	F861BB563(1)310(2)
15	0.068	BB	4	10	18	400	F861BB683(1)310(2)
15	0.082	BB	4	10	18	400	F861BB823(1)310(2)
15	0.1	BB	4	10	18	400	F861BB104(1)310(2)
15	0.12	BB	4	10	18	400	F861BB124M310(2)*
15	0.12	BC	5	11	18	400	F861BC124(1)310(2)
15	0.15	BC	5	11	18	400	F861BC154(1)310(2)
15	0.15	BT	9	12.5	18	400	F861BT154(1)310(2)
15	0.18	BC	5	11	18	400	F861BC184M310(2)*
15	0.18	BE	5.5	12.5	18	400	F861BE184(1)310(2)
15	0.18	BT	9	12.5	18	400	F861BT184(1)310(2)
15	0.22	BE	5.5	12.5	18	400	F861BE224(1)310(2)
15	0.22	BG	6	12	18	400	F861BG224(1)310(2)
15	0.22	BT	9	12.5	18	400	F861BT224(1)310(2)
Lead Space	**Cap Value (µF)**	**Box Code**	**B (mm)**	**H (mm)**	**L (mm)**	**dV/dt (V/µsec)**	**Part Number**

Other part number options:

(1) Where the 10th character equal to, J (±5% tolerance), K (±10% tolerance) and M (±20% tolerance).

(2) Refer to Ordering Options Table for Ordering Code.

**Where the 10th character equal to M (±20% tolerance) is only available in M (±20% tolerance).*

Roll Over for Order Info.

Table 1 – Ratings & Part Number Reference con't

Lead Space	Cap Value (µF)	Box Code	B (mm)	H (mm)	L (mm)	dV/dt (V/µsec)	Part Number
15	0.25	BG	6	12	18	400	F861BG254(1)310(2)
15	0.25	BT	9	12.5	18	400	F861BT254(1)310(2)
15	0.27	BG	6	12	18	400	F861BG274M310(2)*
15	0.27	BI	6	17.5	18	400	F861BI274(1)310(2)
15	0.27	BK	7.5	13.5	18	400	F861BK274(1)310(2)
15	0.27	BR	13	12	18	400	F861BR274(1)310(2)
15	0.27	BT	9	12.5	18	400	F861BT274(1)310(2)
15	0.33	BI	6	17.5	18	400	F861BI334(1)310(2)
15	0.33	BK	7.5	13.5	18	400	F861BK334(1)310(2)
15	0.33	BR	13	12	18	400	F861BR334(1)310(2)
15	0.33	BT	9	12.5	18	400	F861BT334(1)310(2)
15	0.39	BI	6	17.5	18	400	F861BI394(1)310(2)
15	0.39	BK	7.5	13.5	18	400	F861BK394M310(2)*
15	0.39	BP	8.5	14.5	18	400	F861BP394(1)310(2)
15	0.39	BR	13	12	18	400	F861BR394(1)310(2)
15	0.39	BT	9	12.5	18	400	F861BT394(1)310(2)
15	0.47	BO	7.5	18.5	18	400	F861BO474(1)310(2)
15	0.47	BP	8.5	14.5	18	400	F861BP474(1)310(2)
15	0.47	BR	13	12	18	400	F861BR474(1)310(2)
15	0.56	BO	7.5	18.5	18	400	F861BO564(1)310(2)
15	0.56	BR	13	12	18	400	F861BR564(1)310(2)
15	0.56	BS	10	16	18	400	F861BS564(1)310(2)
15	0.68	BR	13	12	18	400	F861BR684M310(2)*
15	0.68	BS	10	16	18	400	F861BS684(1)310(2)
15	0.82	BY	11	19	18	400	F861BY824(1)310(2)
15	1	BZ	12	20	18	400	F861BZ105M310(2)*
22.5	0.039	DB	6	14.5	26	200	F861DB393(1)310(2)
22.5	0.047	DB	6	14.5	26	200	F861DB473(1)310(2)
22.5	0.056	DB	6	14.5	26	200	F861DB563(1)310(2)
22.5	0.068	DB	6	14.5	26	200	F861DB683(1)310(2)
22.5	0.082	DB	6	14.5	26	200	F861DB823(1)310(2)
22.5	0.1	DB	6	14.5	26	200	F861DB104(1)310(2)
22.5	0.12	DB	6	14.5	26	200	F861DB124(1)310(2)
22.5	0.15	DB	6	14.5	26	200	F861DB154(1)310(2)
22.5	0.18	DB	6	14.5	26	200	F861DB184(1)310(2)
22.5	0.22	DB	6	14.5	26	200	F861DB224(1)310(2)
22.5	0.25	DB	6	14.5	26	200	F861DB254(1)310(2)
22.5	0.27	DB	6	14.5	26	200	F861DB274(1)310(2)
22.5	0.33	DB	6	14.5	26	200	F861DB334(1)310(2)
22.5	0.39	DB	6	14.5	26	200	F861DB394(1)310(2)
22.5	0.47	DB	6	14.5	26	200	F861DB474M310(2)*
22.5	0.47	DI	7	16	26	200	F861DI474(1)310(2)
22.5	0.56	DI	7	16	26	200	F861DI564(1)310(2)
22.5	0.68	DI	7	16	26	200	F861DI684(1)310(2)
22.5	0.82	DH	8	16	26	200	F861DH824(1)310(2)
22.5	1	DJ	8.5	17	26	200	F861DJ105M310(2)*
22.5	1.2	DM	9	18.5	26	200	F861DM125M310(2)*
22.5	1.2	DO	10	18.5	26	200	F861DO125(1)310(2)
22.5	1.5	DP	11	20	26	200	F861DP155(1)310(2)
22.5	1.8	DP	11	20	26	200	F861DP185M310(2)*
22.5	1.8	DU	13	22	26	200	F861DU185(1)310(2)
22.5	2.2	DU	13	22	26	200	F861DU225(1)310(2)
22.5	2.5	DU	13	22	26	200	F861DU255M310(2)*
22.5	2.5	DY	15.5	24.5	26	200	F861DY255(1)310(2)
22.5	2.7	DY	15.5	24.5	26	200	F861DY275(1)310(2)
22.5	3.3	DY	15.5	24.5	26	200	F861DY335M310(2)*
Lead Space	**Cap Value (µF)**	**Box Code**	**B (mm)**	**H (mm)**	**L (mm)**	**dV/dt (V/µsec)**	**Part Number**

Other part number options:

(1) Where the 10th character equal to, J (±5% tolerance), K (±10% tolerance) and M (±20% tolerance).

(2) Refer to Ordering Options Table for Ordering Code.

**Where the 10th character equal to M (±20% tolerance) is only available in M (±20% tolerance).*

Roll Over for Order Info.

Table 1 – Ratings & Part Number Reference con't

Lead Space	Cap Value (µF)	Box Code	B (mm)	H (mm)	L (mm)	dV/dt (V/µsec)	Part Number
27.5	0.15	FB	9	17	31.5	150	F861FB154(1)310(2)
27.5	0.18	FB	9	17	31.5	150	F861FB184(1)310(2)
27.5	0.22	FB	9	17	31.5	150	F861FB224(1)310(2)
27.5	0.25	FB	9	17	31.5	150	F861FB254(1)310(2)
27.5	0.25	FH	21	12.5	31.5	150	F861FH254(1)310(2)
27.5	0.27	FB	9	17	31.5	150	F861FB274(1)310(2)
27.5	0.27	FH	21	12.5	31.5	150	F861FH274(1)310(2)
27.5	0.33	FB	9	17	31.5	150	F861FB334(1)310(2)
27.5	0.33	FH	21	12.5	31.5	150	F861FH334(1)310(2)
27.5	0.39	FB	9	17	31.5	150	F861FB394(1)310(2)
27.5	0.39	FH	21	12.5	31.5	150	F861FH394(1)310(2)
27.5	0.47	FB	9	17	31.5	150	F861FB474(1)310(2)
27.5	0.47	FH	21	12.5	31.5	150	F861FH474(1)310(2)
27.5	0.56	FB	9	17	31.5	150	F861FB564(1)310(2)
27.5	0.56	FH	21	12.5	31.5	150	F861FH564(1)310(2)
27.5	0.68	FB	9	17	31.5	150	F861FB684(1)310(2)
27.5	0.68	FH	21	12.5	31.5	150	F861FH684(1)310(2)
27.5	0.82	FB	9	17	31.5	150	F861FB824(1)310(2)
27.5	0.82	FH	21	12.5	31.5	150	F861FH824(1)310(2)
27.5	1	FB	9	17	31.5	150	F861FB105(1)310(2)
27.5	1	FH	21	12.5	31.5	150	F861FH105(1)310(2)
27.5	1.2	FB	9	17	31.5	150	F861FB125M310(2)*
27.5	1.2	FC	11	20	31.5	150	F861FC125(1)310(2)
27.5	1.2	FH	21	12.5	31.5	150	F861FH125(1)310(2)
27.5	1.5	FC	11	20	31.5	150	F861FC155(1)310(2)
27.5	1.5	FH	21	12.5	31.5	150	F861FH155(1)310(2)
27.5	1.8	FC	11	20	31.5	150	F861FC185M310(2)*
27.5	1.8	FH	21	12.5	31.5	150	F861FH185(1)310(2)
27.5	2.2	FH	21	12.5	31.5	150	F861FH225M310(2)*
27.5	2.2	FI	13	25	31.5	150	F861FI225(1)310(2)
27.5	2.5	FI	13	25	31.5	150	F861FI255(1)310(2)
27.5	2.5	FQ	27.5	16	31.5	150	F861FQ255(1)310(2)
27.5	2.7	FI	13	25	31.5	150	F861FI275(1)310(2)
27.5	2.7	FQ	27.5	16	31.5	150	F861FQ275(1)310(2)
27.5	3.3	FI	13	25	31.5	150	F861FI335M310(2)*
27.5	3.3	FN	14	28	31.5	150	F861FN335(1)310(2)
27.5	3.3	FO	17	40	31.5	150	F861FO335(1)310(2)
27.5	3.3	FQ	27.5	16	31.5	150	F861FQ335(1)310(2)
27.5	3.9	FO	17	40	31.5	150	F861FO395(1)310(2)
27.5	3.9	FQ	27.5	16	31.5	150	F861FQ395M310(2)*
27.5	3.9	FR	17.5	28	31.5	150	F861FR395(1)310(2)
27.5	3.9	FT	31	19	31.5	150	F861FT395(1)310(2)
27.5	4.7	FO	17	40	31.5	150	F861FO475(1)310(2)
27.5	4.7	FR	17.5	28	31.5	150	F861FR475(1)310(2)
27.5	4.7	FT	31	19	31.5	150	F861FT475(1)310(2)
27.5	5.6	FO	17	40	31.5	150	F861FO565(1)310(2)
27.5	5.6	FS	19	29	31.5	150	F861FS565M310(2)*
27.5	5.6	FT	31	19	31.5	150	F861FT565M310(2)*
27.5	6.8	FO	17	40	31.5	150	F861FO685M310(2)*
27.5	6.8	FY	22	37	31.5	150	F861FY685(1)310(2)
27.5	8.2	FY	22	37	31.5	150	F861FY825(1)310(2)
37.5	0.33	RB	11	22	41	100	F861RB334(1)310(2)
37.5	0.39	RB	11	22	41	100	F861RB394(1)310(2)
37.5	0.47	RB	11	22	41	100	F861RB474(1)310(2)
37.5	0.56	RB	11	22	41	100	F861RB564(1)310(2)
37.5	0.56	RV	24	15	41	100	F861RV564(1)310(2)
37.5	0.68	RB	11	22	41	100	F861RB684(1)310(2)
Lead Space	**Cap Value (µF)**	**Box Code**	**B (mm)**	**H (mm)**	**L (mm)**	**dV/dt (V/µsec)**	**Part Number**

Other part number options:

(1) Where the 10th character equal to, J (±5% tolerance), K (±10% tolerance) and M (±20% tolerance).

(2) Refer to Ordering Options Table for Ordering Code.

**Where the 10th character equal to M (±20% tolerance) is only available in M (±20% tolerance).*

Roll Over for Order Info.

Table 1 – Ratings & Part Number Reference con't

Lead Space	Cap Value (µF)	Box Code	B (mm)	H (mm)	L (mm)	dV/dt (V/µsec)	Part Number
37.5	0.68	RV	24	15	41	100	F861RV684(1)310(2)
37.5	0.82	RB	11	22	41	100	F861RB824(1)310(2)
37.5	0.82	RV	24	15	41	100	F861RV824(1)310(2)
37.5	1	RB	11	22	41	100	F861RB105(1)310(2)
37.5	1	RV	24	15	41	100	F861RV105(1)310(2)
37.5	1.2	RB	11	22	41	100	F861RB125(1)310(2)
37.5	1.2	RV	24	15	41	100	F861RV125(1)310(2)
37.5	1.5	RB	11	22	41	100	F861RB155(1)310(2)
37.5	1.5	RV	24	15	41	100	F861RV155(1)310(2)
37.5	1.8	RB	11	22	41	100	F861RB185(1)310(2)
37.5	1.8	RV	24	15	41	100	F861RV185(1)310(2)
37.5	2.2	RB	11	22	41	100	F861RB225(1)310(2)
37.5	2.2	RV	24	15	41	100	F861RV225(1)310(2)
37.5	2.5	RB	11	22	41	100	F861RB255(1)310(2)
37.5	2.5	RV	24	15	41	100	F861RV255(1)310(2)
37.5	2.7	RB	11	22	41	100	F861RB275(1)310(2)
37.5	2.7	RV	24	15	41	100	F861RV275(1)310(2)
37.5	3.3	RB	11	22	41	100	F861RB335M310(2)*
37.5	3.3	RF	13	24	41	100	F861RF335(1)310(2)
37.5	3.3	RV	24	15	41	100	F861RV335(1)310(2)
37.5	3.9	RF	13	24	41	100	F861RF395(1)310(2)
37.5	3.9	RV	24	15	41	100	F861RV395(1)310(2)
37.5	4.7	RF	13	24	41	100	F861RF475M310(2)*
37.5	4.7	RH	15	26	41	100	F861RH475(1)310(2)
37.5	4.7	RV	24	15	41	100	F861RV475M310(2)*
37.5	4.7	RW	24	19	41	100	F861RW475(1)310(2)
37.5	5.6	RH	15	26	41	100	F861RH565(1)310(2)
37.5	5.6	RW	24	19	41	100	F861RW565(1)310(2)
37.5	6.8	RC	16	28.5	41	100	F861RC685M310(2)*
37.5	6.8	RD	19	32	41	100	F861RD685(1)310(2)
37.5	6.8	RW	24	19	41	100	F861RW685M310(2)*
37.5	8.2	RD	19	32	41	100	F861RD825(1)310(2)
37.5	10	RP	21	38	41	100	F861RP106(1)310(2)
37.5	12	RO	24	44	41	100	F861RO126(1)310(2)
37.5	12	RP	21	38	41	100	F861RP126M310(2)*
37.5	15	RO	24	44	41	100	F861RO156(1)310(2)
37.5	18	RU	30	45	41	100	F861RU186(1)310(2)
37.5	22	RU	30	45	41	100	F861RU226(1)310(2)
52.5	3.9	GD	30	45	57.5	100	F861GD395(1)310(2)
52.5	4.7	GD	30	45	57.5	100	F861GD475(1)310(2)
52.5	5.6	GD	30	45	57.5	100	F861GD565(1)310(2)
52.5	6.8	GD	30	45	57.5	100	F861GD685(1)310(2)
52.5	8.2	GD	30	45	57.5	100	F861GD825(1)310(2)
52.5	10	GD	30	45	57.5	100	F861GD106(1)310(2)
52.5	12	GD	30	45	57.5	100	F861GD126(1)310(2)
52.5	15	GD	30	45	57.5	100	F861GD156(1)310(2)
52.5	18	GD	30	45	57.5	100	F861GD186(1)310(2)
52.5	22	GD	30	45	57.5	100	F861GD226(1)310(2)
52.5	25	GD	30	45	57.5	100	F861GD256(1)310(2)
52.5	27	GD	30	45	57.5	100	F861GD276(1)310(2)
52.5	33	GD	30	45	57.5	100	F861GD336M310(2)*
52.5	39	GE	35	50	57.5	100	F861GE396(1)310(2)
52.5	45	GE	35	50	57.5	100	F861GE456M310(2)*
Lead Space	**Cap Value (µF)**	**Box Code**	**B (mm)**	**H (mm)**	**L (mm)**	**dV/dt (V/µsec)**	**Part Number**

Other part number options:

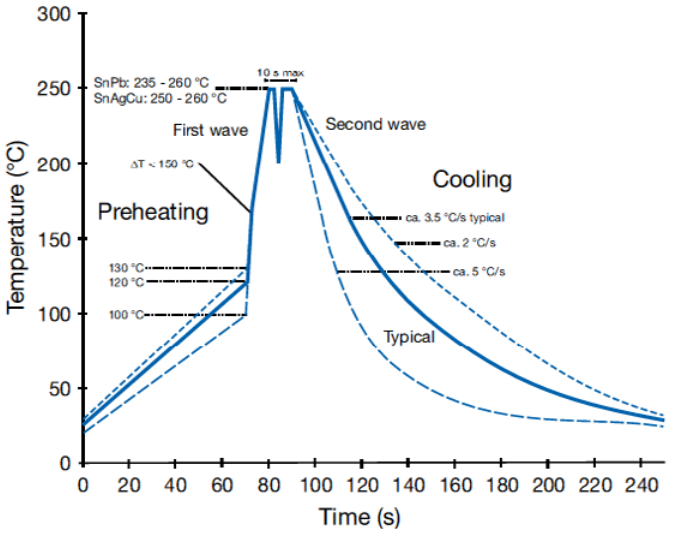
(1) Where the 10th character equal to, J (±5% tolerance), K (±10% tolerance) and M (±20% tolerance).

(2) Refer to Ordering Options Table for Ordering Code.

**Where the 10th character equal to M (±20% tolerance) is only available in M (±20% tolerance).*

Soldering Process

The implementation of RoHS Directive has forced to select SnAuCu (SAC) alloys or SnCu alloys as primary solder. This has increased the liquidus temperature from that of 183°C for SnPb eutectic alloy to 217–221°C for the new alloys. This means that the heat stress to components, even in wave soldering, has increased considerably due to higher pre-heat and wave temperatures. The Polypropylene Capacitors are especially sensitive to heat (melting point of Polypropylene is 160–170°C). The wave soldering can be destructive especially for mechanically small Polypropylene Capacitors (lead spacings 5-10 mm), and great care has to be taken when soldering them. The recommended solder profiles from KEMET should be used. In case of doubt, KEMET should be consulted. In general the wave soldering curve from IEC Publication 61760-1 edition 2 gives a good guideline for successful soldering.



Marking

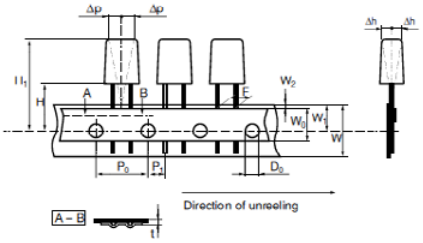
- KEMET or KEC
- Article code
- Rated capacitance
- Capacitance tolerance
- Rated voltage
- X2
- Approval marks
- Manufacturing date code
- IEC climatic category
- Passive flammability class

Lateral Marking	Top Marking
IEC/UL 60384-14 F861 X2 310~ BA4 40/110/56 B	KEMET 68m M

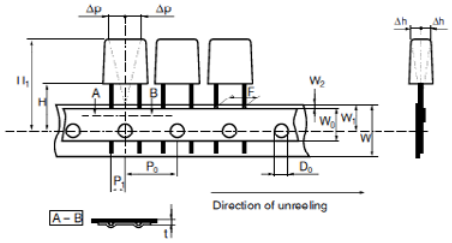
Packaging

The taping is carried out in accordance with IEC 60286-2.

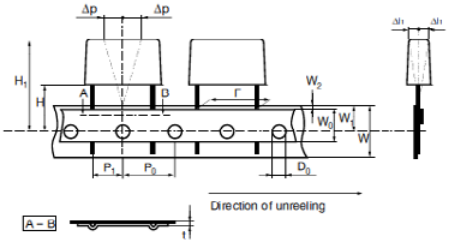
Lead spacing 5 mm



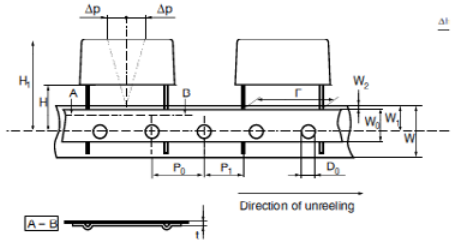
Lead spacing 7.5 mm



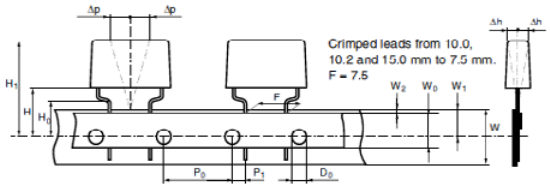
Lead spacing 10 and 15 mm



Lead spacing 22.5 and 27.5 mm



Crimped leads



Taping Specification

Dimensions in mm						Standard IEC 60286-2
Lead spacing, (Tol. +0.6/-0.1)	F	5.0/7.5	7.5 Crimped Leads	10.0/15.0	22.5/27.5	F
Carrier tape width, ±0.5	W	18	18	18	18	18 (+1.0/-0.5)
Hold-down tape width, ±0.3	W_0	9	12	12	12	
Position of sprocket hole, ±0.5	W_1	9	9	9	9	9 (+0.75/-0.5)
Distance between tapes, max.	W_2	3	3	3	3	3
Sprocket hole diameter, ±0.2	D_0	4	4	4	4	4
Feed hole pitch, ±0.3	P_0 [1)]	12.7	15/12.7	12.7	12.7	12.7/15
Distance lead – feed hole, ±0.7	P_1	3.85/3.75	3.75	7.7/5.2	5.3	P_1
Max deviation tape – plane	Δp	1.3	1.3	1.3	1.3	1.3
Max lateral deviation	Δh	2	2	2	2	2
Total thickness, ±0.2	t	0.7	0.7	0.7	0.9 max	0.9 max
Sprocket hole/cap body	H [2)]	18.5 ±0.5 16.5 ±0.5		18.5 ±0.5 16.5 ±0.5	18.5 ±0.5	18.0 (+2/-0)
Sprocket hole/crimped leads	H_0 [2)]		16 ±0.5 18 ±0.5			16 ±0.5
Sprocket hole/top of cap body, max	H_1 [3)]	32/31 max	40 max	43 max	58	58 max

[1)] *Cumulative pitch error*

[2)] *Alternatives for different insertion machines*

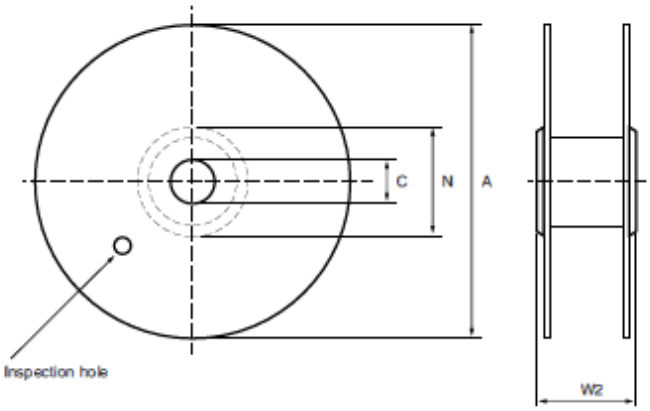
[3)] *Depending on case size*

Note: Crimped leads available on request

Reel Specification

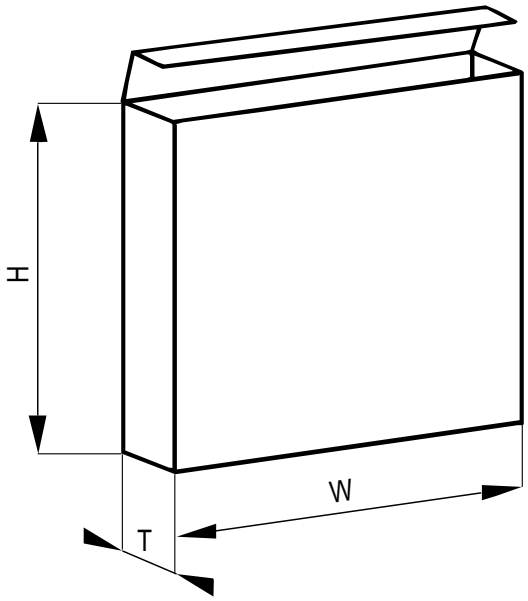
Dimensions in mm			Tolerance
Reel diameter	A	360/500	max
Hub diameter	N	80	min
Arbor hole	C	30	±1
Total reel width measured at hub	W2	58	max

The standard packing for lead space ≤15 mm is 360 mm reel and for lead space >15 mm 500 mm reel.



Ammo Pack Specification

Dimensions in mm		Lead spacing, mm	
		5, 7.5, 10	15, 22.5, 27.5, 37.5
Height	H	330	(135 or 200 for CQ depending on capacitance value)
Width	W	330	(335 for CQ)
Thickness	T	50	



The Manufacturing Date Code Y Z, according to IEC 60062									
where Y = year, Z = month									
Year	Code	Year	Code	Year	Code	Month	Code	Month	Code
1991	B	2001	N	2011	B	Jan	1	July	7
1992	C	2002	P	2012	C	Febr	2	Aug	8
1993	D	2003	R	2013	D	March	3	Sept	9
1994	E	2004	S	2014	E	April	4	Oct	O
1995	F	2005	T	2015	F	May	5	Nov	N
1996	H	2006	U	2016	H	June	6	Dec	D
1997	J	2007	V	2017	J				
1998	K	2008	W	2018	K				
1999	L	2009	X	2019	L				
2000	M	2010	A	2020	M				

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Milpitas, CA
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Zapopan, Jalisco
Tel: 52-33-3123-2141

Europe

Southern Europe
Geneva, Switzerland
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Paris, France
Tel: 33-1-4646-1009

Sasso Marconi, Italy
Tel: 39-051-939111

Milan, Italy
Tel: 39-02-57518176

Rome, Italy
Tel: 39-06-23231718

Madrid, Spain
Tel: 34-91-804-4303

Central Europe
Landsberg, Germany
Tel: 49-8191-3350800

Dortmund, Germany
Tel: 49-2307-3619672

Kwidzyn, Poland
Tel: 48-55-279-7025

Northern Europe
Bishop's Stortford, United Kingdom
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Weymouth, United Kingdom
Tel: 44-1305-830747

Coatbridge, Scotland
Tel: 44-1236-434455

Färjestaden, Sweden
Tel: 46-485-563934

Espoo, Finland
Tel: 358-9-5406-5000

Asia

Northeast Asia
Hong Kong
Tel: 852-2305-1168

Shenzhen, China
Tel: 86-755-2518-1306

Beijing, China
Tel: 86-10-5829-1711

Shanghai, China
Tel: 86-21-6447-0707

Taipei, Taiwan
Tel: 886-2-27528585

Southeast Asia
Singapore
Tel: 65-6586-1900

Penang, Malaysia
Tel: 60-4-6430200

Bangalore, India
Tel: 91-806-53-76817

Note: KEMET reserves the right to modify minor details of internal and external construction at any time in the interest of product improvement. KEMET does not assume any responsibility for infringement that might result from the use of KEMET Capacitors in potential circuit designs. KEMET is a registered trademark of KEMET Electronics Corporation.

Other KEMET Resources

Tools	
Resource	Location
Configure A Part: CapEdge	http://capacitoredge.kemet.com
SPICE & FIT Software	http://www.kemet.com/spice
Search Our FAQs: KnowledgeEdge	http://www.kemet.com/keask

Product Information	
Resource	Location
Products	http://www.kemet.com/products
Technical Resources (Including Soldering Techniques)	http://www.kemet.com/technicalpapers
RoHS Statement	http://www.kemet.com/rohs
Quality Documents	http://www.kemet.com/qualitydocuments

Product Request	
Resource	Location
Sample Request	http://www.kemet.com/sample
Engineering Kit Request	http://www.kemet.com/kits

Contact	
Resource	Location
Website	www.kemet.com
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Investor Relations	http://www.kemet.com/ir
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Twitter	http://twitter.com/kemetcapacitors

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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.

Although we design and manufacture our products to the most stringent quality and safety standards, given the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage.

Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated or that other measures may not be required.

Digitally signed by Marcy Brand
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Date: 2011.08.15 11:16:02 -04'00'