

Overview

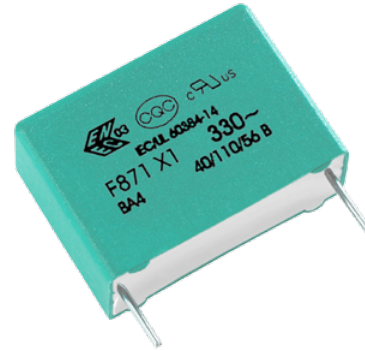
Metallized polypropylene film encapsulated with self-extinguishing resin in a box of material recognized to UL 94 V-0.

Applications

For worldwide use as electromagnetic interference suppressor in all X1 and across-the-line applications. Not for use in series with the mains.

Benefits

- Approvals: ENEC, UL, cUL, CQC
- Rated voltage: 330 VAC 50/60 Hz
- Capacitance range: 0.001 – 12 μ F
- Lead spacing: 10 – 37.5 mm
- Capacitance tolerance: \pm 20%, \pm 10%, \pm 5% on request
- Climatic category 40/110/56, IEC 60068-1
- Tape and reel in accordance with IEC 60286-2
- RoHS Compliant and lead-free terminations
- Operating temperature range of -40°C to +110°C
- 100% screening factory test at 2,500 VDC



Part Number System

F	871	B	K	104	M	330	C
Capacitor Class	Series	Lead Spacing (mm)	Size Code	Capacitance Code (pF)	Capacitance Tolerance	Voltage (VAC)	Lead and Packaging Code
F = Film	X1, Metallized Polypropylene	A = 10 B = 15 D = 22.5 F = 27.5 R = 37.5	See Dimension Table	First two digits represent significant figures. Third digit specifies number of zeros.	J = \pm 5% K = \pm 10% M = \pm 20%	330	See Ordering Options Table

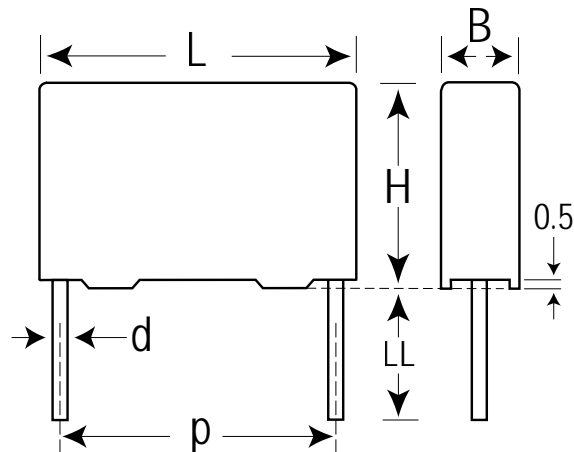
Ordering Options Table

Lead Spacing Nominal (mm)	Type of Leads and Packaging	Lead Length (mm)	Lead and Packaging Code
10	Standard Lead and Packaging Options		
	Bulk (Bag)–Short Leads	4 +2/-0	C
	Bulk (Bag)–Long Leads	17 +0/-1	A
	Tape & Reel (Standard Reel)	H ₀ = 18.5 +/-0.5	L
	Other Lead and Packaging Options		
	Bulk (Bag)–Max Length Leads	20 +5/-0	ALL0L
	Ammo Pack	H ₀ = 18.5 +/-0.5	R
Tape & Reel (Large Reel)	H ₀ = 18.5 +/-0.5	P	

Ordering Options Table cont'd

Lead Spacing Nominal (mm)	Type of Leads and Packaging	Lead Length (mm)	Lead and Packaging Code
15	Standard Lead and Packaging Options		
	Bulk (Bag)–Short Leads	4 +2/-0	C
	Bulk (Bag)–Long Leads	17 +0/-1	A
	Tape & Reel (Standard Reel)	H ₀ = 18.5 +/-0.5	L
	Pizza Pack	4 +2/-0	Z
	Other Lead and Packaging Options		
	Bulk (Bag)–Max Length Leads	25 +5/-0	ALR0L
	Ammo Pack	H ₀ = 18.5 +/-0.5	R
	Tape & Reel (Large Reel)	H ₀ = 18.5 +/-0.5	P
22.5	Standard Lead and Packaging Options		
	Bulk (Tray)-Short Leads	4 +2/-0	C
	Bulk (Tray)-Long Leads	17 +0/-1	A
	Pizza Pack	4 +2/-0	Z
	Other Lead and Packaging Options		
	Tape & Reel (Standard Reel)	H ₀ = 18.5 +/-0.5	L
	Tape & Reel (Large Reel)	H ₀ = 18.5 +/-0.5	P
	Ammo Pack	H ₀ = 18.5 +/-0.5	R
27.5	Standard Lead and Packaging Options		
	Bulk (Tray)-Short Leads	4 +2/-0	C
	Bulk (Tray)-Long Leads	17 +0/-1	A
	Pizza Pack	4 +2/-0	Z
37.5	Standard Lead and Packaging Options		
	Bulk (Tray)-Short Leads	4 +2/-0	C
	Bulk (Tray)-Long Leads	17 +0/-1	A
	Pizza Pack	4 +2/-0	Z

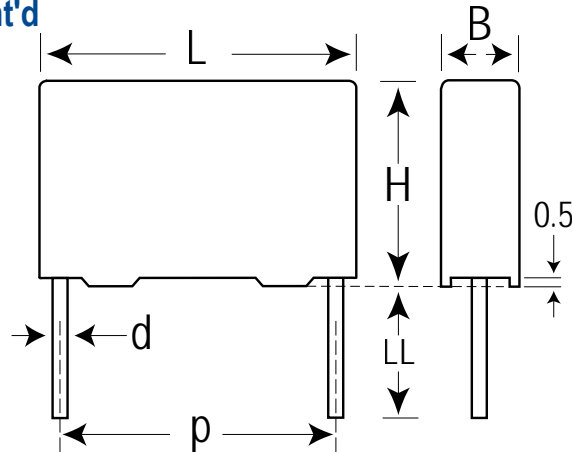
Dimensions – Millimeters



Size Code	Version	p		B		H		L		d	
		Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
AG		10.0	+/-0.4	4.0	Max	9.0	Max	13.0	Max	0.6	+/-0.05
AK		10.0	+/-0.4	5.0	Max	11.0	Max	13.0	Max	0.6	+/-0.05
AP		10.0	+/-0.4	6.0	Max	12.0	Max	13.0	Max	0.6	+/-0.05
AO		10.0	+/-0.4	7.0	Max	17.0	Max	13.0	Max	0.6	+/-0.05
AL	Low Profile	10.0	+/-0.4	9.5	Max	7.5	Max	13.0	Max	0.6	+/-0.05
AE	Special Version	10.0	+/-0.4	4.0	Max	8.0	Max	13.0	Max	0.6	+/-0.05
BB		15.0	+/-0.4	4.0	Max	10.0	Max	18.0	Max	0.8	+/-0.05
BC		15.0	+/-0.4	5.0	Max	11.0	Max	18.0	Max	0.8	+/-0.05
BE		15.0	+/-0.4	5.5	Max	12.5	Max	18.0	Max	0.8	+/-0.05
BG		15.0	+/-0.4	6.0	Max	12.0	Max	18.0	Max	0.8	+/-0.05
BI	High Profile	15.0	+/-0.4	6.0	Max	17.5	Max	18.0	Max	0.8	+/-0.05
BK		15.0	+/-0.4	7.5	Max	13.5	Max	18.0	Max	0.8	+/-0.05
BO	High Profile	15.0	+/-0.4	7.5	Max	18.5	Max	18.0	Max	0.8	+/-0.05
BP		15.0	+/-0.4	8.5	Max	14.5	Max	18.0	Max	0.8	+/-0.05
BT		15.0	+/-0.4	9.0	Max	12.5	Max	18.0	Max	0.8	+/-0.05
BS		15.0	+/-0.4	10.0	Max	16.0	Max	18.0	Max	0.8	+/-0.05
BY		15.0	+/-0.4	11.0	Max	19.0	Max	18.0	Max	0.8	+/-0.05
BZ	Special Version	15.0	+/-0.4	12.0	Max	20.0	Max	18.0	Max	0.8	+/-0.05
BR	Low Profile	15.0	+/-0.4	13.0	Max	12.0	Max	18.0	Max	0.8	+/-0.05
DB		22.5	+/-0.4	6.0	Max	14.5	Max	26.0	Max	0.8	+/-0.05
DI		22.5	+/-0.4	7.0	Max	16.0	Max	26.0	Max	0.8	+/-0.05
DH		22.5	+/-0.4	8.0	Max	16.0	Max	26.0	Max	0.8	+/-0.05
DJ		22.5	+/-0.4	8.5	Max	17.0	Max	26.0	Max	0.8	+/-0.05
DM		22.5	+/-0.4	9.0	Max	18.5	Max	26.0	Max	0.8	+/-0.05
DO		22.5	+/-0.4	10.0	Max	18.5	Max	26.0	Max	0.8	+/-0.05
DP		22.5	+/-0.4	11.0	Max	20.0	Max	26.0	Max	0.8	+/-0.05
DU		22.5	+/-0.4	13.0	Max	22.0	Max	26.0	Max	0.8	+/-0.05
DY		22.5	+/-0.4	15.5	Max	24.5	Max	26.0	Max	0.8	+/-0.05
FB		27.5	+/-0.4	9.0	Max	17.0	Max	31.5	Max	0.8	+/-0.05
FC		27.5	+/-0.4	11.0	Max	20.0	Max	31.5	Max	0.8	+/-0.05
FI		27.5	+/-0.4	13.0	Max	25.0	Max	31.5	Max	0.8	+/-0.05

Note: See Ordering Options Table for lead length (LL) options.

Dimensions – Millimeters cont'd



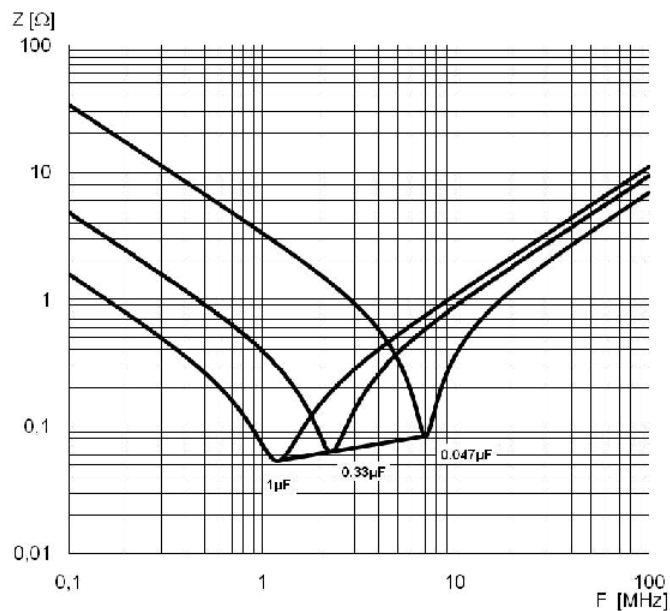
Size Code	Version	p		B		H		L		d	
		Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
FN		27.5	+/-0.4	14.0	Max	28.0	Max	31.5	Max	0.8	+/-0.05
FO	High Profile	27.5	+/-0.4	17.0	Max	40.0	Max	31.5	Max	0.8	+/-0.05
FR		27.5	+/-0.4	17.5	Max	28.0	Max	31.5	Max	0.8	+/-0.05
FS		27.5	+/-0.4	19.0	Max	29.0	Max	31.5	Max	0.8	+/-0.05
FY		27.5	+/-0.4	22.0	Max	37.0	Max	31.5	Max	0.8	+/-0.05
FH	Low Profile	27.5	+/-0.4	21.0	Max	12.5	Max	31.5	Max	0.8	+/-0.05
FQ	Low Profile	27.5	+/-0.4	27.5	Max	16.0	Max	31.5	Max	0.8	+/-0.05
FT	Low Profile	27.5	+/-0.4	31.0	Max	19.0	Max	31.5	Max	0.8	+/-0.05
RB		37.5	+/-0.4	11.0	Max	22.0	Max	41.0	Max	1	+/-0.05
RF		37.5	+/-0.4	13.0	Max	24.0	Max	41.0	Max	1	+/-0.05
RH		37.5	+/-0.4	15.0	Max	26.0	Max	41.0	Max	1	+/-0.05
RC		37.5	+/-0.4	16.0	Max	28.5	Max	41.0	Max	1	+/-0.05
RD		37.5	+/-0.4	19.0	Max	32.0	Max	41.0	Max	1	+/-0.05
RP		37.5	+/-0.4	21.0	Max	38.0	Max	41.0	Max	1	+/-0.05
RO		37.5	+/-0.4	24.0	Max	44.0	Max	41.0	Max	1	+/-0.05
RU		37.5	+/-0.4	30.0	Max	45.0	Max	41.0	Max	1	+/-0.05
RV	Low Profile	37.5	+/-0.4	24.0	Max	15.0	Max	41.0	Max	1	+/-0.05
RW	Low Profile	37.5	+/-0.4	24.0	Max	19.0	Max	41.0	Max	1	+/-0.05

Note: See Ordering Options Table for lead length (LL) options.

Performance Characteristics

Rated Voltage	330 VAC 50/60 Hz		
Capacitance Range	0.001 – 12 μF		
Capacitance Tolerance	$\pm 20\%$, $\pm 10\%$, $\pm 5\%$ on request		
Temperature Range	-40°C to +110°C		
Climatic Category	40/110/56		
Approvals	ENEC, UL, cUL, CQC (pending)		
Dissipation Factor	Maximum Values at +23°C		
		$C \leq 0.1 \mu\text{F}$	$C > 0.1 \mu\text{F}$
	1 kHz	0.3%	0.2%
Test Voltage Between Terminals	The 100% screening factory test is carried out at 2,500 VDC. The voltage level is selected to meet the requirements in applicable equipment standards. All electrical characteristics are checked after the test. It is 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	Between Terminals:		
	$C \leq 0.33 \mu\text{F}$	$\geq 30,000 \text{ M}\Omega$	
	$C > 0.33 \mu\text{F}$	$\geq 10,000 \text{ M}\Omega \cdot \mu\text{F}$	
In DC Applications	Recommended voltage $\leq 800 \text{ VDC}$		




Impedance Graph



Environmental Test Data

Test	IEC Publication	Procedure
Endurance	IEC 60384-14	1.25 x V _R VAC 50 Hz, once every hour increase to 1,000 VAC for 0.1 second, 1,000 hours 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 98 m/s ²
Bump	IEC 60068-2-29 Test Eb	1,000 bumps at 390 m/s ²
Change of Temperature	IEC 60068-2-14 Test Na	Upper and lower rated temperature 5 cycles
Active Flammability	IEC 60384-14	V _R + 20 surge pulses at 4 kV (pulse every 5 seconds)
Passive Flammability	IEC 60384-14	IEC 60384-1, IEC 60695-11-5 Needle-flame test
Damp Heat Steady State	IEC 60068-2-78 Test Cab	+40°C and 93% RH, 56 days

Approvals

Mark	Specification	File Number
	EN/IEC 60384-14	In progress
	UL 60384-14 and CAN/CSA-E60384-14	In progress
	GB/T 14472	Pending

Environmental Compliance

All KEMET EMI capacitors are RoHS Compliant and Halogen Free.



Table 1 – Ratings & Part Number Reference

Cap Value (µF)	Size Code	Max Dimensions in mm			Lead Spacing (p)	dV/dt (V/µs)	Part Number
		B	H	L			
0.001	AE	4	8	13	10	500	F871AE102(1)330(2)
0.0012	AE	4	8	13	10	500	F871AE122(1)330(2)
0.0015	AE	4	8	13	10	500	F871AE152(1)330(2)
0.0018	AE	4	8	13	10	500	F871AE182(1)330(2)
0.0018	AL	9.5	7.5	13	10	500	F871AL182(1)330(2)
0.0022	AE	4	8	13	10	500	F871AE222(1)330(2)
0.0022	AL	9.5	7.5	13	10	500	F871AL222(1)330(2)
0.0025	AE	4	8	13	10	500	F871AE252(1)330(2)
0.0025	AL	9.5	7.5	13	10	500	F871AL252(1)330(2)
0.0027	AE	4	8	13	10	500	F871AE272(1)330(2)
0.0027	AL	9.5	7.5	13	10	500	F871AL272(1)330(2)
0.0033	AE	4	8	13	10	500	F871AE332(1)330(2)
0.0033	AL	9.5	7.5	13	10	500	F871AL332(1)330(2)
0.0039	AE	4	8	13	10	500	F871AE392(1)330(2)
0.0039	AL	9.5	7.5	13	10	500	F871AL392(1)330(2)
0.0047	AE	4	8	13	10	500	F871AE472(1)330(2)
0.0047	AL	9.5	7.5	13	10	500	F871AL472(1)330(2)
0.0056	AE	4	8	13	10	500	F871AE562(1)330(2)
0.0056	AL	9.5	7.5	13	10	500	F871AL562(1)330(2)
0.0068	AE	4	8	13	10	500	F871AE682(1)330(2)
0.0068	AL	9.5	7.5	13	10	500	F871AL682(1)330(2)
0.0082	AE	4	8	13	10	500	F871AE822(1)330(2)
0.0082	AL	9.5	7.5	13	10	500	F871AL822(1)330(2)
0.01	AE	4	8	13	10	500	F871AE103(3)330(2)
0.01	AG	4	9	13	10	500	F871AG103(1)330(2)
0.01	AL	9.5	7.5	13	10	500	F871AL103(1)330(2)
0.012	AG	4	9	13	10	500	F871AG123(1)330(2)
0.012	AL	9.5	7.5	13	10	500	F871AL123(1)330(2)
0.015	AK	5	11	13	10	500	F871AK153(1)330(2)
0.015	AL	9.5	7.5	13	10	500	F871AL153(1)330(2)
0.018	AK	5	11	13	10	500	F871AK183(1)330(2)
0.018	AL	9.5	7.5	13	10	500	F871AL183(1)330(2)
0.022	AK	5	11	13	10	500	F871AK223(3)330(2)
0.022	AL	9.5	7.5	13	10	500	F871AL223(1)330(2)
0.022	AP	6	12	13	10	500	F871AP223(1)330(2)
0.025	AL	9.5	7.5	13	10	500	F871AL253(1)330(2)
0.025	AP	6	12	13	10	500	F871AP253(1)330(2)
0.027	AL	9.5	7.5	13	10	500	F871AL273(1)330(2)
0.027	AP	6	12	13	10	500	F871AP273(1)330(2)
0.033	AO	7	17	13	10	500	F871AO333(1)330(2)
0.033	AP	6	12	13	10	500	F871AP333(3)330(2)
0.035	AO	7	17	13	10	500	F871AO353(1)330(2)
0.039	AO	7	17	13	10	500	F871AO393(1)330(2)
0.047	AO	7	17	13	10	500	F871AO473(3)330(2)
0.0027	BB	4	10	18	15	400	F871BB272(1)330(2)
0.0033	BB	4	10	18	15	400	F871BB332(1)330(2)
0.0039	BB	4	10	18	15	400	F871BB392(1)330(2)
0.0047	BB	4	10	18	15	400	F871BB472(1)330(2)
0.0056	BB	4	10	18	15	400	F871BB562(1)330(2)
0.0068	BB	4	10	18	15	400	F871BB682(1)330(2)
0.0082	BB	4	10	18	15	400	F871BB822(1)330(2)
0.01	BB	4	10	18	15	400	F871BB103(1)330(2)
0.012	BB	4	10	18	15	400	F871BB123(1)330(2)
0.015	BB	4	10	18	15	400	F871BB153(1)330(2)
0.018	BB	4	10	18	15	400	F871BB183(1)330(2)
0.022	BB	4	10	18	15	400	F871BB223(1)330(2)
0.025	BB	4	10	18	15	400	F871BB253(1)330(2)
0.027	BB	4	10	18	15	400	F871BB273(1)330(2)

(1) M = ±20%, K = ±10%, J = ± 5% on request.

(2) Insert lead and packaging code. See table for available options.

(3) M = ±20% (only available tolerance).

Table 1 – Ratings & Part Number Reference cont'd

Cap Value (μF)	Size Code	Max Dimensions in mm			Lead Spacing (p)	dV/dt (V/μs)	Part Number
		B	H	L			
0.033	BB	4	10	18	15	400	F871BB333(3)330(2)
0.033	BC	5	11	18	15	400	F871BC333(1)330(2)
0.039	BC	5	11	18	15	400	F871BC393(1)330(2)
0.047	BC	5	11	18	15	400	F871BC473(3)330(2)
0.047	BE	5.5	12.5	18	15	400	F871BE473(1)330(2)
0.056	BE	5.5	12.5	18	15	400	F871BE563(1)330(2)
0.068	BE	5.5	12.5	18	15	400	F871BE683(3)330(2)
0.068	BG	6	12	18	15	400	F871BG683(1)330(2)
0.082	BI	6	17.5	18	15	400	F871BI823(1)330(2)
0.082	BK	7.5	13.5	18	15	400	F871BK823(1)330(2)
0.082	BR	13	12	18	15	400	F871BR823(1)330(2)
0.082	BT	9	12.5	18	15	400	F871BT823(1)330(2)
0.1	BI	6	17.5	18	15	400	F871BI104(1)330(2)
0.1	BK	7.5	13.5	18	15	400	F871BK104(1)330(2)
0.1	BR	13	12	18	15	400	F871BR104(1)330(2)
0.1	BT	9	12.5	18	15	400	F871BT104(1)330(2)
0.12	BI	6	17.5	18	15	400	F871BI124(1)330(2)
0.12	BK	7.5	13.5	18	15	400	F871BK124(3)330(2)
0.12	BP	8.5	14.5	18	15	400	F871BP124(1)330(2)
0.12	BR	13	12	18	15	400	F871BR124(1)330(2)
0.12	BT	9	12.5	18	15	400	F871BT124(3)330(2)
0.15	BO	7.5	18.5	18	15	400	F871BO154(1)330(2)
0.15	BP	8.5	14.5	18	15	400	F871BP154(3)330(2)
0.15	BR	13	12	18	15	400	F871BR154(1)330(2)
0.18	BO	7.5	18.5	18	15	400	F871BO184(3)330(2)
0.18	BR	13	12	18	15	400	F871BR184(1)330(2)
0.18	BS	10	16	18	15	400	F871BS184(1)330(2)
0.22	BY	11	19	18	15	400	F871BY224(1)330(2)
0.25	BY	11	19	18	15	400	F871BY254(3)330(2)
0.25	BZ	12	20	18	15	400	F871BZ254(1)330(2)
0.27	BY	11	19	18	15	400	F871BY274(3)330(2)
0.27	BZ	12	20	18	15	400	F871BZ274(1)330(2)
0.039	DB	6	14.5	26	22.5	200	F871DB393(1)330(2)
0.047	DB	6	14.5	26	22.5	200	F871DB473(1)330(2)
0.056	DB	6	14.5	26	22.5	200	F871DB563(1)330(2)
0.068	DB	6	14.5	26	22.5	200	F871DB683(1)330(2)
0.082	DB	6	14.5	26	22.5	200	F871DB823(1)330(2)
0.1	DB	6	14.5	26	22.5	200	F871DB104(1)330(2)
0.12	DB	6	14.5	26	22.5	200	F871DB124(1)330(2)
0.15	DB	6	14.5	26	22.5	200	F871DB154(3)330(2)
0.15	DI	7	16	26	22.5	200	F871DI154(1)330(2)
0.18	DI	7	16	26	22.5	200	F871DI184(1)330(2)
0.22	DI	7	16	26	22.5	200	F871DI224(1)330(2)
0.25	DH	8	16	26	22.5	200	F871DH254(1)330(2)
0.27	DH	8	16	26	22.5	200	F871DH274(3)330(2)
0.33	DJ	8.5	17	26	22.5	200	F871DJ334(3)330(2)
0.33	DM	9	18.5	26	22.5	200	F871DM334(1)330(2)
0.39	DM	9	18.5	26	22.5	200	F871DM394(3)330(2)
0.39	DO	10	18.5	26	22.5	200	F871DO394(1)330(2)
0.47	DO	10	18.5	26	22.5	200	F871DO474(3)330(2)
0.47	DP	11	20	26	22.5	200	F871DP474(1)330(2)
0.56	DP	11	20	26	22.5	200	F871DP564(3)330(2)
0.68	DU	13	22	26	22.5	200	F871DU684(1)330(2)
0.82	DU	13	22	26	22.5	200	F871DU824(3)330(2)
0.82	DY	15.5	24.5	26	22.5	200	F871DY824(1)330(2)
1	DY	15.5	24.5	26	22.5	200	F871DY105(1)330(2)
0.15	FB	9	17	31.5	27.5	150	F871FB154(1)330(2)
0.18	FB	9	17	31.5	27.5	150	F871FB184(1)330(2)
0.22	FB	9	17	31.5	27.5	150	F871FB224(1)330(2)
Cap Value (μF)	Size Code	B (mm)	H (mm)	L (mm)	Lead Spacing (p)	dV/dt (V/μs)	Part Number

(1) M = ±20%, K = ±10%, J = ± 5% on request.

(2) Insert lead and packaging code. See table for available options.

(3) M = ±20% (only available tolerance).

Table 1 – Ratings & Part Number Reference cont'd

Cap Value (μF)	Size Code	Max Dimensions in mm			Lead Spacing (p)	dV/dt (V/μs)	Part Number
		B	H	L			
0.25	FB	9	17	31.5	27.5	150	F871FB254(1)330(2)
0.25	FH	21	12.5	31.5	27.5	150	F871FH254(1)330(2)
0.27	FB	9	17	31.5	27.5	150	F871FB274(1)330(2)
0.27	FH	21	12.5	31.5	27.5	150	F871FH274(1)330(2)
0.33	FB	9	17	31.5	27.5	150	F871FB334(1)330(2)
0.33	FH	21	12.5	31.5	27.5	150	F871FH334(1)330(2)
0.39	FB	9	17	31.5	27.5	150	F871FB394(1)330(2)
0.39	FH	21	12.5	31.5	27.5	150	F871FH394(1)330(2)
0.47	FB	9	17	31.5	27.5	150	F871FB474(1)330(2)
0.47	FH	21	12.5	31.5	27.5	150	F871FH474(1)330(2)
0.56	FB	9	17	31.5	27.5	150	F871FB564(3)330(2)
0.56	FC	11	20	31.5	27.5	150	F871FC564(1)330(2)
0.56	FH	21	12.5	31.5	27.5	150	F871FH564(1)330(2)
0.68	FC	11	20	31.5	27.5	150	F871FC684(1)330(2)
0.68	FH	21	12.5	31.5	27.5	150	F871FH684(1)330(2)
0.82	FC	11	20	31.5	27.5	150	F871FC824(1)330(2)
0.82	FH	21	12.5	31.5	27.5	150	F871FH824(1)330(2)
1	FH	21	12.5	31.5	27.5	150	F871FH105(3)330(2)
1	FI	13	25	31.5	27.5	150	F871FI105(1)330(2)
1.2	FI	13	25	31.5	27.5	150	F871FI125(1)330(2)
1.2	FQ	27.5	16	31.5	27.5	150	F871FQ125(1)330(2)
1.5	FI	13	25	31.5	27.5	150	F871FI155(1)330(2)
1.5	FN	14	28	31.5	27.5	150	F871FN155(1)330(2)
1.5	FQ	27.5	16	31.5	27.5	150	F871FQ155(1)330(2)
1.8	FN	14	28	31.5	27.5	150	F871FN185(3)330(2)
1.8	FO	17	40	31.5	27.5	150	F871FO185(1)330(2)
1.8	FQ	27.5	16	31.5	27.5	150	F871FQ185(3)330(2)
1.8	FR	17.5	28	31.5	27.5	150	F871FR185(1)330(2)
1.8	FT	31	19	31.5	27.5	150	F871FT185(1)330(2)
2.2	FO	17	40	31.5	27.5	150	F871FO225(1)330(2)
2.2	FR	17.5	28	31.5	27.5	150	F871FR225(1)330(2)
2.2	FT	31	19	31.5	27.5	150	F871FT225(1)330(2)
2.5	FO	17	40	31.5	27.5	150	F871FO255(1)330(2)
2.5	FR	17.5	28	31.5	27.5	150	F871FR255(3)330(2)
2.5	FS	19	29	31.5	27.5	150	F871FS255(1)330(2)
2.5	FT	31	19	31.5	27.5	150	F871FT255(3)330(2)
2.7	FO	17	40	31.5	27.5	150	F871FO275(1)330(2)
2.7	FS	19	29	31.5	27.5	150	F871FS275(3)330(2)
2.7	FT	31	19	31.5	27.5	150	F871FT275(3)330(2)
3.3	FY	22	37	31.5	27.5	150	F871FY335(1)330(2)
3.9	FY	22	37	31.5	27.5	150	F871FY395(1)330(2)
0.33	RB	11	22	41	37.5	100	F871RB334(1)330(2)
0.39	RB	11	22	41	37.5	100	F871RB394(1)330(2)
0.47	RB	11	22	41	37.5	100	F871RB474(1)330(2)
0.56	RB	11	22	41	37.5	100	F871RB564(1)330(2)
0.56	RV	24	15	41	37.5	100	F871RV564(1)330(2)
0.68	RB	11	22	41	37.5	100	F871RB684(1)330(2)
0.68	RV	24	15	41	37.5	100	F871RV684(1)330(2)
0.82	RB	11	22	41	37.5	100	F871RB824(1)330(2)
0.82	RV	24	15	41	37.5	100	F871RV824(1)330(2)
1	RB	11	22	41	37.5	100	F871RB105(1)330(2)
1	RV	24	15	41	37.5	100	F871RV105(1)330(2)
1.2	RB	11	22	41	37.5	100	F871RB125(1)330(2)
1.2	RV	24	15	41	37.5	100	F871RV125(1)330(2)
1.5	RB	11	22	41	37.5	100	F871RB155(3)330(2)
1.5	RV	24	15	41	37.5	100	F871RV155(1)330(2)
1.8	RF	13	24	41	37.5	100	F871RF185(1)330(2)
1.8	RV	24	15	41	37.5	100	F871RV185(1)330(2)
2.2	RF	13	24	41	37.5	100	F871RF225(3)330(2)
Cap Value (μF)	Size Code	B (mm)	H (mm)	L (mm)	Lead Spacing (p)	dV/dt (V/μs)	Part Number

(1) $M = \pm 20\%$, $K = \pm 10\%$, $J = \pm 5\%$ on request.

(2) Insert lead and packaging code. See table for available options.

(3) $M = \pm 20\%$ (only available tolerance).

Table 1 – Ratings & Part Number Reference cont'd

Cap Value (μ F)	Size Code	Max Dimensions in mm			Lead Spacing (p)	dV/dt (V/ μ s)	Part Number
		B	H	L			
2.2	RH	15	26	41	37.5	100	F871RH225(1)330(2)
2.2	RV	24	15	41	37.5	100	F871RV225(3)330(2)
2.5	RH	15	26	41	37.5	100	F871RH255(1)330(2)
2.5	RW	24	19	41	37.5	100	F871RW255(1)330(2)
2.7	RH	15	26	41	37.5	100	F871RH275(1)330(2)
2.7	RW	24	19	41	37.5	100	F871RW275(1)330(2)
3.3	RC	16	28.5	41	37.5	100	F871RC335(3)330(2)
3.3	RD	19	32	41	37.5	100	F871RD335(1)330(2)
3.3	RW	24	19	41	37.5	100	F871RW335(3)330(2)
3.9	RD	19	32	41	37.5	100	F871RD395(1)330(2)
4.7	RD	19	32	41	37.5	100	F871RD475(3)330(2)
4.7	RP	21	38	41	37.5	100	F871RP475(1)330(2)
5.6	RO	24	44	41	37.5	100	F871RO565(1)330(2)
5.6	RP	21	38	41	37.5	100	F871RP565(3)330(2)
6.8	RO	24	44	41	37.5	100	F871RO685(1)330(2)
8.2	RO	24	44	41	37.5	100	F871RO825(1)330(2)
10	RU	30	45	41	37.5	100	F871RU106(1)330(2)
12	RU	30	45	41	37.5	100	F871RU126(3)330(2)
Cap Value (μ F)	Size Code	B (mm)	H (mm)	L (mm)	Lead Spacing (p)	dV/dt (V/ μ s)	Part Number

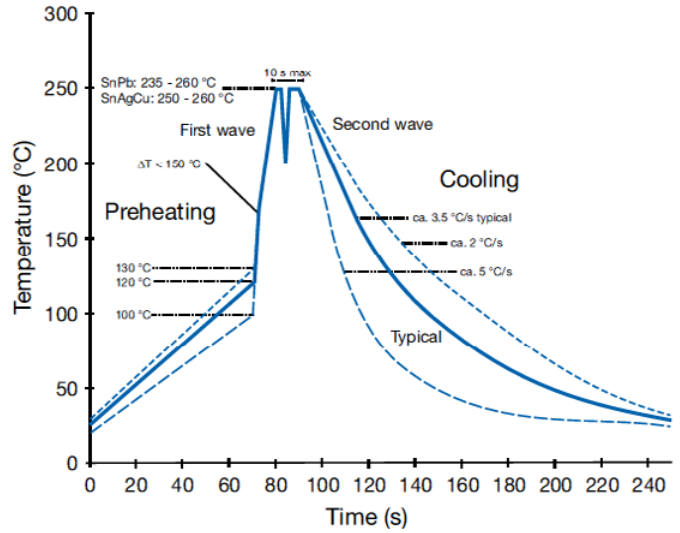
(1) $M = \pm 20\%$, $K = \pm 10\%$, $J = \pm 5\%$ on request.

(2) Insert lead and packaging code. See table for available options.

(3) $M = \pm 20\%$ (only available tolerance).

Soldering Process

The implementation of the RoHS Directive has required the use of SnAuCu (SAC) or SnCu alloys as primary solder. These alloys require a higher liquidus temperature (217°C – 221°C) as compared to SnPb eutectic alloy (183°C). Due to the higher pre-heat and wave temperatures, the heat stress to components has increased considerably. Polypropylene capacitors are especially sensitive to soldering temperature due to the relatively low melting point of polypropylene material (160°C – 170°C). As a result, wave soldering can be destructive, especially to mechanically small polypropylene capacitors with lead spacings of 5 – 10 mm. For more information, please refer to KEMET’s Recommended Soldering Profiles or contact a KEMET representative. IEC Publication 61760–1 Edition 2 may also be consulted for general guidelines.



Marking

- KEMET or KEC
- Series
- Capacitance
- Capacitance tolerance
- Rated voltage
- X1
- Approval marks
- Manufacturing date code
- IEC climatic category
- Passive flammability class

Lateral Marking	Top Marking
<p>EN 03 CQC cULus IEC/UL 60384-14 F871 X1 330~ BA1 40/110/56 B</p>	<p>KEMET μ22 M</p>

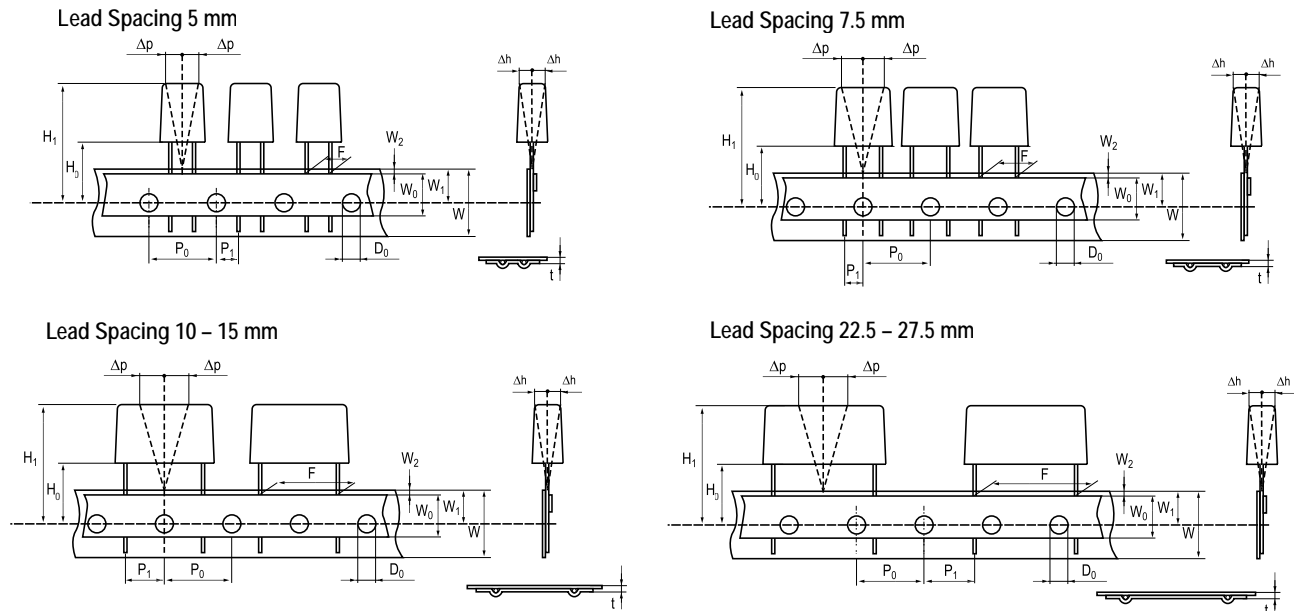
Packaging Quantities

Size Code	Lead Spacing	Thickness (mm)	Height (mm)	Length (mm)	Bulk Short Leads	Bulk Long Leads	Standard Reel Ø 355 mm	Large Reel Ø 500 mm	Ammo	Pizza
AN	10	3.5	9	13	2200	3200	850	1700	1150	
AG		4	9	13	2000	2200	750	1500	1000	
AK		5	11	13	1300	2000	600	1250	800	
AP		6	12	13	1000	1800	500	1000	680	
AO		7	17	13	600	900	450	900	580	
AL		9.5	7.5	13	1100	2000	300	600	430	
AE		4	8	13	2000	2200	750	1500	1000	
BB	15	4	10	18	1300	1500	750	1500	1000	1411
BC		5	11	18	1000	1250	600	1250	800	1139
BE		5.5	12.5	18	800	1100	550	1100	750	1020
BG		6	12	18	1750	1000	500	1000	680	935
BK		7.5	13.5	18	1000	800	350	800	500	748
BI		6	17.5	18	1000	800	500	1000	680	935
BP		8.5	14.5	18	1000	650	300	700	440	663
BT		9	12.5	18	1000	700	270	650	410	629
BO		7.5	18.5	18	900	600	350	800	500	748
BS		10	16	18	750	550	300	600	380	561
BR		13	12	18	750	520	200	480	280	425
BY		11	19	18	450	400	250	500	340	510
BA		8.5	12.5	18	1000	650	300	700	440	663
BZ		12	20	18	350	300	220	450	330	459
DB	22.5	6	14.5	26	1638	702	300	700	464	660
DI		7	16	26	1188	594	250	550	380	564
DH		8.0	16.0	26	1026	513	240	500	330	492
DJ		8.5	17	26	972	486	250	450	280	468
DM		9	18.5	26	918	459	200	400	300	444
DO		10	18.5	26	810	405	160	350	235	396
DP		11	20	26	756	378	190	350	217	360
DU		13	22	26	540	324	150	300	200	300
DY		15.5	24.5	26	450	270	120	250	170	252

Packaging Quantities cont'd

Size Code	Lead Spacing	Thickness (mm)	Height (mm)	Length (mm)	Bulk Short Leads	Bulk Long Leads	Standard Reel Ø 355 mm	Large Reel Ø 500 mm	Ammo	Pizza
FB	27.5	9.0	17.0	31.5	816	408				370
FC		11.0	20.0	31.5	672	336				300
FI		13.0	25.0	31.5	480	288				250
FN		14.0	28.0	31.5	352	176				230
FO		17.0	40.0	31.5	216	144				190
FR		17.5	28.0	31.5	256	128				190
FS		19.0	29.0	31.5	256	128				170
FY		22.0	37.0	31.5	168	112				150
FH		21.0	12.5	31.5	392	168				150
FQ		27.5	16.0	31.5	280	120				120
FT		31.0	19.0	31.5	240	120				100
RB	37.5	11.0	22.0	41.0	420	252				210
RF		13.0	24.0	41.0	360	216				175
RH		15.0	26.0	41.0	300	180				154
RC		16.0	28.5	41.0	216	108				140
RD		19.0	32.0	41.0	192	96				119
RP		21.0	38.0	41.0	126	84				105
RO		24.0	44.0	41.0	108	72				91
RU		30.0	45.0	41.0	90	60				77
RV		24.0	15.0	41.0	252	108				91
RW		24.0	19.0	41.0	216	108				91

Lead Taping & Packaging (IEC 60286–2)



Taping Specification

Dimensions in mm									Standard IEC 60286–2
Lead spacing	+6/-0.1	F	5	7.5	10	15	22.5	27.5	F
Carrier tape width	+1/-0.5	W	18	18	18	18	18	18	18 ^{+1/-0.5}
Hold-down tape width	MIN	W_0	6	6	9	10	10	10	
Position of sprocket hole	+/-0.5	W_1	9	9	9	9	9	9	9 ^{+0.75/-0.5}
Distance between tapes	MAX	W_2	3	3	3	3	3	3	3
Sprocket hole diameter	+/-0.2	D_0	4	4	4	4	4	4	4
Feed hole lead spacing	+/-0.2 ⁽¹⁾	P_0 ⁽³⁾	12.7	12.7	12.7	12.7	12.7	12.7	12.7
Distance lead - feed hole	+/-0.7	P_1	3.85	3.75	7.7	5.2	7.8	5.3	P^1
Deviation tape - plane	MAX	Δp	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Lateral deviation	+/-2	Δh	2	2	2	2	2	2	2
Total thickness	+/-0.2	t	0.7	0.7	0.7	0.7	0.9 ^{MAX}	0.9 ^{MAX}	0.9 ^{MAX}
Sprocket hole/cap body	+/-0.5	H_0 ⁽²⁾	18.5 ^{+/-0.5}	18.5 ^{+/-0.5}	18.5 ^{+/-0.5}	18.5 ^{+/-0.5}	18.5 ^{+/-0.5}	18.5 ^{+/-0.5}	18 ^{+2/-0}

(1) Maximum cumulative feed hole error, 1 mm per 20 parts.

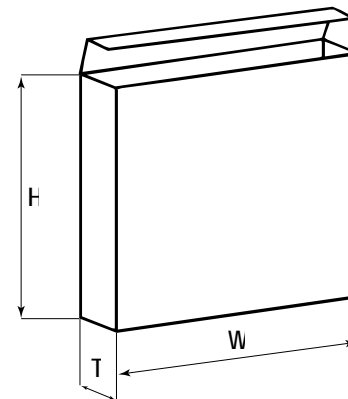
(2) 16.5 mm available on request.

(3) 15 mm available on request ($F \geq 10$ mm).

Lead Taping & Packaging (IEC 60286–2) cont'd

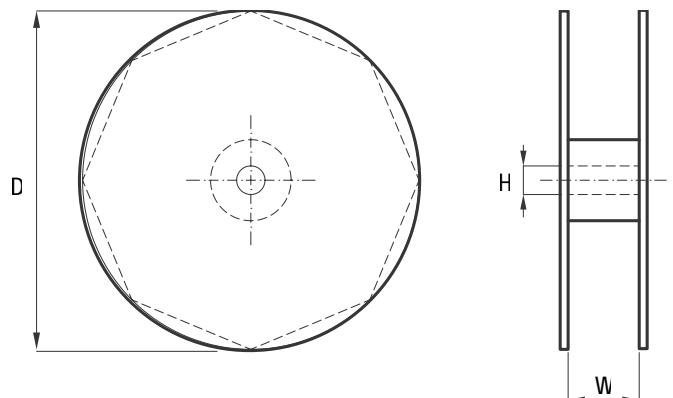
Ammo Specifications

Series	Dimensions (mm)		
	H	W	T
R4x, R4x+R, R7x, RSB	360	340	59
F5A, F5B, F5D			
F6xx, F8xx			
PHExxx, PMExxx, PMRxxx	330	330	50



Reel Specifications

Series	Dimensions (mm)		
	D	H	W
R4x, R4x+R, R7x, RSB	355 500	30	55 (Max)
F5A, F5B, F5D		25	
F6xx, F8xx			
PHExxx, PMExxx, PMRxxx	360 500	30	46 (Max)



Manufacturing Date Code (IEC–60062)

Y = Year, Z = Month			
Year	Code	Month	Code
2000	M	January	1
2001	N	February	2
2002	P	March	3
2003	R	April	4
2004	S	May	5
2005	T	June	6
2006	U	July	7
2007	V	August	8
2008	W	September	9
2009	X	October	0
2010	A	November	N
2011	B	December	D
2012	C		
2013	D		
2014	E		
2015	F		
2016	H		
2017	J		
2018	K		
2019	L		
2020	M		

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West

Milpitas, CA
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Mexico

Zapopan, Jalisco
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Tel: 33-1-4646-1009

Sasso Marconi, Italy
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Milan, Italy
Tel: 39-02-57518176

Rome, Italy
Tel: 39-06-23231718

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

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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
Tel: 44-1279-757201

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

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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
Contact Us	http://www.kemet.com/contact
Investor Relations	http://www.kemet.com/ir
Call Us	1-877-MyKEMET
Twitter	http://twitter.com/kemetcapacitors

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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.

Class X1

Polypropylene Metallized Film EMI Suppression Capacitors – F871 Series, Class X1, 330 VAC
