Motor Run Capacitors

C87, Cylindrical Aluminum Case, Overpressure Protection, 420 VAC/470 VAC

Overview

[illegible] faston, plastic deck or cable terminals, and an overpressure safety device.

Applications

Typical applications include motor run S2 safety class: single-phase motors, low power electric motors and compressors.

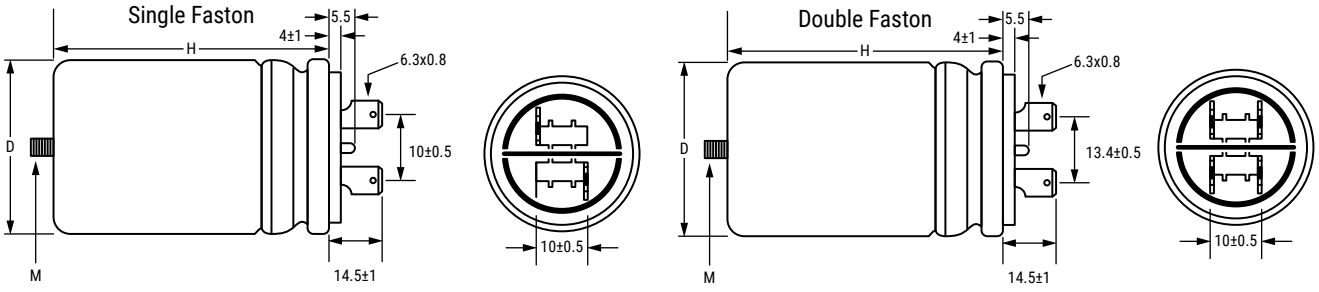
Benefits

- Self-healing
- VDE, CQC and UL810 approved
- Rated frequency of 50 Hz and 60 Hz
- High capacitance density
- Safety device protection

Part Number System

C87	8	B	F	3	4300	AA	4	J
Series		Marking	Case & Fixing Bolt Code	Terminal Style	Capacitance Code (pF)	Packaging	[illegible] Use	Tolerance
C87 = Motor Run Capacitors	0 = 10,000 hours/ 420 VAC (Class B) or 3,000 hours/ 470 VAC (Class C) 8 = 30,000 hours/ 420 VAC (Class A) or 10,000 hours/ 470 VAC (Class B)	C870: C = Standard D = UL Z = Special C878: A = Standard B = UL Z = Special	F = Cylindrical aluminum can with M8 bolt G = Cylindrical aluminum can with M12 bolt [illegible]	1 = Single faston 2.8 x 0.8 (hole) 2 = Single faston 6.3 x 0.8 3 = Double faston 6.3 x 0.8 4 = Single faston 2.8 x 0.8 (slot) 5 = Single faston 2.8 x 0.5 (hole)	Digits 2 - 4 [illegible] three digits of the capacitance value. First digit indicates the number of zeros to be added.	AA = Standard	0, 1, 2, 4, 5 = Standard	J = 5% K = 10% R = 0 to +10% X = Special tolerance

Dimensions – Millimeters



D	H	Mounting Stud (M)
	±2	
25	48	M8 x 10
25	60	M8 x 10
25	78	M8 x 10
30	48	M8 x 10
30	60	M8 x 10
30	78	M8 x 10
35	48	M8 x 10
35	60	M8 x 10
35	78	M8 x 10
35	98	M8 x 10
40	78	M8 x 10
40	98	M8 x 10
45	78	M8 x 10
45	98	M8 x 10
45		

Performance Characteristics

Type of Service	Continuous
Operating Class	
C87/8	Class B 10,000 hours at 470 VAC, Class A 30,000 hours at 420 VAC
C87/0	Class B 10,000 hours at 420 VAC, Class C 3,000 hours at 470 VAC
Temperature Range	
Rated Voltage	470 VAC
Rated Frequency	
Voltage Rise/Fall Time (Maximum)	
Maximum Permissible Voltage	1.10 x rated voltage
Maximum Permissible Current	1.30 x rated current
Dissipation Factor (DF)	20 x 10
Safety Class	S2
Maximum Altitude	2,000 m
Capacitance Tolerance	±5%
Mounting	Any position
Case	Aluminium
Disk	Thermoplastic Polymer V0 (UL 94) Plastic deck with: - self-extinguishing features V0 (UL94)
Filling Resin	Polyurethane
Dielectric	Polypropylene
Plates	Self-healing metal layer
Test Voltage Terminal to Terminal (V_{TT})	2 V_n for 2 seconds
Test Voltage Terminal to Can (V_{TC})	2,000 V for 2 seconds
Total Harmonic Distortion	Up to 10%
Fire Load	40 MJ/kg
Air Distance Between Live Parts	
Air Distance Between Live Parts and Case	
Vibration Test	
Maximum Tightening Torque	

Table 1 – Ratings & Part Number Reference

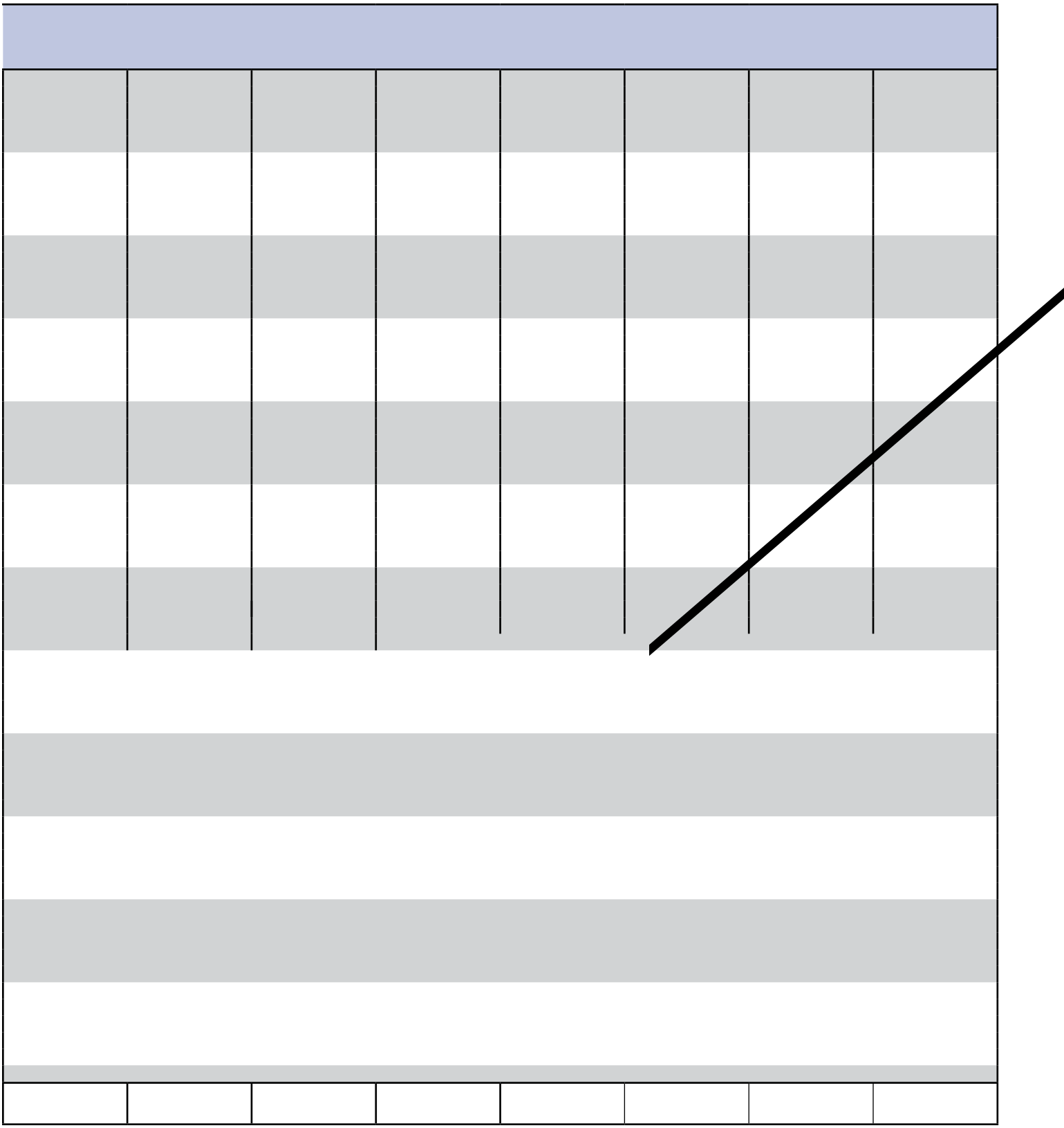


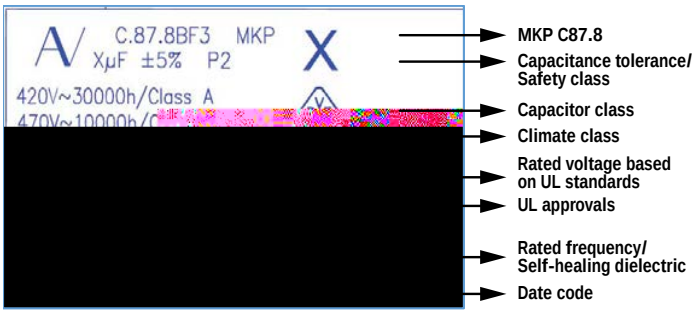
Table 1 – Ratings & Part Number Reference cont'd

Capacitance Value (µF)	VAC	Maximum Dimensions in mm		dV/dt (V/µs)	Packaging Quantity	Termination	Part Number
		D	H				
25	470	45	98	20	50	Double faston	C878BF35250AA0J
29	470	45	98	20	50	Double faston	C878BF35290AA0J
30	470	45	98	20	50	Double faston	C878BF35300AA0J
35	470	45	133	20	50	Double faston	C878BF35350AA0J
40	470	45	133	20	50	Double faston	C878BF35400AA0J
46	470	50	133	20	40	Double faston	C878BF35460AA0J
55	470	50	133	20	40	Double faston	C878BF35550AA0J
60	470	50	133	20	40	Double faston	C878BF35600AA0J
3	470	30	48	15	115	Single faston	C870CF24300AA4J
4	470	30	48	15	115	Single faston	C870CF24400AA4J
5	470	35	48	15	86	Single faston	C870CF24500AA4J
6	470	30	60	15	115	Single faston	C870CF24600AA1J
8	470	30	78	15	115	Single faston	C870CF24800AA0J
10	470	30	78	15	115	Single faston	C870CF25100AA0J
12	470	35	78	15	86	Single faston	C870CF25120AA0J
12.5	470	35	78	15	86	Single faston	C870CF25125AA0J
14	470	35	78	15	86	Single faston	C870CF25140AA0J
16	470	35	78	15	86	Single faston	C870CF25160AA0J
18	470	40	78	15	62	Single faston	C870CF25180AA0J
20	470	40	78	15	62	Single faston	C870CF25200AA0J
25	470	40	98	15	62	Single faston	C870CF25250AA1J
30	470	40	98	15	62	Single faston	C870CF25300AA1J
40	470	45	98	15	50	Single faston	C870CF25400AA0J
5	470	35	48	15	86	Double faston	C870CF34500AA4J
8	470	30	78	15	115	Double faston	C870CF34800AA0J
9	470	30	78	15	115	Double faston	C870CF34900AA0J
10	470	30	78	15	115	Double faston	C870CF35100AA0J
14	470	35	78	15	86	Double faston	C870CF35140AA0J
15	470	35	78	15	86	Double faston	C870CF35150AA0J
16	470	35	78	15	86	Double faston	C870CF35160AA0J
18	470	40	78	15	62	Double faston	C870CF35180AA0J
20	470	40	78	15	62	Double faston	C870CF35200AA0J
22	470	40	78	15	62	Double faston	C870CF35220AA0J
25	470	45	78	15	50	Double faston	C870CF35250AA0J
30	470	40	98	15	62	Double faston	C870CF35300AA1J
35	470	45	98	15	50	Double faston	C870CF35350AA0J
40	470	45	98	15	50	Double faston	C870CF35400AA0J
45	470	45	133	15	50	Double faston	C870CF35450AA0J
50	470	50	133	15	40	Double faston	C870CG35500AA1J
60	470	60	98	15	28	Double faston	C870CG35600AA5J
70	470	55	133	15	32	Double faston	C870CG35700AA1J
75	470	60	133	15	28	Double faston	C870CG35750AA0J
80	470	50	133	15	40	Double faston	C870CG35800AA2J
100	470	55	133	15	32	Double faston	C870CG36100AA0J
110	470	60	133	15	28	Double faston	C870CG36110AA0J
Capacitance Value (µF)	VAC	B (mm)	H (mm)	dV/dt (V/µs)		Termination	Part Number

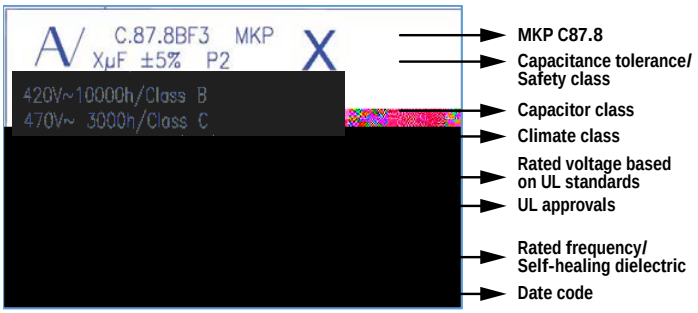
Marking

C87.8

From 1 µF up to 45 µF

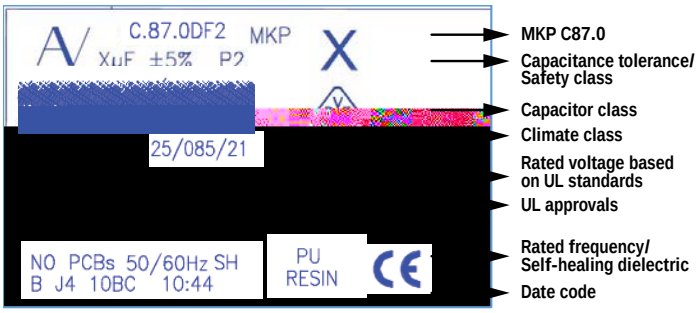


Over 45 µF

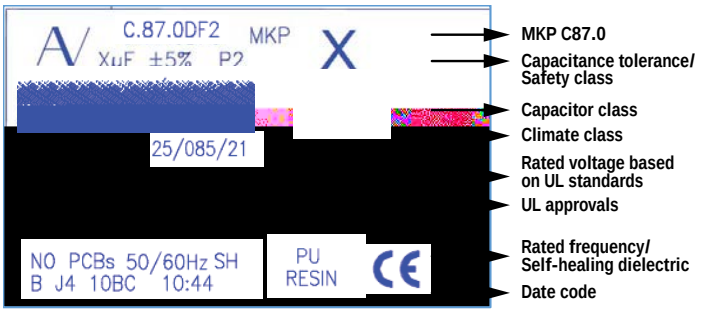


C87.0

From 1 µF up to 80 µF



Over 80 µF



Marking (cont.d)

Manufacturing Date Code (IEC–60062)			
Y = Year, Z = Month			
Year	Code	Month	Code
2010	A	January	1
2011	B	February	2
2012	C	March	3
2013	D	April	4
2014	E	May	5
2015	F	June	6
2016	H	July	7
2017	J	August	8
2018	K	September	9
2019	L	October	O
2020	M	□ □□ □	
2021		December	D
2022	P		
2023	R		
2024	S		
2025	T		
2026	U		
2027	V		
2028	W		
2029	X		
2030	A		

Environmental Compliance

As an environmentally conscious company, KEMET is working continuously to improve the environmental effects of both our capacitors and their production.

[illegible] to prevent the use of some hazardous materials, including lead (Pb) in electronic equipment. All products in this catalog are [illegible] containing less than 0.1% of lead in any homogeneous material.

KEMET will closely follow any changes in legislation world wide and makes any necessary changes in its products, whenever needed.

Some customer segments including medical, defense and automotive electronics may still require the use of lead in electrode coatings. To clarify the situation and distinguish products, the following symbols are used on the packaging labels for RoHS compliant and Pb-free capacitors.

Due to customer requirements, additional markings such as "LF" for lead-free or "LFW" for lead-free wires may appear on the packaging label.

Materials & Environment

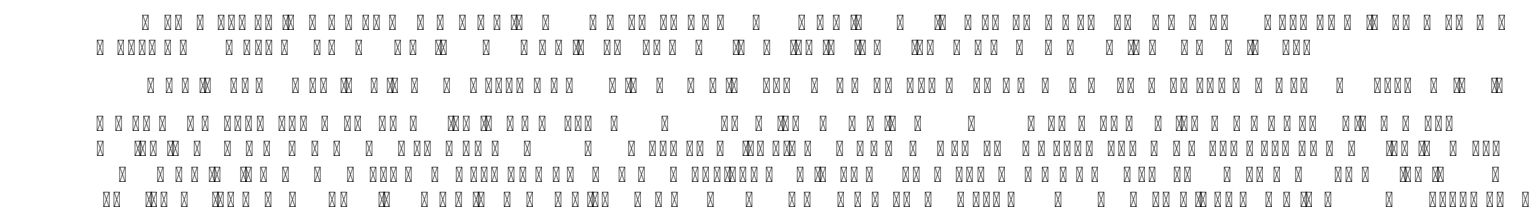
The selection of materials used by KEMET for the production of capacitors is the result of extensive experience and [illegible] out statistical analysis on the materials purchased before the acceptance. All the materials, to the company's present knowledge, are non-toxic and free from cadmium, mercury, chrome and compounds, polychlorine triphenyl (PCB), bromide and chlorine dioxins bromurate clorurate, CFC and HCFC, and asbestos.

Green Products

[illegible]

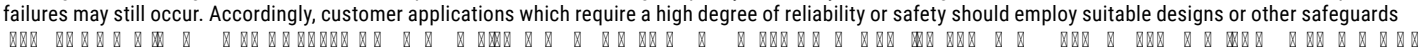
KEMET Electronics Corporation Sales O ces

Disclaimer



obligation or liability for the advice given or results obtained.

Although KEMET designs and manufactures its 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



property damage.

measures may not be required.

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