

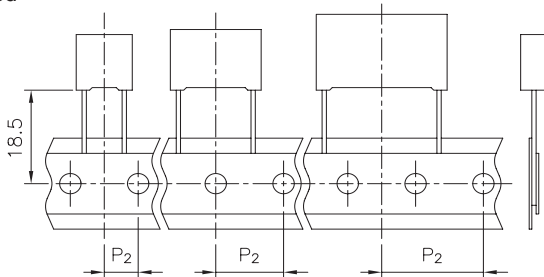
Fig. 1

Fig. 2

Fig. 3

Loose

Taped



Ød±0.05	P = 22.5 - 27.5	p = 37.5
	0.8	1.0

All dimensions are in mm.

PRODUCT CODE SYSTEM

The part number, comprising 14 digits, is formed as follows:

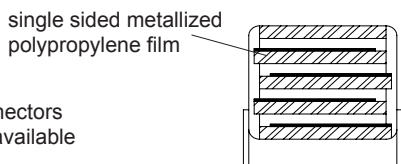


- Digit 1 to 3 Series code.
- Digit 4 a.c. rated voltage:
4 = 400Vac
- Digit 5 Pitch:
N=22.5mm; R=27.5 mm; W=37.5mm
- Digit 6 to 9 Digits 7 - 8 - 9 indicate the first three digits of Capacitance value and the 6th digit indicates the number of zeros that must be added to obtain the Rated Capacitance in pF.
- Digit 10 to 11 Mechanical version and/or packaging (table 1)
- Digit 12 Identifies the dimensions and electrical characteristics.
- Digit 13 Internal use.
- Digit 14 Capacitance tolerance:
J=5%; K=10%

Table 1

Standard packaging style	Lead length	Taping style			Ordering code
		P ₂ (mm)	Fig. (No.)	Pitch (mm)	
REEL Ø 500mm		19.05	3	22.5/27.5	CK (Digit 10 to 11)
Loose, short leads	4 ⁺²				AA
Loose, long leads	30 ⁺⁵ 25 ^{+2/-1}				40 50
Loose, insulated rigid leads	30 ⁺⁵				51
Loose, insulated flexible leads	150 ^{±5}				52

Note: Flat quick-connectors and solder tags are available upon request.



METALLIZED POLYPROPYLENE FILM CAPACITOR MOTOR RUN CAPACITORS

Typical applications: The capacitor is used in series to the auxiliary winding of a single-phase electric motor, allowing it to start and increase its torque while working. The capacitor is particularly suitable for applications requiring reduced dimensions i.e. air-fans and circulators.

PRODUCT CODE: **C244**

Pitch (mm)	Box thickness (mm)	Maximum dimensions (mm)		
		B max	H max	L max
22.5	All	B +0.2	H +0.1	L +0.3
27.5	All	B +0.2	H +0.1	L +0.3
37.5	All	B +0.3	H +0.1	L +0.3

GENERAL TECHNICAL DATA

- Dielectric:** polypropylene film.
- Plates:** self-healing metal layer.
- Winding:** non-inductive type.
- Leads:** tinned wire.
- Protection:** plastic case, thermosetting resin filled. Box material is solvent resistant and flame retardant according to UL94 V0.
- Marking:** manufacturer's logo, series, capacitance, tolerance, rated voltage, capacitor class, SH for self-healing capacitors, class of safety protection, climatic category, approval marks, manufacturing plant, manufacturing date code.
- Climatic category:** 40/85/21 IEC 60068-1
- Operating temperature range:** -40 to +85°C
- Related documents:** IEC 60252

ELECTRICAL CHARACTERISTICS

- Rated voltage (V_R):** 400Vac
- Rated temperature (T_R):** +85°C
- Capacitance range:** 0.3 µF to 10 µF.
- Capacitance tolerances** (measured at 1 kHz):
±5% (J); ±10% (K).
- Dissipation factor (DF):** tgδ 20 x 10⁻⁴ at +20°C±5°C
- Insulation resistance:**

Test conditions

- Temperature: +20°C±5°C
- Voltage charge time: 1min
- Voltage charge: 100 Vdc

Performance

- ≥1x10⁵ MΩ (5x10⁵ MΩ)* for C≤0.33µF
- ≥30000s (150000s)* for C>0.33µF
- * Typical value.

Test voltage between terminations:

2xV_R applied for 2 s at +20°C±5°C

Test voltage terminal to case:

2000Vdc for 2 s

Safety class: P0 according IEC 60252

Protection degree: IP55



Expected life:

30.000 h at 350Vac at 85°C (Class A)

10.000 h at 400Vac at 85°C (Class B)

3.000 h at 460Vac at 85°C (Class C)



Rated Cap.	400Vac Std dimensions				Max dv/dt (V/μs)	Rated current A	Part Number
	B	H	L	p			
0.33 μF	7.0	16.0	26.5	22.5	50	0.05	C244N 3330 -- 01 -
0.4 μF	7.0	16.0	26.5	22.5	50	0.06	C244N 3400 -- 02 -
0.47 μF	8.5	17.0	26.5	22.5	50	0.07	C244N 3470 -- 02 -
0.5 μF	8.5	17.0	26.5	22.5	50	0.08	C244N 3500 -- 02 -
0.6 μF	8.5	17.0	26.5	22.5	50	0.09	C244N 3600 -- 02 -
0.68 μF	10.0	18.5	26.5	22.5	50	0.10	C244N 3680 -- 02 -
0.7 μF	10.0	18.5	26.5	22.5	50	0.11	C244N 3700 -- 02 -
0.8 μF	11.0	20.0	26.5	22.5	50	0.12	C244N 3800 -- 02 -
0.9 μF	11.0	20.0	26.5	22.5	50	0.14	C244N 3900 -- 02 -
1.0 μF	13.0	22.0	26.5	22.5	50	0.15	C244N 4100 -- 02 -
0.6 μF	9.0	17.0	32.0	27.5	50	0.09	C244R 3600 -- 02 -
0.68 μF	9.0	17.0	32.0	27.5	50	0.10	C244R 3680 -- 02 -
0.7 μF	9.0	17.0	32.0	27.5	50	0.11	C244R 3700 -- 02 -
0.8 μF	11.0	20.0	32.0	27.5	50	0.12	C244R 3800 -- 02 -
0.9 μF	11.0	20.0	32.0	27.5	50	0.14	C244R 3900 -- 02 -
1.0 μF	11.0	20.0	32.0	27.5	50	0.15	C244R 4100 -- 01 -
1.5 μF	13.0	25.0	32.0	27.5	50	0.23	C244R 4150 -- 01 -
2.0 μF	14.0	28.0	32.0	27.5	50	0.30	C244R 4200 -- 02 -
2.2 μF	14.0	28.0	32.0	27.5	50	0.33	C244R 4220 -- 02 -
2.5 μF	18.0	33.0	32.0	27.5	50	0.38	C244R 4250 -- 02 -
3.0 μF	18.0	33.0	32.0	27.5	50	0.45	C244R 4300 -- 01 -
3.3 μF	22.0	37.0	32.0	27.5	50	0.50	C244R 4330 -- 02 -
4.0 μF	22.0	37.0	32.0	27.5	50	0.60	C244R 4400 -- 02 -
4.5 μF	22.0	37.0	32.0	27.5	50	0.71	C244R 4450 -- 02 -
1.5 μF	11.0	22.0	41.5	37.5	50	0.23	C244W 4150 -- 02 -
2.0 μF	13.0	24.0	41.5	37.5	50	0.30	C244W 4200 -- 02 -
2.2 μF	13.0	24.0	41.5	37.5	50	0.33	C244W 4220 -- 02 -
2.5 μF	13.0	24.0	41.5	37.5	50	0.38	C244W 4250 -- 02 -
3.0 μF	16.0	28.5	41.5	37.5	50	0.45	C244W 4300 -- 01 -
3.3 μF	16.0	28.5	41.5	37.5	50	0.50	C244W 4330 -- 02 -
4.0 μF	19.0	32.0	41.5	37.5	50	0.60	C244W 4400 -- 02 -
4.5 μF	19.0	32.0	41.5	37.5	50	0.71	C244W 4450 -- 02 -
4.7 μF	19.0	32.0	41.5	37.5	50	0.71	C244W 4470 -- 02 -
5.0 μF	19.0	32.0	41.5	37.5	50	0.75	C244W 4500 -- 01 -
5.5 μF	20.0	40.0	41.5	37.5	50	0.90	C244W 4550 -- 02 -
6.0 μF	20.0	40.0	41.5	37.5	50	0.90	C244W 4600 -- 02 -
6.5 μF	20.0	40.0	41.5	37.5	50	1.03	C244W 4650 -- 02 -
6.8 μF	20.0	40.0	41.5	37.5	50	1.03	C244W 4680 -- 02 -
7.0 μF	20.0	40.0	41.5	37.5	50	1.06	C244W 4700 -- 01 -
7.5 μF	24.0	44.0	41.5	37.5	50	1.21	C244W 4750 -- 02 -
8.0 μF	24.0	44.0	41.5	37.5	50	1.21	C244W 4800 -- 02 -
8.5 μF	24.0	44.0	41.5	37.5	50	1.36	C244W 4850 -- 02 -
9.0 μF	24.0	44.0	41.5	37.5	50	1.36	C244W 4900 -- 02 -
9.5 μF	24.0	44.0	41.5	37.5	50	1.51	C244W 4950 -- 02 -
10 μF	24.0	44.0	41.5	37.5	50	1.51	C244W 5100 -- 02 -

Mechanical version and packaging (Table1) 
 Tolerance: J (±5%); K (±10%) 

All dimensions are mm.
 Other capacitance values are available upon request.

METALLIZED POLYPROPYLENE FILM CAPACITOR MOTOR RUN CAPACITORS

PRODUCT CODE: C244

APPROVALS			
	VDE EN 60252-1	Class A Class B Class C	Certificate No. 40026094
			

METALLIZED POLYPROPYLENE FILM CAPACITOR
MOTOR RUN CAPACITORS

PRODUCT CODE: C244

TEST METHOD AND PERFORMANCE

Damp heat, steady state:

Test conditions 1st

Temperature: +40°C±2°C
 Relative humidity (RH): 93%±2%
 Test duration: 21 days

Performance

Capacitance change $|\Delta C/C|$: ≤2%
 DF change ($\Delta \text{tg}\delta$): ≤20×10⁻⁴ at 1kHz
 Insulation resistance: ≥50% of initial limit.

Endurance:

Test conditions Class A

Temperature: +85°C±2°C
 Test duration: 6.000 h
 Voltage applied: 438Vac

Test conditions Class A

Temperature: +85°C±2°C
 Test duration: 3.000 h
 Voltage applied: 473Vac

Test conditions Class B

Temperature: +85°C±2°C
 Test duration: 2.000 h
 Voltage applied: 500Vac

Test conditions Class B

Temperature: +85°C±2°C
 Test duration: 1.000 h
 Voltage applied: 540Vac

Test conditions Class C

Temperature: +85°C±2°C
 Test duration: 600 h
 Voltage applied: 575Vac

Performance

Capacitance change $|\Delta C/C|$: ≤3%
 DF change ($\Delta \text{tg}\delta$): ≤50×10⁻⁴ at 10kHz for C≤1μF
 ≤30×10⁻⁴ at 1kHz for C>1μF
 Insulation resistance: ≥50% of initial limit.

Resistance to soldering heat:

Test conditions

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

Performance

Capacitance change $|\Delta C/C|$: ≤2%
 DF change ($\Delta \text{tg}\delta$): ≤50×10⁻⁴ at 10kHz for C≤1μF
 ≤30×10⁻⁴ at 1kHz for C>1μF
 Insulation resistance: ≥initial limit.

Long term stability (after two years):

Storage: -40 / 90°C

Performance

Capacitance change $|\Delta C/C|$: ≤2%