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## Overview

C27 is a polypropylene metallized film, with a cylindrical plastic can-type construction filled with resin. It uses faston and plastic deck or cable terminals.

## Applications

Typical applications include motor start S0 safety class.

## Benefits

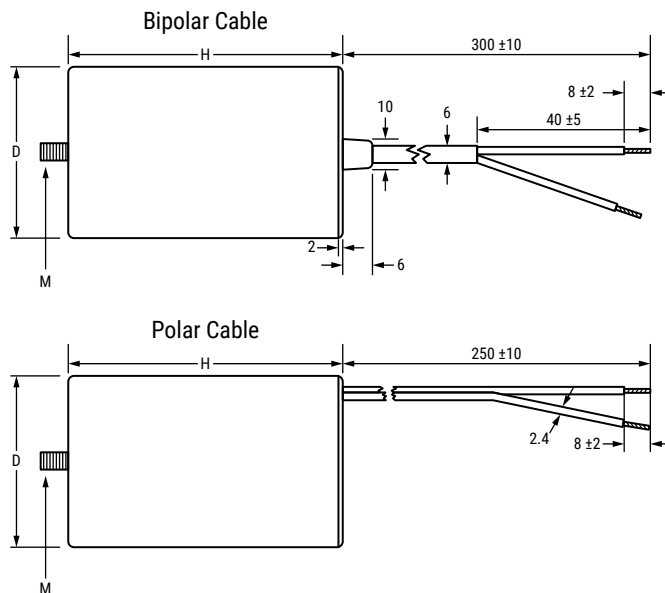
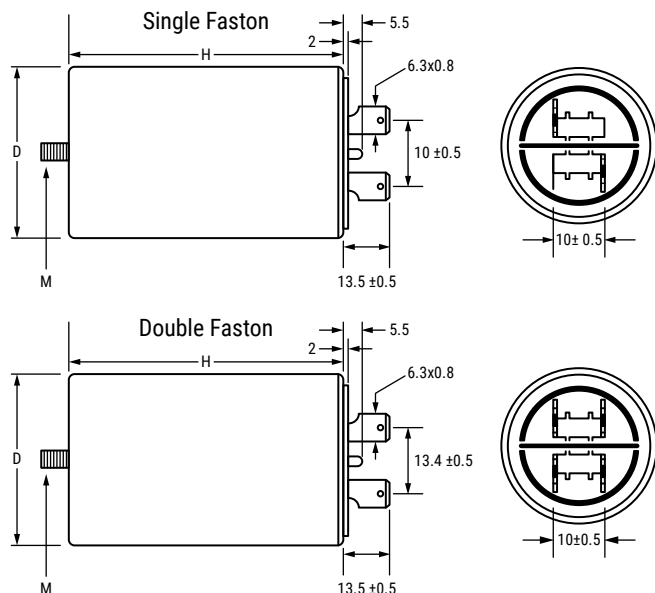
- Self-healing
- IMQ and UL810 approved (construction only)
- Rated frequency of 50 Hz and 60 Hz
- High capacitance density



## Part Number System

| C27                        | 4                                                                    | A                                              | C                                                                                | 2                                          | 4100                                                                                                                             | AA                                                                                                                                                                                                                                                                                                                                     | 5                     | J         |
|----------------------------|----------------------------------------------------------------------|------------------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------|
| Series                     |                                                                      | Marking                                        | Case and Fixing Bolt Code                                                        | Terminal Style                             | Capacitance Code (pF)                                                                                                            | Packaging                                                                                                                                                                                                                                                                                                                              | Internal Use          | Tolerance |
| C27 = Motor Run Capacitors | 4 = 30,000 hours/420 VAC (Class A) or 10,000 hours/470 VAC (Class B) | C274:<br>C = Standard<br>N = UL<br>Z = Special | A = Without fixing bolt/flat bottom<br>C = Cylindrical plastic case with M8 bolt | 2 = Single faston 6.3 x 0.8                | Digits 2 - 4 indicate the first three digits of the capacitance value.<br>First digit indicates the number of zeros to be added. | AA = Faston terminals standard<br>AF = Unipolar cable, L = 250 mm, stripped 8 mm<br>AL = Unipolar cable, L = 300 mm, stripped 8 mm,<br>LF = Bipolar cable L = 250 mm, unsheathed 40 mm, stripped 8mm<br>LG = Bipolar cable L= 300mm, unsheathed 40 mm, stripped 8 mm<br>LH = Bipolar cable L = 350 mm, unsheathed 40 mm, stripped 8 mm | 0, 1, 2, 5 = Standard | J = 5%    |
|                            | 6 = 10,000 hours/420 VAC (Class B) or 3,000 hours/470 VAC (Class C)  | C276:<br>A = Standard<br>N = UL<br>Z = Special |                                                                                  | 3 = Double faston 6.3 x 0.8                |                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                        |                       |           |
|                            | 7 = 10,000 hours/275 VAC (Class C) or 1,000 hours/425 VAC (Class D)  | C277:<br>L = Standard<br>N = UL<br>Z = Special |                                                                                  | A = Unipolar flexible cable (tinned end)   |                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                        |                       |           |
|                            |                                                                      |                                                |                                                                                  | B = Unipolar flexible cable (untinned end) |                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                        |                       |           |
|                            |                                                                      |                                                |                                                                                  | F = Bipolar cable (tinned end)             |                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                        |                       |           |

## Dimensions – Millimeters



| D     | H    | Mounting Stud (M) |
|-------|------|-------------------|
| +1/-0 | ±2   |                   |
| 25    | 56.5 | M8 x 10           |
| 25    | 58   | M8 x 11           |
| 25    | 55   | M8 x 12           |
| 25    | 58.5 | M8 x 13           |
| 25    | 57   | M8 x 14           |
| 30    | 56.5 | M8 x 15           |
| 30    | 55   | M8 x 16           |
| 30    | 69.5 | M8 x 17           |
| 30    | 58.5 | M8 x 18           |
| 30    | 57   | M8 x 19           |
| 35    | 56.5 | M8 x 20           |
| 35    | 73.5 | M8 x 21           |
| 35    | 55   | M8 x 22           |
| 35    | 57   | M8 x 23           |
| 35    | 71.5 | M8 x 24           |
| 35    | 74   | M8 x 25           |
| 35    | 94.5 | M8 x 26           |
| 35    | 69.5 | M8 x 27           |
| 35    | 58.5 | M8 x 28           |
| 35    | 95.5 | M8 x 29           |

| D     | H    | Mounting Stud (M) |
|-------|------|-------------------|
| +1/-0 | ±2   |                   |
| 40    | 73.5 | M8 x 30           |
| 40    | 71.5 | M8 x 31           |
| 40    | 74   | M8 x 32           |
| 40    | 94   | M8 x 33           |
| 40    | 69.5 | M8 x 34           |
| 40    | 95.5 | M8 x 35           |
| 45    | 93   | M8 x 36           |
| 45    | 74   | M8 x 37           |
| 45    | 95.5 | M8 x 38           |
| 45    | 94   | M8 x 39           |
| 45    | 120  | M8 x 40           |
| 45    | 71.5 | M8 x 41           |
| 50    | 95   | M8 x 42           |
| 50    | 120  | M8 x 43           |
| 55    | 120  | M8 x 44           |
| 55    | 121  | M8 x 45           |
| 55    | 93.5 | M8 x 46           |

## Qualification

|                     |                                                                                              |
|---------------------|----------------------------------------------------------------------------------------------|
| Reference Standards | IEC 252, EN 60252-1:2011/A1/20131994, IMQ, UL810 (construction only), approved up to 500 VAC |
| Vibration Test      | IEC 68-2-6                                                                                   |

## Performance Characteristics

| Type of Service                                              | Continuous                                                                                                                                        |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Class                                              |                                                                                                                                                   |
| C27/4                                                        | Class A 30,000 hours at 420 VAC or Class B 10,000 hours at 470 VAC                                                                                |
| C27/6                                                        | Class B 10,000 hours at 420 VAC or Class C 3,000 hours at 470 VAC                                                                                 |
| C27/7                                                        | Class B 10,000 hours at 275 VAC or Class D 1,000 hours at 425 VAC (intermittent operation)                                                        |
| Temperature Range                                            | -25°C to +85°C                                                                                                                                    |
| Storage Temperature                                          | -40°C to +90°C                                                                                                                                    |
| Rated Voltage                                                | 470 VAC                                                                                                                                           |
| Rated Frequency                                              | 50 – 60 Hz                                                                                                                                        |
| Voltage Rise/Fall Time (Maximum):<br>C27/4<br>C27/6<br>c27/7 | 20 V/μs<br>15 V/μs<br>15 V/μs                                                                                                                     |
| Maximum Permissible Voltage                                  | 1.10 x rated voltage                                                                                                                              |
| Maximum Permissible Current                                  | 1.30 x rated current                                                                                                                              |
| Dissipation Factor (DF)                                      | 20 x 10 <sup>-4</sup> at +20°C, 50Hz                                                                                                              |
| Safety Class                                                 | S0                                                                                                                                                |
| Maximum Altitude                                             | 2,000 m                                                                                                                                           |
| Capacitance Tolerance                                        | ±5%                                                                                                                                               |
| Mounting                                                     | Any position                                                                                                                                      |
| Can                                                          | Polypropylene with self-extinguishing features V2 (UL 94)<br>Noryl with self-extinguishing features VI (UL 94) for diameters > 50 mm              |
| Faston                                                       | Faston execution: Nylon PA66 with self-extinguishing features V0                                                                                  |
| Disk                                                         | Cable execution: PC-A with self-extinguishing features V0<br>For diameters > 40 mm cable execution: Noryl PPO with self-extinguishing features VI |
| Filling Resin                                                | Polyurethane                                                                                                                                      |
| Dielectric                                                   | Polypropylene                                                                                                                                     |
| Plates                                                       | Self-healing metal layer                                                                                                                          |
| Test Voltage Terminal to Terminal (V <sub>TT</sub> )         | 2 V <sub>n</sub> for 2 seconds                                                                                                                    |
| Test Voltage Terminal to Can (V <sub>TC</sub> )              | 2,000 V for 2 seconds                                                                                                                             |
| Air Distance Between Live Parts                              | ≥ 5 mm                                                                                                                                            |
| Air Distance Between Live Parts and Case                     | ≥ 6 mm                                                                                                                                            |

**Table 1 – Ratings & Part Number Reference**

| Capacitance Value (µF) | VAC | Maximum Dimensions (mm) |        | dV/dt (V/µs) | Termination                           | Packaging Quantity | Part Number     |
|------------------------|-----|-------------------------|--------|--------------|---------------------------------------|--------------------|-----------------|
|                        |     | D                       | H      |              |                                       |                    |                 |
| 1                      | 470 | 25                      | 56.5   | 20           | Single Fast-On                        | 162                | C274AC24100AA0J |
| 1.25                   | 470 | 25                      | 58     | 20           | Single Fast-On                        | 162                | C274AC24125AA0J |
| 1.5                    | 470 | 25                      | 58     | 20           | Single Fast-On                        | 162                | C274AC24150AA0J |
| 2                      | 470 | 25                      | 58     | 20           | Single Fast-On                        | 162                | C274AC24200AA0J |
| 2.5                    | 470 | 25                      | 58     | 20           | Single Fast-On                        | 162                | C274AC24250AA0J |
| 3                      | 470 | 25                      | 58     | 20           | Single Fast-On                        | 162                | C274AC24300AA0J |
| 4                      | 470 | 30                      | 56.5   | 20           | Single Fast-On                        | 110                | C274AC24400AA0J |
| 5                      | 470 | 30                      | 56.5   | 20           | Single Fast-On                        | 110                | C274AC24500AA0J |
| 6                      | 470 | 35                      | 56.5   | 20           | Single Fast-On                        | 86                 | C274AC24600AA0J |
| 6.3                    | 470 | 35                      | 56.5   | 20           | Single Fast-On                        | 86                 | C274AC24630AA0J |
| 7                      | 470 | 35                      | 56.5   | 20           | Single Fast-On                        | 86                 | C274AC24700AA0J |
| 7.5                    | 470 | 35                      | 56.5   | 20           | Single Fast-On                        | 86                 | C274AC24750AA0J |
| 8                      | 470 | 35                      | 56.5   | 20           | Single Fast-On                        | 86                 | C274AC24800AA0J |
| 10                     | 470 | 35                      | 73.5   | 20           | Single Fast-On                        | 86                 | C274AC25100AA0J |
| 12                     | 470 | 35                      | 73.5   | 20           | Single Fast-On                        | 86                 | C274AC25120AA0J |
| 12.5                   | 470 | 35                      | 73.5   | 20           | Single Fast-On                        | 86                 | C274AC25125AA0J |
| 16                     | 470 | 40                      | 73.5   | 20           | Single Fast-On                        | 60                 | C274AC25160AA0J |
| 25                     | 470 | 45                      | 93     | 20           | Single Fast-On                        | 50                 | C274AC25250AA0J |
| 30                     | 470 | 45                      | 93     | 20           | Single Fast-On                        | 50                 | C274AC25300AA0J |
| 31.5                   | 470 | 45                      | 93     | 20           | Single Fast-On                        | 50                 | C274AC25315AA0J |
| 1                      | 470 | 25                      | 56.5   | 20           | Double Fast-On                        | 162                | C274AC34100AA0J |
| 1.5                    | 470 | 25                      | 58     | 20           | Double Fast-On                        | 162                | C274AC34150AA0J |
| 2                      | 470 | 25                      | 58     | 20           | Double Fast-On                        | 162                | C274AC34200AA0J |
| 2.5                    | 470 | 25                      | 56.5   | 20           | Double Fast-On                        | 162                | C274AC34250AA0J |
| 3                      | 470 | 25                      | 58     | 20           | Double Fast-On                        | 162                | C274AC34300AA0J |
| 4                      | 470 | 30                      | 56.5   | 20           | Double Fast-On                        | 110                | C274AC34400AA0J |
| 5                      | 470 | 30                      | 56.5   | 20           | Double Fast-On                        | 110                | C274AC34500AA0J |
| 6                      | 470 | 35                      | 56.5   | 20           | Double Fast-On                        | 86                 | C274AC34600AA0J |
| 6.3                    | 470 | 35                      | 56.5   | 20           | Double Fast-On                        | 86                 | C274AC34630AA0J |
| 7                      | 470 | 35                      | 56.5   | 20           | Double Fast-On                        | 86                 | C274AC34700AA0J |
| 7.5                    | 470 | 35                      | 56.5   | 20           | Double Fast-On                        | 86                 | C274AC34750AA0J |
| 8                      | 470 | 35                      | 56.5   | 20           | Double Fast-On                        | 86                 | C274AC34800AA0J |
| 9                      | 470 | 35                      | 73.5   | 20           | Double Fast-On                        | 86                 | C274AC34900AA0J |
| 10                     | 470 | 35                      | 73.5   | 20           | Double Fast-On                        | 86                 | C274AC35100AA0J |
| 11                     | 470 | 35                      | 73.5   | 20           | Double Fast-On                        | 86                 | C274AC35110AA0J |
| 12                     | 470 | 35                      | 73.5   | 20           | Double Fast-On                        | 86                 | C274AC35120AA0J |
| 12.5                   | 470 | 35                      | 73.5   | 20           | Double Fast-On                        | 86                 | C274AC35125AA0J |
| 14                     | 470 | 40                      | 73.5   | 20           | Double Fast-On                        | 60                 | C274AC35140AA0J |
| 15                     | 470 | 40                      | 73.5   | 20           | Double Fast-On                        | 60                 | C274AC35150AA0J |
| 16                     | 470 | 40                      | 73.5   | 20           | Double Fast-On                        | 60                 | C274AC35160AA0J |
| 18                     | 470 | 45                      | 74     | 20           | Double Fast-On                        | 50                 | C274AC35180AA0J |
| 20                     | 470 | 45                      | 74     | 20           | Double Fast-On                        | 50                 | C274AC35200AA0J |
| 25                     | 470 | 45                      | 93     | 20           | Double Fast-On                        | 50                 | C274AC35250AA0J |
| 30                     | 470 | 45                      | 93     | 20           | Double Fast-On                        | 50                 | C274AC35300AA0J |
| 35                     | 470 | 50                      | 95     | 20           | Double Fast-On                        | 40                 | C274AC35350AA0J |
| 40                     | 470 | 50                      | 120    | 20           | Double Fast-On                        | 40                 | C274AC35400AA0J |
| 50                     | 470 | 50                      | 120    | 20           | Double Fast-On                        | 40                 | C274AC35500AA0J |
| 55                     | 470 | 55                      | 120    | 20           | Double Fast-On                        | 32                 | C274AC35550AA0J |
| 60                     | 470 | 55                      | 121    | 20           | Double Fast-On                        | 32                 | C274AC35600AA0J |
| 1                      | 470 | 25                      | 55     | 20           | Unipolar flexible cable (tinned end)  | 162                | C274ACA4100AL0J |
| 1.5                    | 470 | 25                      | 55     | 20           | Unipolar flexible cable (tinned end)  | 162                | C274ACA4150AL0J |
| 2                      | 470 | 25                      | 55     | 20           | Unipolar flexible cable (tinned end)  | 162                | C274ACA4200AL0J |
| 2.5                    | 470 | 25                      | 55     | 20           | Unipolar flexible cable (tinned end)  | 162                | C274ACA4250AL0J |
| 3                      | 470 | 25                      | 55     | 20           | Unipolar flexible cable (tinned end)  | 162                | C274ACA4300AL0J |
| 4                      | 470 | 30                      | 55     | 20           | Unipolar flexible cable (tinned end)  | 110                | C274ACA4400AL0J |
| 5                      | 470 | 30                      | 55     | 20           | Unipolar flexible cable (tinned end)  | 110                | C274ACA4500AL0J |
| 6                      | 470 | 35                      | 55     | 20           | Unipolar flexible cable (tinned end)  | 86                 | C274ACA4600AL0J |
| 1                      | 470 | 25                      | 58.5   | 20           | Unsheathed Bipolar cable (tinned end) | 162                | C274ACF4100LF0J |
| 1.5                    | 470 | 25                      | 58.5   | 20           | Unsheathed Bipolar cable (tinned end) | 162                | C274ACF4150LF0J |
| 2                      | 470 | 25                      | 58.5   | 20           | Unsheathed Bipolar cable (tinned end) | 162                | C274ACF4200LF0J |
| 2.5                    | 470 | 25                      | 58.5   | 20           | Unsheathed Bipolar cable (tinned end) | 162                | C274ACF4250LF0J |
| 3                      | 470 | 25                      | 58.5   | 20           | Unsheathed Bipolar cable (tinned end) | 162                | C274ACF4300LF0J |
| Capacitance Value (µF) | VAC | B (mm)                  | H (mm) | dV/dt (V/µs) | Termination                           | Packaging Quantity | Part Number     |

**Table 1 – Ratings & Part Number Reference cont'd**

| Capacitance Value (µF) | VAC | Maximum Dimensions (mm) |        | dV/dt (V/µs) | Termination                           | Packaging Quantity | Part Number     |
|------------------------|-----|-------------------------|--------|--------------|---------------------------------------|--------------------|-----------------|
|                        |     | D                       | H      |              |                                       |                    |                 |
| 4                      | 470 | 30                      | 58.5   | 20           | Unsheathed Bipolar cable (tinned end) | 110                | C274ACF4400LF0J |
| 5                      | 470 | 30                      | 58.5   | 20           | Unsheathed Bipolar cable (tinned end) | 110                | C274ACF4500LF0J |
| 6                      | 470 | 35                      | 58.5   | 20           | Unsheathed Bipolar cable (tinned end) | 86                 | C274ACF4600LF0J |
| 8                      | 470 | 35                      | 58.5   | 20           | Unsheathed Bipolar cable (tinned end) | 86                 | C274ACF4800LF0J |
| 10                     | 470 | 35                      | 71.5   | 20           | Unsheathed Bipolar cable (tinned end) | 86                 | C274ACF5100LF0J |
| 12                     | 470 | 35                      | 71.5   | 20           | Unsheathed Bipolar cable (tinned end) | 86                 | C274ACF5120LF0J |
| 15                     | 470 | 40                      | 71.5   | 20           | Unsheathed Bipolar cable (tinned end) | 60                 | C274ACF5150LF0J |
| 20                     | 470 | 45                      | 71.5   | 20           | Unsheathed Bipolar cable (tinned end) | 50                 | C274ACF5200LF0J |
| 30                     | 470 | 45                      | 93     | 20           | Unsheathed Bipolar cable (tinned end) | 50                 | C274ACF5300LF0J |
| 35                     | 470 | 50                      | 93     | 20           | Unsheathed Bipolar cable (tinned end) | 40                 | C274ACF5350LF0J |
| 40                     | 470 | 50                      | 120    | 20           | Unsheathed Bipolar cable (tinned end) | 40                 | C274ACF5400LF0J |
| 1.5                    | 470 | 25                      | 58     | 15           | Single Fast-On                        | 162                | C276CC24150AA0J |
| 2                      | 470 | 25                      | 58     | 15           | Single Fast-On                        | 162                | C276CC24200AA0J |
| 2.5                    | 470 | 25                      | 58     | 15           | Single Fast-On                        | 162                | C276CC24250AA0J |
| 3                      | 470 | 25                      | 58     | 15           | Single Fast-On                        | 162                | C276CC24300AA0J |
| 3.15                   | 470 | 25                      | 58     | 15           | Single Fast-On                        | 162                | C276CC24315AA0J |
| 4                      | 470 | 25                      | 58     | 15           | Single Fast-On                        | 162                | C276CC24400AA0J |
| 5                      | 470 | 25                      | 58     | 15           | Single Fast-On                        | 162                | C276CC24500AA1J |
| 6                      | 470 | 30                      | 56.5   | 15           | Single Fast-On                        | 110                | C276CC24600AA0J |
| 6.3                    | 470 | 30                      | 56.5   | 15           | Single Fast-On                        | 110                | C276CC24630AA0J |
| 7                      | 470 | 30                      | 56.5   | 15           | Single Fast-On                        | 110                | C276CC24700AA0J |
| 8                      | 470 | 35                      | 56.5   | 15           | Single Fast-On                        | 86                 | C276CC24800AA0J |
| 9                      | 470 | 35                      | 56.5   | 15           | Single Fast-On                        | 86                 | C276CC24900AA0J |
| 10                     | 470 | 35                      | 56.5   | 15           | Single Fast-On                        | 86                 | C276CC25100AA0J |
| 11                     | 470 | 35                      | 56.5   | 15           | Single Fast-On                        | 86                 | C276CC25110AA0J |
| 12                     | 470 | 35                      | 73.5   | 15           | Single Fast-On                        | 86                 | C276CC25120AA0J |
| 12.5                   | 470 | 35                      | 73.5   | 15           | Single Fast-On                        | 86                 | C276CC25125AA0J |
| 14                     | 470 | 35                      | 73.5   | 15           | Single Fast-On                        | 86                 | C276CC25140AA0J |
| 15                     | 470 | 35                      | 73.5   | 15           | Single Fast-On                        | 86                 | C276CC25150AA0J |
| 16                     | 470 | 35                      | 73.5   | 15           | Single Fast-On                        | 86                 | C276CC25160AA0J |
| 18                     | 470 | 40                      | 73.5   | 15           | Single Fast-On                        | 60                 | C276CC25180AA0J |
| 20                     | 470 | 40                      | 73.5   | 15           | Single Fast-On                        | 60                 | C276CC25200AA0J |
| 25                     | 470 | 45                      | 74     | 15           | Single Fast-On                        | 50                 | C276CC25250AA0J |
| 30                     | 470 | 45                      | 74     | 15           | Single Fast-On                        | 50                 | C276CC25300AA0J |
| 35                     | 470 | 45                      | 93     | 15           | Single Fast-On                        | 50                 | C276CC25350AA0J |
| 40                     | 470 | 45                      | 94     | 15           | Single Fast-On                        | 50                 | C276CC25400AA0J |
| 60                     | 470 | 50                      | 120    | 15           | Single Fast-On                        | 40                 | C276CC25600AA0J |
| 1.5                    | 470 | 25                      | 56.5   | 15           | Double Fast-On                        | 162                | C276CC34150AA0J |
| 2.5                    | 470 | 25                      | 58     | 15           | Double Fast-On                        | 162                | C276CC34250AA0J |
| 3                      | 470 | 25                      | 58     | 15           | Double Fast-On                        | 162                | C276CC34300AA0J |
| 3.15                   | 470 | 25                      | 58     | 15           | Double Fast-On                        | 162                | C276CC34315AA0J |
| 4                      | 470 | 25                      | 58     | 15           | Double Fast-On                        | 162                | C276CC34400AA0J |
| 5                      | 470 | 30                      | 56.5   | 15           | Double Fast-On                        | 110                | C276CC34500AA0J |
| 6                      | 470 | 30                      | 56.5   | 15           | Double Fast-On                        | 110                | C276CC34600AA0J |
| 6.3                    | 470 | 30                      | 56.5   | 15           | Double Fast-On                        | 110                | C276CC34630AA0J |
| 7                      | 470 | 30                      | 56.5   | 15           | Double Fast-On                        | 110                | C276CC34700AA0J |
| 8                      | 470 | 35                      | 56.5   | 15           | Double Fast-On                        | 86                 | C276CC34800AA0J |
| 10                     | 470 | 35                      | 56.5   | 15           | Double Fast-On                        | 86                 | C276CC35100AA0J |
| 11                     | 470 | 35                      | 56.5   | 15           | Double Fast-On                        | 86                 | C276CC35110AA0J |
| 12                     | 470 | 35                      | 74     | 15           | Double Fast-On                        | 86                 | C276CC35120AA0J |
| 12.5                   | 470 | 35                      | 73.5   | 15           | Double Fast-On                        | 86                 | C276CC35125AA0J |
| 14                     | 470 | 35                      | 73.5   | 15           | Double Fast-On                        | 86                 | C276CC35140AA0J |
| 15                     | 470 | 35                      | 73.5   | 15           | Double Fast-On                        | 86                 | C276CC35150AA0J |
| 16                     | 470 | 35                      | 74     | 15           | Double Fast-On                        | 86                 | C276CC35160AA0J |
| 17.5                   | 470 | 40                      | 73.5   | 15           | Double Fast-On                        | 60                 | C276CC35175AA0J |
| 18                     | 470 | 40                      | 73.5   | 15           | Double Fast-On                        | 60                 | C276CC35180AA0J |
| 20                     | 470 | 40                      | 74     | 15           | Double Fast-On                        | 60                 | C276CC35200AA0J |
| 22                     | 470 | 40                      | 73.5   | 15           | Double Fast-On                        | 60                 | C276CC35220AA0J |
| 25                     | 470 | 40                      | 94     | 15           | Double Fast-On                        | 60                 | C276CC35250AA1J |
| 30                     | 470 | 45                      | 74     | 15           | Double Fast-On                        | 50                 | C276CC35300AA0J |
| 31.5                   | 470 | 45                      | 93     | 15           | Double Fast-On                        | 50                 | C276CC35315AA0J |
| 35                     | 470 | 45                      | 93     | 15           | Double Fast-On                        | 50                 | C276CC35350AA0J |
| Capacitance Value (µF) | VAC | B (mm)                  | H (mm) | dV/dt (V/µs) | Termination                           | Packaging Quantity | Part Number     |

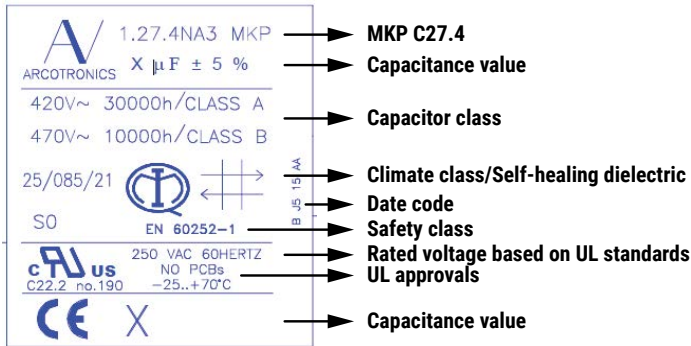
**Table 1 – Ratings & Part Number Reference cont'd**

| Capacitance Value (µF) | VAC | Maximum Dimensions (mm) |        | dV/dt (V/µs) | Termination                           | Packaging Quantity | Part Number     |
|------------------------|-----|-------------------------|--------|--------------|---------------------------------------|--------------------|-----------------|
|                        |     | D                       | H      |              |                                       |                    |                 |
| 40                     | 470 | 45                      | 93     | 15           | Double Fast-On                        | 50                 | C276CC35400AA0J |
| 45                     | 470 | 50                      | 95     | 15           | Double Fast-On                        | 40                 | C276CC35450AA0J |
| 50                     | 470 | 50                      | 120    | 15           | Double Fast-On                        | 40                 | C276CC35500AA0J |
| 60                     | 470 | 50                      | 120    | 15           | Double Fast-On                        | 40                 | C276CC35600AA0J |
| 2                      | 470 | 25                      | 58.5   | 15           | Unsheathed Bipolar cable (tinned end) | 162                | C276CCF4200LG0J |
| 3                      | 470 | 25                      | 57     | 15           | Unsheathed Bipolar cable (tinned end) | 162                | C276CCF4300LG0J |
| 4                      | 470 | 25                      | 58.5   | 15           | Unsheathed Bipolar cable (tinned end) | 162                | C276CCF4400LG0J |
| 5                      | 470 | 30                      | 57     | 15           | Unsheathed Bipolar cable (tinned end) | 110                | C276CCF4500LG0J |
| 5.5                    | 470 | 30                      | 58.5   | 15           | Unsheathed Bipolar cable (tinned end) | 110                | C276CCF4550LG0J |
| 6                      | 470 | 30                      | 58.5   | 15           | Unsheathed Bipolar cable (tinned end) | 110                | C276CCF4600LG0J |
| 8                      | 470 | 35                      | 58.5   | 15           | Unsheathed Bipolar cable (tinned end) | 86                 | C276CCF4800LG0J |
| 10                     | 470 | 35                      | 58.5   | 15           | Unsheathed Bipolar cable (tinned end) | 86                 | C276CCF5100LG0J |
| 12                     | 470 | 35                      | 71.5   | 15           | Unsheathed Bipolar cable (tinned end) | 86                 | C276CCF5120LG0J |
| 12.5                   | 470 | 35                      | 71.5   | 15           | Unsheathed Bipolar cable (tinned end) | 86                 | C276CCF5125LG0J |
| 14                     | 470 | 35                      | 71.5   | 15           | Unsheathed Bipolar cable (tinned end) | 86                 | C276CCF5140LG0J |
| 16                     | 470 | 35                      | 71.5   | 15           | Unsheathed Bipolar cable (tinned end) | 86                 | C276CCF5160LG0J |
| 16                     | 470 | 35                      | 71.5   | 15           | Unsheathed Bipolar cable (tinned end) | 86                 | C276CCF5160LF0J |
| 20                     | 470 | 40                      | 71.5   | 15           | Unsheathed Bipolar cable (tinned end) | 60                 | C276CCF5200LG0J |
| 25                     | 470 | 45                      | 71.5   | 15           | Unsheathed Bipolar cable (tinned end) | 50                 | C276CCF5250LG0J |
| 30                     | 470 | 45                      | 71.5   | 15           | Unsheathed Bipolar cable (tinned end) | 50                 | C276CCF5300LG0J |
| 35                     | 470 | 45                      | 95.5   | 15           | Unsheathed Bipolar cable (tinned end) | 50                 | C276CCF5350LG0J |
| 40                     | 470 | 45                      | 95.5   | 15           | Unsheathed Bipolar cable (tinned end) | 50                 | C276CCF5400LG0J |
| 50                     | 470 | 50                      | 95     | 15           | Unsheathed Bipolar cable (tinned end) | 40                 | C276CCF5500LH2J |
| 3                      | 470 | 25                      | 55     | 15           | Polar cable (untinned end)            | 162                | C276CCB4300AF0J |
| 4                      | 470 | 25                      | 55     | 15           | Polar cable (untinned end)            | 162                | C276CCB4400AF0J |
| 5                      | 470 | 30                      | 55     | 15           | Polar cable (untinned end)            | 110                | C276CCB4500AF0J |
| 7                      | 470 | 30                      | 55     | 15           | Polar cable (untinned end)            | 110                | C276CCB4700AF0J |
| 8                      | 470 | 35                      | 55     | 15           | Polar cable (untinned end)            | 86                 | C276CCB4800AF0J |
| 8.5                    | 470 | 35                      | 55     | 15           | Polar cable (untinned end)            | 86                 | C276CCB4850AF0J |
| 9                      | 470 | 35                      | 55     | 15           | Polar cable (untinned end)            | 86                 | C276CCB4900AF0J |
| 12                     | 470 | 35                      | 69.5   | 15           | Polar cable (untinned end)            | 86                 | C276CCB5120AF0J |
| 12.5                   | 470 | 35                      | 69.5   | 15           | Polar cable (untinned end)            | 86                 | C276CCB5125AF0J |
| 14                     | 470 | 35                      | 69.5   | 15           | Polar cable (untinned end)            | 86                 | C276CCB5140AF0J |
| 5                      | 425 | 25                      | 56.5   | 15           | Single Fast-On                        | 162                | C277LC24500AA0J |
| 16                     | 425 | 35                      | 74     | 15           | Single Fast-On                        | 86                 | C277LC25160AA0J |
| 50                     | 425 | 45                      | 93     | 15           | Double Fast-On                        | 50                 | C277LC35500AA0J |
| 70                     | 425 | 50                      | 95     | 15           | Double Fast-On                        | 40                 | C277LC35700AA0J |
| 4                      | 425 | 25                      | 55     | 15           | Polar cable (untinned end)            | 162                | C277LCB4400AF0J |
| 5                      | 425 | 25                      | 55     | 15           | Polar cable (untinned end)            | 162                | C277LCB4500AF0J |
| 7                      | 425 | 30                      | 55     | 15           | Polar cable (untinned end)            | 110                | C277LCB4700AF0J |
| 8                      | 425 | 30                      | 55     | 15           | Polar cable (untinned end)            | 110                | C277LCB4800AF0J |
| 9                      | 425 | 30                      | 55     | 15           | Polar cable (untinned end)            | 110                | C277LCB4900AF0J |
| 30                     | 425 | 40                      | 95.5   | 15           | Unsheathed Bipolar cable (tinned end) | 60                 | C277LCF5300LG2J |
| Capacitance Value (µF) | VAC | B (mm)                  | H (mm) | dV/dt (V/µs) | Termination                           | Packaging Quantity | Part Number     |

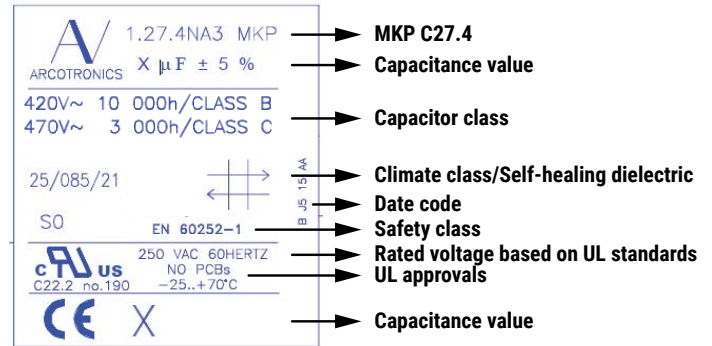
## Marking

### C27.4

From 1  $\mu$ F up to 45  $\mu$ F

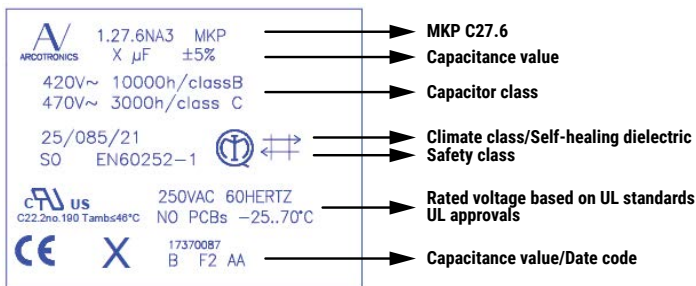


Over 45  $\mu$ F

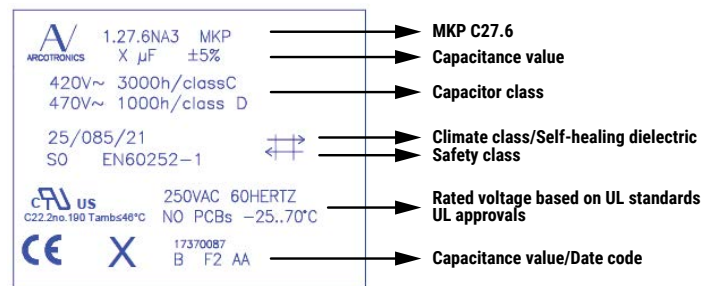


### C27.6

From 1  $\mu$ F up to 55  $\mu$ F



Over 55  $\mu$ F



## 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   | 0    |
| 2020                                | M    | November  | N    |
| 2021                                | N    | 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.

In Europe, due to the RoHS Directive, and in some other geographical areas such as China, legislation has been put in place to prevent the use of some hazardous materials, including lead (Pb) in electronic equipment. All products in this catalog are produced to help our customers' obligations to guarantee their products to fulfill these legislative requirements. The only material of concern in our products has been lead (Pb), which has been removed from all designs to fulfill the requirement of 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.

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## Materials & Environment

The selection of materials used by KEMET for the production of capacitors is the result of extensive experience and constant attention to environmental protection. KEMET selects its suppliers according to ISO 9001 standards and carries 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 chlorurate, CFC and HCFC, and asbestos.

## Green Products

All KEMET power film products are ROHS Compliant.

## Insulation Resistance

When the capacitor temperature increases, the insulation resistance decreases. This is due to the increased electron activity. Low insulation resistance can also be the result of moisture trapped in the windings, caused by a prolonged exposure to excessive humidity.

## Dissipation Factor

Dissipation factor is a complex function involved with the inefficiency of the capacitor. The  $\tan \delta$  may change up and down with increased temperature. For more information, please refer to Performance Characteristics.

## Sealing

### Hermetically Sealed Capacitors

When the temperature increases, the pressure inside the capacitor increases. If the internal pressure is high enough, it can cause a breach in the capacitor, which can result in leakage, impregnation, filling fluid or moisture susceptibility.

### Resin Encased/Wrap & Fill Capacitors

The resin seals on resin encased and wrap and fill capacitors will withstand short-term exposure to high humidity environments without degradation. Resins and plastic tapes will form a pseudo-impervious barrier to humidity and chemicals. These case materials are somewhat porous and through osmosis can cause contaminants to enter the capacitor. The second area of contaminated absorption is the lead-wire/resin interface. Since resins cannot bond 100% to tinned wires, there can be a path formed up to the lead wire into the capacitor section. Aqueous cleaning of circuit boards can aggravate this condition.

### Barometric Pressure

The altitude at which hermetically sealed capacitors are operated, controls the voltage rating of the capacitor. As the barometric pressure decreases, the susceptibility to terminal arc-over increases. Non-hermetic capacitors can be affected by internal stresses due to pressure changes. This can be in the form of capacitance changes, or dielectric arc-over, as well as low insulation resistance. Heat transfer can also be affected by altitude operation. Heat, generated in an operation, cannot be dissipated properly and can result in high RI2 losses and eventual failure.

### Radiation

Radiation capabilities of capacitors must be taken into consideration. Electrical degradation in the form of dielectric embitterment can take place causing shorts or opens.

## KEMET Electronics Corporation Sales Offices

For a complete list of our global sales offices, please visit [www.kemet.com/sales](http://www.kemet.com/sales).

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### Disclaimer

All product specifications, statements, information and data (collectively, the "Information") in this datasheet are subject to change. The customer is responsible for checking and verifying the extent to which the Information contained in this publication is applicable to an order at the time the order is placed.

All Information given herein is believed to be accurate and reliable, but it is presented without guarantee, warranty, or responsibility of any kind, expressed or implied.

Statements of suitability for certain applications are based on KEMET Electronics Corporation's ("KEMET") knowledge of typical operating conditions for such applications, but are not intended to constitute – and KEMET specifically disclaims – any warranty concerning suitability for a specific customer application or use. The 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 KEMET with reference to the use of KEMET's products is given gratis, and KEMET assumes no 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 (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.