

## Metallized Polypropylene Film Capacitor Related Document: IEC 60384-16



### MAIN APPLICATIONS

Oscillator, timing and LC/RC filter circuits, high frequency coupling/decoupling, sample and hold circuits.

### MARKING

Manufacturer's logo/type/C-value/rated voltage/tolerance/  
date of manufacture

### DIELECTRIC

Polypropylene film

### ELECTRODES

Vacuum deposited aluminum

### COATING

Flame retardant plastic case (UL-class 94 V-0), blue, epoxy resin sealed

### CONSTRUCTION

Extended metallized film (refer to general information)

### LEADS

Tinned wire

### IEC TEST CLASSIFICATION

55/100/56, according to IEC 60068

### OPERATING TEMPERATURE RANGE

-55°C to +100°C

### CAPACITANCE RANGE

0.01µF to 0.1µF

### CAPACITANCE DRIFT

Up to +40°C, < 0.5% for a period of two years

### DISSIPATION FACTOR TAN δ

| MEASURED AT    | C ≤ 0.1µF              |
|----------------|------------------------|
| 1kHz           | 0.4 x 10 <sup>-3</sup> |
| 10kHz          | 0.6 x 10 <sup>-3</sup> |
| 100kHz         | 4 x 10 <sup>-3</sup>   |
| Maximum values |                        |

### FEATURES

Product is completely lead (Pb)-free  
Product is RoHS-compliant



### CAPACITANCE TOLERANCES

± 10% (K), ± 5% (J), ± 2.5% (H), ± 1% (F)



### RATED VOLTAGES (U<sub>R</sub>)

160 VDC

**RoHS**  
COMPLIANT

### PERMISSIBLE AC VOLTAGES (RMS) UP TO 60HZ

100 VAC

### TEST VOLTAGE (ELECTRODE/ELECTRODE)

1.6 x U<sub>R</sub> for 2 s

### INSULATION RESISTANCE

Measured at 100 VDC after one minute  
100,000 MΩ minimum value

### TEMPERATURE COEFFICIENT

-250°C x 10<sup>-6</sup>/°C (typical value)

### MAXIMUM PULSE RISE TIME

dv/dt = 390 V/µs

If the maximum pulse voltage is less than the rated voltage, higher dv/dt values can be permitted.

### DERATING FOR DC AND AC CATEGORY VOLTAGE U<sub>C</sub>

At +85°C: U<sub>C</sub> = 1.0 U<sub>R</sub>

At +100°C: U<sub>C</sub> = 0.7 U<sub>R</sub>

### SELF INDUCTANCE

~ 6 nH measured with 2mm long leads

### PULL TEST ON LEADS

≥ 30 N in direction of leads according to IEC 60068-2-21

### DIELECTRIC ABSORPTION

0.05% (typical value) acc. to IEC 60384-1

### RELIABILITY

Operational life > 300,000 h

Failure rate < 5 FIT (40°C and 0.5 x U<sub>R</sub>)

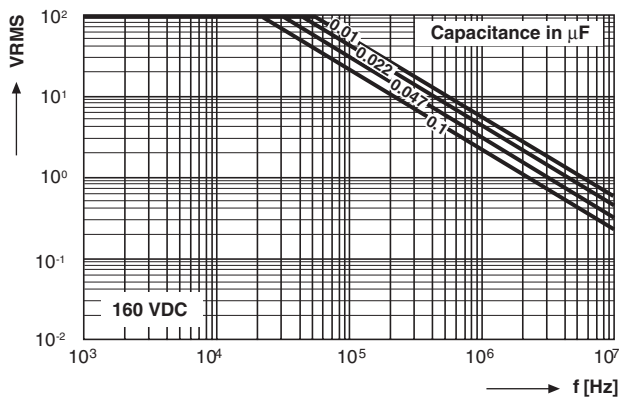
For further details, please refer to the general information available at [www.vishay.com/doc?26033](http://www.vishay.com/doc?26033).

| CAPACITANCE   | CAPACITANCE CODE | VOLTAGE CODE 16<br>160 VDC/100 VAC |      |     |
|---------------|------------------|------------------------------------|------|-----|
|               |                  | W                                  | H    | L   |
| 0.01 $\mu$ F  | - 310            | 5.5                                | 7.0  | 7.5 |
| 0.015 $\mu$ F | - 315            | 5.5                                | 7.0  | 7.5 |
| 0.022 $\mu$ F | - 322            | 5.5                                | 7.0  | 7.5 |
| 0.033 $\mu$ F | - 333            | 7.5                                | 9.0  | 7.5 |
| 0.047 $\mu$ F | - 347            | 7.5                                | 9.0  | 7.5 |
| 0.068 $\mu$ F | - 368            | 7.5                                | 9.0  | 7.5 |
| 0.1 $\mu$ F   | - 410            | 9.0                                | 11.0 | 7.5 |

Further C-values upon request

## RECOMMENDED PACKAGING

| LETTER CODE | TYPE OF PACKAGING | HEIGHT (H) (mm) | REEL DIAMETER (mm) | ORDERING CODE EXAMPLES | PCM 5 |
|-------------|-------------------|-----------------|--------------------|------------------------|-------|
| D           | AMMO              | 16.5            | S*                 | MKP 1837-322-162-D     | X     |
| G           | AMMO              | 18.5            | S*                 | MKP 1837-322-162-G     | X     |
| F           | REEL              | 16.5            | 350                | MKP 1837-322-162-F     | X     |
| W           | REEL              | 18.5            | 350                | MKP 1837-322-162-W     | X     |
| —           | BULK              | —               | —                  | MKP 1837-322-162       | X     |





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