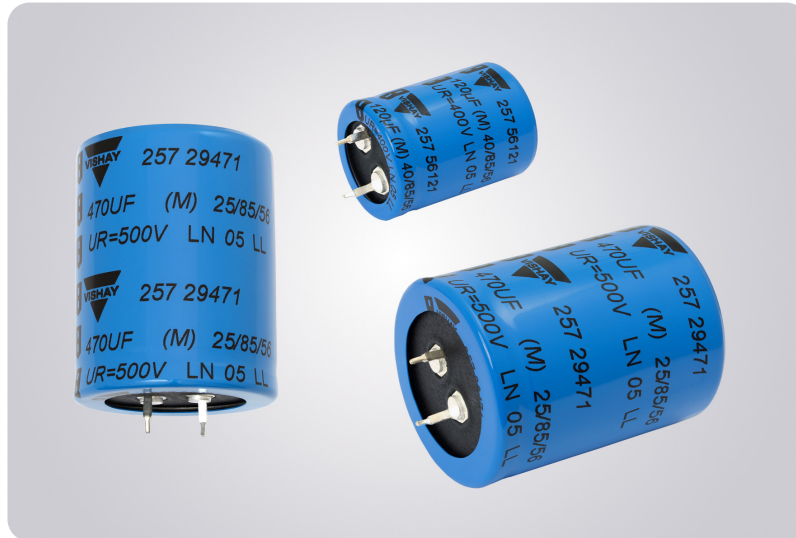


Aluminum Electrolytic Capacitors Power Ripple Miniature Snap-In



KEY BENEFITS

- 10 % to 20 % higher ripple current and longer life than 093 PMG-SI
- 500 V range for use in PFC or countries with unstable mains voltage
- 5000 h at 85 °C useful life allows for 10 years of 24 / 7 application life up to 50 °C

APPLICATIONS

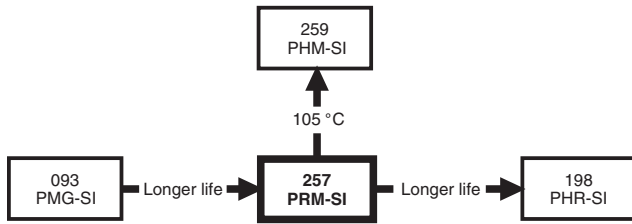
- Switched-mode power supplies in mains connected medical equipment, test and measurement instruments, and industrial control units
- Motor drives for internal transport, escalators, or outdoor applications
- Welding inverters for consumer use
- Audio amplifiers

RESOURCES

- Datasheet: 257 PRM-SI - www.vishay.com/ppg?28460
- For technical questions contact aluminumcaps2@vishay.com
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

ALUMINUM CAPACITORS

257 PRM-SI



ELECTRICAL DATA

| SYMBOL | DESCRIPTION |
|----------|--|
| C_R | Rated capacitance at 100 Hz |
| I_R | Rated RMS ripple current at 100 Hz, 85 °C |
| I_{L5} | Max. leakage current after 5 min at U_R |
| ESR | Typ. / max. equivalent series resistance at 100 Hz |
| Z | Typ. / max. impedance at 10 kHz |

Note

- Unless otherwise specified, all electrical values in Table 2 apply at $T_{amb} = 20\text{ °C}$, $P = 86\text{ kPa}$ to 106 kPa , $RH = 45\%$ to 75%

QUICK REFERENCE DATA

| DESCRIPTION | VALUE | |
|------------------------------------|-------------------------|------------------|
| Nominal case sizes (Ø D x L in mm) | 22 x 25 to 35 x 60 | |
| Rated capacitance range, C_R | 56 µF to 3300 µF | |
| Tolerance on C_R | ± 20 % | |
| Rated voltage range, U_R | 200 V to 450 V | 500 V |
| Category temperature range | -40 °C to +85 °C | -25 °C to +85 °C |
| Endurance test at 85 °C | 3000 h | |
| Useful life at 85 °C | 5000 h | |
| Shelf life at 0 V, 85 °C | 1000 h | |
| Based on sectional specification | IEC 60384-4 / EN 130300 | |
| Climatic category IEC 60038 | 40 / 85 / 56 | 25 / 85 / 56 |

ELECTRICAL DATA AND ORDERING INFORMATION (Selected Parts)

| U_R (V) | C_R 100 Hz (µF) | NOMINAL CASE SIZE Ø D x L (mm) | I_R 100 Hz (A) | I_{L5} (mA) | TYP. ESR 100 Hz (mΩ) | MAX. ESR 100 Hz (mΩ) | TYP. Z 10 kHz (mΩ) | MAX. Z 10 kHz (mΩ) | ORDERING CODE MAL2257..... | |
|--------------|-------------------------|---|------------------------|------------------|----------------------------|-------------------------------|--------------------------|--------------------------|-------------------------------|---------|
| | | | | | | | | | 2-TERM. | 3-TERM. |
| 200 | 330 | 22 x 25 | 1.51 | 0.66 | 308 | 440 | 217 | 310 | 52331E3 | 62331E3 |
| | 1000 | 25 x 45 | 3.11 | 2.00 | 112 | 160 | 77 | 110 | 42102E3 | 72102E3 |
| | 1500 | 35 x 35 | 3.22 | 3.00 | 98 | 140 | 77 | 110 | 22152E3 | 12152E3 |
| 250 | 220 | 22 x 25 | 1.32 | 0.55 | 378 | 540 | 252 | 360 | 53221E3 | 63221E3 |
| | 470 | 22 x 40 | 2.17 | 1.18 | 182 | 260 | 119 | 170 | 53471E3 | 63471E3 |
| | 1500 | 35 x 45 | 3.78 | 3.75 | 77 | 110 | 56 | 80 | 23152E3 | 13152E3 |
| 400 | 120 | 22 x 30 | 0.98 | 0.48 | 1036 | 1480 | 847 | 1210 | 56121E3 | 66121E3 |
| | 220 | 22 x 45 | 1.50 | 0.88 | 567 | 810 | 462 | 660 | 56221E3 | 66221E3 |
| | 220 | 25 x 35 | 1.42 | 0.88 | 574 | 820 | 469 | 670 | 46221E3 | 76221E3 |
| | 470 | 30 x 45 | 2.34 | 1.88 | 280 | 400 | 231 | 330 | 36471E3 | 86471E3 |
| | 820 | 35 x 50 | 3.18 | 3.28 | 175 | 250 | 147 | 210 | 26821E3 | 16821E3 |
| 450 | 100 | 22 x 30 | 0.90 | 0.45 | 1246 | 1780 | 1029 | 1470 | 57101E3 | 67101E3 |
| | 150 | 22 x 40 | 1.20 | 0.68 | 833 | 1190 | 686 | 980 | 57151E3 | 67151E3 |
| | 220 | 25 x 45 | 1.59 | 0.99 | 574 | 820 | 476 | 680 | 47221E3 | 77221E3 |
| | 220 | 35 x 25 | 1.52 | 0.99 | 623 | 890 | 525 | 750 | 27221E3 | 17221E3 |
| | 470 | 35 x 40 | 2.39 | 2.12 | 294 | 420 | 245 | 350 | 27471E3 | 17471E3 |
| | 680 | 35 x 55 | 3.13 | 3.06 | 203 | 290 | 168 | 240 | 27681E3 | 17681E3 |
| 500 | 100 | 22 x 35 | 0.97 | 0.50 | 1470 | 2100 | 1274 | 1820 | 59101E3 | 69101E3 |
| | 220 | 25 x 50 | 1.72 | 1.10 | 672 | 960 | 588 | 840 | 49221E3 | 79221E3 |
| | 390 | 30 x 50 | 2.34 | 1.95 | 392 | 560 | 343 | 490 | 39391E3 | 89391E3 |
| | 470 | 35 x 45 | 2.55 | 2.35 | 336 | 480 | 294 | 420 | 29471E3 | 19471E3 |
| | 560 | 35 x 50 | 2.85 | 2.80 | 287 | 410 | 252 | 360 | 29561E3 | 19561E3 |