

Type HES 105 °C High Energy Screw Terminal Aluminum Electrolytic

High Power Input Filtering, Screw Terminal Capacitors



Type HES screw terminal, aluminum electrolytic capacitors have excellent reliability and are ideal for high power input and charge-discharge applications for welders and strobe lights. The HES can be operated at 105 °C at full rated voltage

Highlights

- High reliability - 1000 hours at 105 °C
- Great for charge-discharge applications
- Ideal for high power input filter applications
- Operates at 105 °C at full rated voltage

RoHS Compliant

Specifications

| | |
|------------------------------------|---------------------|
| Capacitance Range: | 300 to 5,600 µF |
| Voltage Range: | 350 to 450 WVdc |
| Capacitance Tolerance: | -0% +50% |
| Operating Temperature: | -40 °C to +105 °C |
| Ripple Current Multipliers: | Ambient Temperature |

| +25 °C | +35 °C | +45 °C | +55 °C | +65 °C | +85 °C |
|--------|--------|--------|--------|--------|--------|
| 2.00 | 1.88 | 1.72 | 1.58 | 1.42 | 1.00 |

| Rated Voltage | Frequency / Ripple Multiplier | | | | |
|---------------|-------------------------------|--------|---------|---------|--------|
| | 120 Hz | 400 Hz | 1000 Hz | 2500 Hz | 10 kHz |
| 350 to 450 | 1.000 | 1.080 | 1.113 | 1.175 | 1.230 |

DC Leakage Current: $I \leq 3 \sqrt{CV}$ after 5 minutes
Not to exceed 4.0 mA
C = Capacitance in µF
V = Rated Voltage
I = Leakage current in mA

QA Stability Test: Life test:
1000 h @ +105 °C
Ripple Test:
2000 h, full load @ +85 °C
Shelf test:
500 h @ +105 °C

[Click here to see: Hardware & Mounting Options](#)

[Click here to see: Mechanical Details](#)

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Ratings

| Cap (μ F) | Catalog Part Number | Typical Max Ripple | | Dia. (Inches) | Length (Inches) |
|-----------------------------------|------------------------|-----------------------------------|-----------------------------|------------------|--------------------|
| | | Max ESR 120 Hz (Ω) | 120 Hz +85 °C (A) RMS | | |
| 350 WVdc (400 Vdc Surge) | | | | | |
| 600 | HES601G350V2C | 0.173 | 2.6 | 2.00 | 2.125 |
| 900 | HES901G350V5C | 0.110 | 4.6 | 2.00 | 5.125 |
| 1,100 | HES112G350V3C | 0.099 | 4.0 | 2.00 | 3.125 |
| 1,400 | HES142G350W5C | 0.080 | 6.2 | 2.50 | 5.125 |
| 1,600 | HES162G350V4C | 0.062 | 5.6 | 2.00 | 4.125 |
| 1,900 | HES192G350V4L | 0.053 | 6.4 | 2.00 | 4.625 |
| 2,500 | HES252G350W4C | 0.045 | 7.4 | 2.50 | 4.125 |
| 3,100 | HES312G350X3L | 0.040 | 8.6 | 3.00 | 3.625 |
| 3,400 | HES342G350W5C | 0.034 | 9.4 | 2.50 | 5.125 |
| 3,700 | HES372G350X4C | 0.034 | 9.8 | 3.00 | 4.125 |
| 4,400 | HES442G350X4L | 0.029 | 11.0 | 3.00 | 4.625 |
| 5,000 | HES502G350X5C | 0.026 | 12.1 | 3.00 | 5.125 |
| 5,600 | HES562G350X5L | 0.024 | 13.2 | 3.00 | 5.625 |
| 400 WVdc (450 Vdc Surge) | | | | | |
| 300 | HES301G400U3C | 0.275 | 2.2 | 1.75 | 3.125 |
| 500 | HES501G400V2C | 0.180 | 2.6 | 2.00 | 2.125 |
| 1,300 | HES132G400V4C | 0.066 | 5.4 | 2.00 | 4.125 |
| 2,000 | HES202G400V5L | 0.044 | 7.3 | 2.00 | 5.625 |
| 2,000 | HES202G400W4C | 0.048 | 7.3 | 2.50 | 4.125 |
| 2,100 | HES212G400X5L | 0.045 | 9.5 | 3.00 | 5.625 |
| 3,000 | HES302G400W5L | 0.033 | 9.9 | 2.50 | 5.625 |
| 3,500 | HES352G400X4L | 0.031 | 10.7 | 3.00 | 4.625 |
| 4,100 | HES412G400X5C | 0.027 | 11.9 | 3.00 | 5.125 |
| 4,600 | HES462G400X5L | 0.025 | 13.0 | 3.00 | 5.625 |

| Cap (μ F) | Catalog Part Number | Typical Max Ripple | | Dia. (Inches) | Length (Inches) |
|-----------------------------------|------------------------|-------------------------------|-----------------------------|------------------|--------------------|
| | | ESR 120 Hz (Ω) | 120 Hz +85 °C (A) RMS | | |
| 450 WVdc (525 Vdc Surge) | | | | | |
| 300 | HES301G450V3C | 0.268 | 2.4 | 2.00 | 3.125 |
| 400 | HES401G450V3L | 0.203 | 2.9 | 2.00 | 3.625 |
| 550 | HES551G450V4C | 0.150 | 3.6 | 2.00 | 4.125 |
| 700 | HES701G450V3C | 0.125 | 3.5 | 2.00 | 3.125 |
| 1,200 | HES122G450X4L | 0.069 | 7.1 | 3.00 | 4.625 |
| 1,500 | HES152G450X5L | 0.056 | 8.5 | 3.00 | 5.625 |
| 1,600 | HES162G450V5L | 0.053 | 6.9 | 2.00 | 5.625 |
| 1,700 | HES172G450W4C | 0.051 | 7.1 | 2.50 | 4.125 |
| 2,000 | HES202G450X5L | 0.041 | 9.7 | 3.00 | 5.625 |
| 2,200 | HES222G450X5L | 0.040 | 10.1 | 3.00 | 5.625 |
| 2,400 | HES242G450W5C | 0.038 | 9.0 | 2.50 | 5.125 |
| 2,700 | HES272G450W5L | 0.034 | 9.9 | 2.50 | 5.625 |
| 3,600 | HES362G450X5C | 0.028 | 11.7 | 3.00 | 5.125 |
| 4,000 | HES402G450X5L | 0.025 | 12.7 | 3.00 | 5.625 |

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