

Product Features

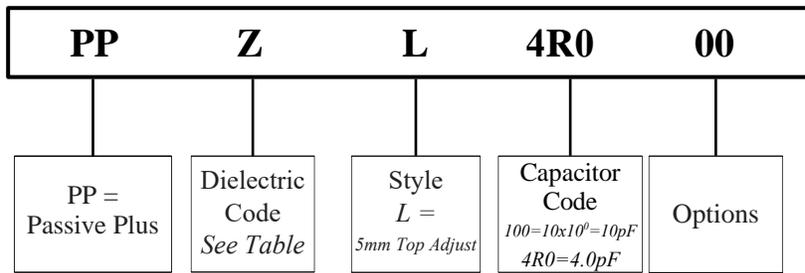
- Dielectrics:
Standard PTFE
Polyimide
- SMD and lead-through-hole mounting
- Top Mount models
- Wide capacitance ranges
- Low cost
- Linear capacitance change vs. rotation
- Compact size

Product Applications

- Typical Applications:**
- Antennas • Transmitters
 - RF Equipment
 - Test Equipment
- Modifications & Variations:**
- Special capacitance ranges
 - Special terminal sizes & shapes
 - Extended Adjust shafts
 - High temperature versions for PTFE
 - Silver and/or Gold Plating



Part Numbering



For special requests, please contact ☐☐ directly.

Dielectrics

| Dielectrics | |
|-------------|---|
| Code | Description |
| X | PTFE (Polytetrafluoroethylene) |
| Z | PC (Polycarbonate) or PI (Polyimide) |

Style

| Style | |
|-------|----------------|
| Code | Description |
| L | 5mm Top Adjust |

Capacitance

| Capacitance Code |
|------------------|
| 2R0 = 2.0pF |
| 270 = 27pF |

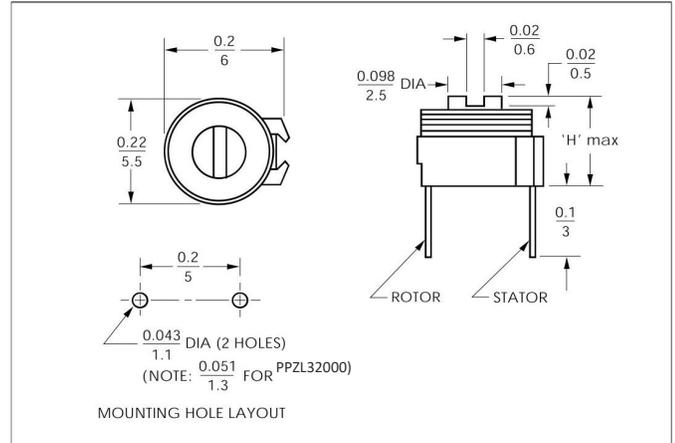
Special Options

| Special Options (Top Adjust Models) | |
|--|-------------|
| Code | Description |
| 00 | Standard |



Electrical Specifications

| | |
|---------------------------------|---|
| Dielectrics | <ul style="list-style-type: none"> • High Temperature PTFE • Polyimide (PI) |
| Voltage Rating | 150 VDC |
| Dielectric Withstanding Voltage | 300 VDC |
| Contact Resistance | ≤0.010mΩ |
| Insulation Resistance | ≥10.000MΩ |
| Rotation Torque | C _{max} <20pF 0.10...1.5Ncm C _{max} >20pF 0.15...2.5Ncm |



All dimensions are in/mm.



General Specifications

| Dielectric | Capacitance (pF) | | Q min (1MHz) | TCC (ppm/°C) | Operating Temperature (°C) | H max in/mm | Color Code | Model Number |
|------------|------------------|-----|--------------|--------------|----------------------------|-------------|------------|--------------|
| | min | max | | | | | | |
| PTFE* | 0.8 | 3.0 | | -100±250 | | 0.20/5.0 | Brown | PPXL3R000 |
| | 0.9 | 4.0 | | -100±250 | | 0.20/5.0 | Brown | PPXL4R000 |
| | 1.0 | 5.0 | | -100±250 | | 0.20/5.0 | Brown | PPXL5R000 |
| | 1.3 | 8.0 | 1500 | -100±200 | -40 to +125 | 0.23/5.8 | Black | PPXL8R000 |
| | 1.8 | 10 | | -100±200 | | 0.23/5.8 | Black | PPXL10000 |
| | 2.0 | 15 | | -100±200 | | 0.24/6.0 | White | PPXL15000 |
| | 2.3 | 18 | | -100±200 | | 0.24/6.0 | Green | PPXL18000 |
| PI | 1.0 | 5.0 | 300 | | | 0.20/5.0 | Brown | PPZL5R000 |
| | 1.2 | 8.0 | 300 | | | 0.20/5.0 | Brown | PPZL8R000 |
| | 1.3 | 10 | 300 | | | 0.20/5.0 | Black | PPZL10000 |
| | 2.0 | 15 | 300 | -100±250 | -40 to +85 | 0.23/5.8 | White | PPZL15000 |
| | 2.7 | 20 | 300 | | | 0.23/5.8 | Green | PPZL20000 |
| | 2.8 | 25 | 300 | | | 0.23/5.8 | Green | PPZL25000 |
| | 3.6 | 32 | 150 | | | 0.25/6.3 | None | PPZL32000 |

*High Temperature PTFE available upon request



Production Qualification

- FilmTrim Capacitors are in accordance with DIN IEC 418-1 and 4-former DIN 44261 part 3.
- Testing methods for manufacturing quality are in accordance with MIL-STD-105D and IEC410 (former DIN44260).
- Solderability or heat resistance for the FilmTrim Capacitors comply with DIN IEC 68-2-20 part 2, Test Ta and Tb.
- Each FilmTrim Capacitor is tested for minimum and maximum capacitance value and is also subjected to full test voltage.

⚡ Specifications Notes

- 1 Parts are 100% tested for capacitance range and dielectric withstanding voltage.
- 2 Capacitance range specified is that which is guaranteed and is measured at 1 MHz at room temperature.
- 3 Q factor is measured at maximum rated capacitance and at room temperature.
- 4 Dielectric strength is measured at maximum rated capacitance and room temperature, with test voltage (as listed for each model) applied for 60 seconds.
- 5 Insulation resistance is measured at maximum rated capacitance and room temperature and at rated voltage, unless otherwise specified.
- 6 Temperature coefficient of capacitance (TCC) is measured at 1 MHz over the operating temperature range, with capacitor set at maximum rated capacitance.
- 7 Axial load during tuning should not exceed 200 grams force. At maximum axial load, capacitance change is no more than 15%.
- 8 Capacitors should not be operated outside of rated capacitance range and working voltage.

⚡ Soldering FilmTrim Capacitors

Dip soldering:

260°C ± 10°C for 7 seconds maximum.

Hand Soldering

(for lead-through-hole models):

Tip temperature 350°C ± 10°C for 3 to 4 seconds



⚡ Cleaning FilmTrim Capacitors

- Water soluble fluxes and detergents with a
- 1 water flush after soldering of the boards can be used for all parts.

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- Do not immerse FilmTrim models in chlorinated or fluorinated hydrocarbon solvents as this would adversely affect the plastic dielectrics and base materials. Some customers have successfully used X
- 2 models in scrubbers or sprayers where only bottom of the printed circuit boards is exposed to solvents.

If the process requires immersion in solvents for cleaning boards, the FilmTrim capacitors should be hand soldered to board after the boards have been cleaned.