

# Type 150 Axial Leaded Metallized Polyester Flame Retardant Wrap and Fill Axial Leaded Capacitors



The Type 150 series axial lead metallized polyester non inductive capacitors are available in bulk or on tape and reel for automatic insertion. Type 150 is a general purpose capacitor for use in blocking, bypass, decoupling, smoothing and some timing applications.

## Highlights

- Available on tape and reel or bulk
- Epoxy end fill meets UL94V-0
- Non inductively wound
- Flame retardant outer wrap meets UL510
- Non polar

## Specifications

|                                      |                                                                                                  |
|--------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>Capacitance Range:</b>            | 0.001 $\mu$ F to 10.0 $\mu$ F                                                                    |
| <b>Voltage Range:</b>                | 63 to 1000 Vdc                                                                                   |
| <b>Capacitance Tolerance:</b>        | $\pm$ 5%, $\pm$ 10%, $\pm$ 20%                                                                   |
| <b>Operating Temperature Range:</b>  | -55 $^{\circ}$ C to +125 $^{\circ}$ C (derate linearly to 50% rated voltage at 125 $^{\circ}$ C) |
| <b>Dielectric Withstand Voltage:</b> | 1.6 x rated voltage for 2 s @ +25 $^{\circ}$ C $\pm$ 5 $^{\circ}$ C                              |
| <b>Dissipation Factor (DF):</b>      | $\text{tg}\delta \times 10^{-4}$ at +25 $^{\circ}$ C $\pm$ 5 $^{\circ}$ C                        |

| kHz | C $\leq$ 0.1 $\mu$ F | 0.1 $\mu$ F < C $\leq$ 1 $\mu$ F | C > 1 $\mu$ F |
|-----|----------------------|----------------------------------|---------------|
| 1   | 80                   | 80                               | 100           |
| 10  | 150                  | 150                              | —             |
| 100 | 250                  | —                                | —             |

|                                                                     |                                                          |
|---------------------------------------------------------------------|----------------------------------------------------------|
| <b>Insulation Resistance:</b>                                       | 10,000 M $\Omega$ x $\mu$ F, 30,000 M $\Omega$ Min.      |
| <b>Self Inductance:</b>                                             | 1 nH max. per 1 mm lead and body length                  |
| <b>Life Test:</b>                                                   | 1000 hrs @ 85 $^{\circ}$ C 1.25 x Vn                     |
| <b>Damp Heat Test:</b>                                              | 95% RH @ +45 $^{\circ}$ C for 21 days                    |
| <b>Soldering:</b>                                                   | 260 $^{\circ}$ C $\pm$ 5 $^{\circ}$ C for 10 s $\pm$ 1 s |
| <b>Long Term Storage Stability:</b>                                 | $\Delta$ C/C $\leq$ $\pm$ 3% after 2 years               |
| <b>Maximum Pulse Rise Time dv/dt and Pulse Characteristic (Wo):</b> |                                                          |

| V/n     | L Max  |           |             |           | dV/dt (V/ $\mu$ sec)<br>Wo (V <sup>2</sup> / $\mu$ sec) |
|---------|--------|-----------|-------------|-----------|---------------------------------------------------------|
|         | 16.5   | 19 - 20.5 | 26.5 - 5.28 | 31.5 - 33 |                                                         |
| 50 - 63 | 4      | 2         | 1.5         | 1         |                                                         |
|         | 504    | 252       | 189         | 126       |                                                         |
| 100     | 5      | 3         | 2           | 1         |                                                         |
|         | 1,000  | 600       | 400         | 300       |                                                         |
| 250     | 10     | 7         | 4           | 2.5       |                                                         |
|         | 5,000  | 3,500     | 2,000       | 1,250     |                                                         |
| 400     | 13.5   | 10        | 6.5         | 4         |                                                         |
|         | 10,800 | 8,000     | 5,200       | 3,200     |                                                         |
| 630     | 20     | 15        | 10          | 6         |                                                         |
|         | 25,200 | 18,900    | 12,600      | 7,500     |                                                         |



Complies with the EU Directive 2002/95/EC requirement restricting the use of Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr(VI)), PolyBrominated Biphenyls (PBB) and PolyBrominated Diphenyl Ethers (PBDE).

# Type 150 Axial Leaded Metallized Polyester

## Tape and Reel Specifications

## Outline Drawing

| L Max<br>(Body Lengthy) |           | Lead Spacing |      | Distance Between<br>Reel Flanges |    | Class |
|-------------------------|-----------|--------------|------|----------------------------------|----|-------|
| Inches                  | mm        | Inches       | mm   | Inches                           | mm |       |
| ≤.433                   | ≤11       | 2.06         | 52.4 | 3                                | 75 | 1     |
| .551 - .808             | 14 - 20.5 | 2.5          | 63.6 | 3.4                              | 86 | 2     |
| ≥1.03                   | ≥26       | 2.87         | 73   | 3.7                              | 95 | 3     |

^Add class number (1, 2, or 3) to catalog number to indicate tape and reel

| Diameter       |              | Quantity per Reel |
|----------------|--------------|-------------------|
| Inches         | mm           |                   |
| 0.197          | 5            | 3,000             |
| .236 thru .256 | 6.0 thru 6.5 | 1,200             |
| 0.276          | 7            | 1,100             |
| .315 thru .346 | 8 thru 8.5   | 800               |
| .354 thru .413 | 9 thru 10.5  | 500               |
| .433 thru .512 | 11 thru 13   | 300               |
| .551 thru .571 | 14 thru 14.5 | 200               |
| >.571          | >14.5        | Not available     |



## Ratings

| Catalog<br>Part Number | Cap<br>(µF) | Inches Max |       |       | Millimeters Max |      |     |
|------------------------|-------------|------------|-------|-------|-----------------|------|-----|
|                        |             | D          | L     | Ød    | D               | L    | Ød  |
| <b>63 Vdc</b>          |             |            |       |       |                 |      |     |
| 150154*63AA^           | 0.150       | 0.197      | 0.433 | 0.024 | 5.0             | 11.0 | 0.6 |
| 150154*63BB^           | 0.150       | 0.236      | 0.650 | 0.024 | 6.0             | 16.5 | 0.6 |
| 150184*63AA^           | 0.180       | 0.197      | 0.433 | 0.024 | 5.0             | 11.0 | 0.6 |
| 150184*63BB^           | 0.180       | 0.236      | 0.650 | 0.024 | 6.0             | 16.5 | 0.6 |
| 150224*63BB^           | 0.220       | 0.236      | 0.650 | 0.024 | 6.0             | 16.5 | 0.6 |
| 150274*63BB^           | 0.270       | 0.236      | 0.650 | 0.024 | 6.0             | 16.5 | 0.6 |
| 150334*63BB^           | 0.330       | 0.236      | 0.650 | 0.024 | 6.0             | 16.5 | 0.6 |
| 150394*63CB^           | 0.390       | 0.256      | 0.650 | 0.024 | 6.5             | 16.5 | 0.6 |
| 150474*63DB^           | 0.470       | 0.276      | 0.650 | 0.024 | 7.0             | 16.5 | 0.6 |
| 150564*63DB^           | 0.560       | 0.276      | 0.650 | 0.024 | 7.0             | 16.5 | 0.6 |
| 150684*63DC^           | 0.680       | 0.276      | 0.807 | 0.024 | 7.0             | 20.5 | 0.6 |
| 150824*63EC^           | 0.820       | 0.315      | 0.807 | 0.031 | 8.0             | 20.5 | 0.8 |
| 150105*63EC^           | 1.000       | 0.315      | 0.807 | 0.031 | 8.0             | 20.5 | 0.8 |
| 150155*63HC^           | 1.500       | 0.374      | 0.807 | 0.031 | 9.5             | 20.5 | 0.8 |
| 150225*63HE^           | 2.200       | 0.374      | 1.102 | 0.031 | 9.5             | 28.0 | 0.8 |
| 150335*63KE^           | 3.300       | 0.433      | 1.102 | 0.031 | 11.0            | 28.0 | 0.8 |
| 150475*63ME^           | 4.700       | 0.492      | 1.102 | 0.031 | 12.5            | 28.0 | 0.8 |
| 150685*63QF^           | 6.800       | 0.571      | 1.299 | 0.031 | 14.5            | 33.0 | 0.8 |
| 150106*63TF^           | 10.000      | 0.610      | 1.299 | 0.031 | 15.5            | 33.0 | 0.8 |
| <b>100 Vdc</b>         |             |            |       |       |                 |      |     |
| 150683*100AA^          | 0.068       | 0.197      | 0.433 | 0.024 | 5.0             | 11.0 | 0.6 |
| 150683*100BB^          | 0.068       | 0.236      | 0.650 | 0.024 | 6.0             | 16.5 | 0.6 |
| 150823*100AA^          | 0.082       | 0.197      | 0.433 | 0.024 | 5.0             | 11.0 | 0.6 |
| 150823*100BB^          | 0.082       | 0.236      | 0.650 | 0.024 | 6.0             | 16.5 | 0.6 |
| 150104*100AA^          | 0.100       | 0.197      | 0.433 | 0.024 | 5.0             | 11.0 | 0.6 |
| 150104*100BB^          | 0.100       | 0.236      | 0.650 | 0.024 | 6.0             | 16.5 | 0.6 |
| 150124*100BB^          | 0.120       | 0.236      | 0.650 | 0.024 | 6.0             | 16.5 | 0.6 |
| 150154*100BB^          | 0.150       | 0.236      | 0.650 | 0.024 | 6.0             | 16.5 | 0.6 |
| 150184*100CB^          | 0.180       | 0.256      | 0.650 | 0.024 | 6.5             | 16.5 | 0.6 |
| 150224*100CB^          | 0.220       | 0.256      | 0.650 | 0.024 | 6.5             | 16.5 | 0.6 |

| Catalog<br>Part Number | Cap<br>(µF) | Inches Max |       |       | Millimeters Max |      |     |
|------------------------|-------------|------------|-------|-------|-----------------|------|-----|
|                        |             | D          | L     | Ød    | D               | L    | Ød  |
| 150274*100CB^          | 0.270       | 0.256      | 0.650 | 0.024 | 6.5             | 16.5 | 0.6 |
| 150334*100EB^          | 0.330       | 0.315      | 0.650 | 0.031 | 8.0             | 16.5 | 0.8 |
| 150394*100EB^          | 0.390       | 0.315      | 0.650 | 0.031 | 8.0             | 16.5 | 0.8 |
| 150474*100DC^          | 0.470       | 0.276      | 0.807 | 0.031 | 7.0             | 20.5 | 0.8 |
| 150564*100EC^          | 0.560       | 0.315      | 0.807 | 0.031 | 8.0             | 20.5 | 0.8 |
| 150684*100FC^          | 0.680       | 0.335      | 0.807 | 0.031 | 8.5             | 20.5 | 0.8 |
| 150824*100HC^          | 0.820       | 0.374      | 0.807 | 0.031 | 9.5             | 20.5 | 0.8 |
| 150105*100IC^          | 1.000       | 0.394      | 0.807 | 0.031 | 10.0            | 20.5 | 0.8 |
| <b>100 Vdc</b>         |             |            |       |       |                 |      |     |
| 150155*100IE^          | 1.500       | 0.394      | 1.102 | 0.031 | 10.0            | 28.0 | 0.8 |
| 150225*100LE^          | 2.200       | 0.453      | 1.102 | 0.031 | 11.5            | 28.0 | 0.8 |
| 150335*100PE^          | 3.300       | 0.531      | 1.102 | 0.031 | 13.5            | 28.0 | 0.8 |
| 150475*100RF^          | 4.700       | 0.591      | 1.299 | 0.031 | 15.0            | 33.0 | 0.8 |
| 150685*100WF^          | 6.800       | 0.689      | 1.299 | 0.031 | 17.5            | 33.0 | 0.8 |
| 150106*100YF^          | 10.000      | 0.807      | 1.299 | 0.031 | 20.5            | 33.0 | 0.8 |
| <b>250 Vdc</b>         |             |            |       |       |                 |      |     |
| 150123*250AA^          | 0.012       | 0.197      | 0.433 | 0.024 | 5.0             | 11.0 | 0.6 |
| 150123*250BB^          | 0.012       | 0.236      | 0.650 | 0.024 | 6.0             | 16.5 | 0.6 |
| 150153*250AA^          | 0.015       | 0.197      | 0.433 | 0.024 | 5.0             | 11.0 | 0.6 |
| 150153*250BB^          | 0.015       | 0.236      | 0.650 | 0.024 | 6.0             | 16.5 | 0.6 |
| 150183*250AA^          | 0.018       | 0.197      | 0.433 | 0.024 | 5.0             | 11.0 | 0.6 |
| 150183*250BB^          | 0.018       | 0.236      | 0.650 | 0.024 | 6.0             | 16.5 | 0.6 |
| 150223*250AA^          | 0.022       | 0.197      | 0.433 | 0.024 | 5.0             | 11.0 | 0.6 |
| 150223*250BB^          | 0.022       | 0.236      | 0.650 | 0.024 | 6.0             | 16.5 | 0.6 |
| 150273*250AA^          | 0.027       | 0.197      | 0.433 | 0.024 | 5.0             | 11.0 | 0.6 |
| 150273*250BB^          | 0.027       | 0.236      | 0.650 | 0.024 | 6.0             | 16.5 | 0.6 |

\* Indicates capacitance tolerance

^If ordering tape and reel,

J = ±5%, K = ±10%, M = ±20%

insert 1, 2, or 3.

See tape & reel specifications to determine which class applies.

Part Number highlighted in yellow, available until stock is depleted.

Replacement part number with "BB" case size.



# Type 150 Axial Leaded Metallized Polyester

| Catalog<br>Part Number    | Cap<br>( $\mu$ F) | Inches Max |       |                 | Millimeters Max |      |                 |
|---------------------------|-------------------|------------|-------|-----------------|-----------------|------|-----------------|
|                           |                   | D          | L     | $\varnothing$ d | D               | L    | $\varnothing$ d |
| <b>630 Vdc</b>            |                   |            |       |                 |                 |      |                 |
| 150682*630AA <sup>^</sup> | 0.0068            | 0.197      | 0.433 | 0.024           | 5.5             | 11.0 | 0.6             |
| 150682*630BB <sup>^</sup> | 0.0068            | 0.236      | 0.650 | 0.024           | 6.0             | 16.5 | 0.6             |
| 150822*630BB <sup>^</sup> | 0.0082            | 0.236      | 0.650 | 0.024           | 6.0             | 16.5 | 0.6             |
| 150103*630BB <sup>^</sup> | 0.0100            | 0.236      | 0.650 | 0.024           | 6.0             | 16.5 | 0.6             |
| 150123*630BB <sup>^</sup> | 0.0120            | 0.236      | 0.650 | 0.024           | 6.0             | 16.5 | 0.6             |
| 150153*630BB <sup>^</sup> | 0.0150            | 0.236      | 0.650 | 0.024           | 6.0             | 16.5 | 0.6             |
| 150183*630CB <sup>^</sup> | 0.0180            | 0.256      | 0.650 | 0.024           | 6.5             | 16.5 | 0.6             |
| 150223*630DB <sup>^</sup> | 0.0220            | 0.276      | 0.650 | 0.024           | 7.0             | 16.5 | 0.6             |
| 150273*630CC <sup>^</sup> | 0.0270            | 0.256      | 0.807 | 0.024           | 6.5             | 20.5 | 0.6             |
| 150333*630EC <sup>^</sup> | 0.0330            | 0.315      | 0.807 | 0.031           | 8.0             | 20.5 | 0.8             |
| 150393*630EC <sup>^</sup> | 0.0390            | 0.315      | 0.807 | 0.031           | 8.0             | 20.5 | 0.8             |
| 150473*630EC <sup>^</sup> | 0.0470            | 0.315      | 0.807 | 0.031           | 8.0             | 20.5 | 0.8             |
| 150563*630FC <sup>^</sup> | 0.0560            | 0.335      | 0.807 | 0.031           | 8.5             | 20.5 | 0.8             |
| 150683*630GC <sup>^</sup> | 0.0680            | 0.354      | 0.807 | 0.031           | 9.0             | 20.5 | 0.8             |
| 150823*630HC <sup>^</sup> | 0.0820            | 0.374      | 0.807 | 0.031           | 9.5             | 20.5 | 0.8             |
| 150104*630FE <sup>^</sup> | 0.1000            | 0.335      | 1.102 | 0.031           | 8.5             | 28.0 | 0.8             |
| 150124*630GE <sup>^</sup> | 0.1200            | 0.354      | 1.102 | 0.031           | 9.0             | 28.0 | 0.8             |
| 150154*630IE <sup>^</sup> | 0.1500            | 0.394      | 1.102 | 0.031           | 10.0            | 28.0 | 0.8             |
| 150184*630JE <sup>^</sup> | 0.1800            | 0.413      | 1.102 | 0.031           | 10.5            | 28.0 | 0.8             |
| 150224*630LE <sup>^</sup> | 0.2200            | 0.453      | 1.102 | 0.031           | 11.5            | 28.0 | 0.8             |
| 150274*630ME <sup>^</sup> | 0.2700            | 0.492      | 1.102 | 0.031           | 12.5            | 28.0 | 0.8             |
| 150334*630NF <sup>^</sup> | 0.3300            | 0.512      | 1.299 | 0.031           | 13.0            | 33.0 | 0.8             |
| 150394*630QF <sup>^</sup> | 0.3900            | 0.571      | 1.299 | 0.031           | 14.5            | 33.0 | 0.8             |
| 150474*630RF <sup>^</sup> | 0.4700            | 0.591      | 1.299 | 0.031           | 15.0            | 33.0 | 0.8             |
| 150564*630TF <sup>^</sup> | 0.5600            | 0.610      | 1.299 | 0.031           | 15.5            | 33.0 | 0.8             |
| 150684*630WF <sup>^</sup> | 0.6800            | 0.689      | 1.299 | 0.031           | 17.5            | 33.0 | 0.8             |
| 150824*630XF <sup>^</sup> | 0.8200            | 0.728      | 1.299 | 0.031           | 18.5            | 33.0 | 0.8             |
| 150105*630YF <sup>^</sup> | 1.0000            | 0.807      | 1.299 | 0.031           | 20.5            | 33.0 | 0.8             |

| Catalog<br>Part Number     | Cap<br>( $\mu$ F) | Inches Max |       |                 | Millimeters Max |      |                 |
|----------------------------|-------------------|------------|-------|-----------------|-----------------|------|-----------------|
|                            |                   | D          | L     | $\varnothing$ d | D               | L    | $\varnothing$ d |
| <b>1000 Vdc</b>            |                   |            |       |                 |                 |      |                 |
| 150102*1000CB <sup>^</sup> | 0.0010            | 0.256      | 0.650 | 0.031           | 6.5             | 16.5 | 0.6             |
| 150152*1000CB <sup>^</sup> | 0.0015            | 0.256      | 0.650 | 0.031           | 6.5             | 16.5 | 0.6             |
| 150222*1000CB <sup>^</sup> | 0.0022            | 0.256      | 0.650 | 0.031           | 6.5             | 16.5 | 0.6             |
| 150332*1000CB <sup>^</sup> | 0.0033            | 0.256      | 0.650 | 0.031           | 6.5             | 16.5 | 0.6             |
| 150472*1000DB <sup>^</sup> | 0.0047            | 0.276      | 0.650 | 0.031           | 7.0             | 16.5 | 0.6             |
| 150682*1000EB <sup>^</sup> | 0.0068            | 0.315      | 0.650 | 0.031           | 8.0             | 16.5 | 0.8             |
| 150103*1000DC <sup>^</sup> | 0.0100            | 0.276      | 0.807 | 0.031           | 7.0             | 20.5 | 0.6             |
| 150153*1000FC <sup>^</sup> | 0.0150            | 0.335      | 0.807 | 0.031           | 8.5             | 20.5 | 0.8             |
| 150223*1000HC <sup>^</sup> | 0.0220            | 0.374      | 0.807 | 0.031           | 9.5             | 20.5 | 0.8             |
| 150333*1000FE <sup>^</sup> | 0.0330            | 0.335      | 1.102 | 0.031           | 8.5             | 28.0 | 0.8             |
| 150473*1000HE <sup>^</sup> | 0.0470            | 0.374      | 1.102 | 0.031           | 9.5             | 28.0 | 0.8             |
| 150683*1000KE <sup>^</sup> | 0.0680            | 0.433      | 1.102 | 0.031           | 11.0            | 28.0 | 0.8             |
| 150104*1000NE <sup>^</sup> | 0.1000            | 0.512      | 1.102 | 0.031           | 13.0            | 28.0 | 0.8             |
| 150154*1000OF <sup>^</sup> | 0.1500            | 0.551      | 1.299 | 0.031           | 14.0            | 33.0 | 0.8             |
| 150224*1000WF <sup>^</sup> | 0.2200            | 0.689      | 1.299 | 0.031           | 17.5            | 33.0 | 0.8             |
| 150334*1000YF <sup>^</sup> | 0.3300            | 0.807      | 1.299 | 0.031           | 20.5            | 33.0 | 0.8             |
| 150474*1000ZF <sup>^</sup> | 0.4700            | 0.945      | 1.299 | 0.031           | 24.0            | 33.0 | 0.8             |

\* Indicates capacitance tolerance <sup>^</sup>If ordering tape and reel,  
insert 1, 2, or 3.  
**J =  $\pm$ 5%, K =  $\pm$ 10%, M =  $\pm$ 20%**

See tape & reel specifications to determine which class applies.  
*Part Number highlighted in yellow, available until stock is depleted.*  
*Replacement part number with "BB" case size.*

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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