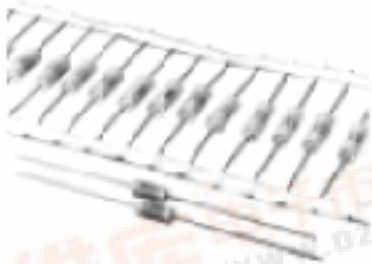


**Flame Retardant Wrap and Fill Axial Leaded Capacitors**



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**

**Capacitance Range:** 0.001  $\mu$ F to 10.0  $\mu$ F  
**Voltage Range:** 63 to 1000 Vdc (40 to 250 Vac @ 60 Hz)  
**Capacitance Tolerance:**  $\pm$ 5%,  $\pm$ 10%,  $\pm$ 20%  
**Operating Temperature Range:** -55  $^{\circ}$ C to +125  $^{\circ}$ C (derate linearly to 50% rated voltage at 125  $^{\circ}$ C)  
**Dielectric Withstand Voltage:** 1.6 x rated voltage for 2 s @ +25  $^{\circ}$ C  $\pm$ 5  $^{\circ}$ C  
**Dissipation Factor (DF):**  $\text{tg}\delta \times 10^{-4}$  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	—	—

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

V/n	L Max				dv/dt (V/ $\mu$ sec) 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

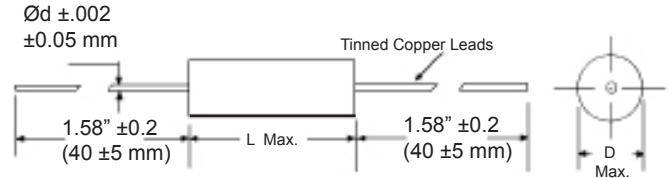
## Tape and Reel Specifications

## Outline Drawing

L Max (Body Length)		Lead Spacing		Distance Between 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 Part Number	Cap ( $\mu\text{F}$ )	Inches Max			Millimeters Max		
		D	L	$\text{Ød}$	D	L	$\text{Ød}$
<b>63 Vdc/40 Vac</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/63 Vac</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 Part Number	Cap ( $\mu\text{F}$ )	Inches Max			Millimeters Max		
		D	L	$\text{Ød}$	D	L	$\text{Ød}$
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/63 Vac</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/160 Vac</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 =  $\pm 5\%$ , K =  $\pm 10\%$ , M =  $\pm 20\%$  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 Part Number	Cap (µF)	Inches Max			Millimeters Max		
		D	L	Ød	D	L	Ød
<b>250 Vdc/160 Vac</b>							
150333*250AA <sup>^</sup>	0.0330	0.197	0.433	0.024	5.0	11.0	0.6
150333*250BB <sup>^</sup>	0.0330	0.236	0.650	0.024	6.0	16.5	0.6
150393*250AA <sup>^</sup>	0.0390	0.197	0.433	0.024	5.0	11.0	0.6
150393*250BB <sup>^</sup>	0.0390	0.236	0.650	0.024	6.0	16.5	0.6
150473*250AA <sup>^</sup>	0.0470	0.197	0.433	0.024	5.0	11.0	0.6
150473*250BB <sup>^</sup>	0.0470	0.236	0.650	0.024	6.0	16.5	0.6
150563*250AA <sup>^</sup>	0.0560	0.197	0.433	0.024	5.0	11.0	0.6
150563*250BB <sup>^</sup>	0.0560	0.236	0.650	0.024	6.0	16.5	0.6
150683*250BB <sup>^</sup>	0.0680	0.236	0.650	0.024	6.0	16.5	0.6
150823*250BB <sup>^</sup>	0.0820	0.236	0.650	0.024	6.0	16.5	0.6
150104*250CB <sup>^</sup>	0.1000	0.256	0.650	0.024	6.5	16.5	0.6
150124*250DB <sup>^</sup>	0.1200	0.276	0.650	0.024	7.0	16.5	0.6
150154*250EB <sup>^</sup>	0.1500	0.315	0.650	0.031	8.0	16.5	0.8
150184*250EB <sup>^</sup>	0.1800	0.315	0.650	0.031	8.0	16.5	0.8
150224*250FB <sup>^</sup>	0.2200	0.335	0.650	0.031	8.5	16.5	0.8
150274*250EC <sup>^</sup>	0.2700	0.315	0.807	0.031	8.0	20.5	0.8
150334*250FC <sup>^</sup>	0.3300	0.335	0.807	0.031	8.5	20.5	0.8
150394*250GC <sup>^</sup>	0.3900	0.354	0.807	0.031	9.0	20.5	0.8
150474*250HC <sup>^</sup>	0.4700	0.374	0.807	0.031	9.5	20.5	0.8
150564*250IC <sup>^</sup>	0.5600	0.394	0.807	0.031	10.0	20.5	0.8
150684*250GE <sup>^</sup>	0.6800	0.354	1.102	0.031	9.0	28.0	0.8
150824*250HE <sup>^</sup>	0.8200	0.374	1.102	0.031	9.5	28.0	0.8
150105*250JE <sup>^</sup>	1.0000	0.413	1.102	0.031	10.5	28.0	0.8
150155*250ME <sup>^</sup>	1.5000	0.492	1.102	0.031	12.5	28.0	0.8
150225*250PF <sup>^</sup>	2.2000	0.531	1.299	0.031	13.5	33.0	0.8
150335*250TF <sup>^</sup>	3.3000	0.610	1.299	0.031	15.5	33.0	0.8
150475*250XF <sup>^</sup>	4.7000	0.728	1.299	0.031	18.5	33.0	0.8
150685*250ZF <sup>^</sup>	6.8000	0.845	1.299	0.031	21.5	33.0	0.8
<b>400 Vdc/200 Vac</b>							
150822*400AA <sup>^</sup>	0.0082	0.197	0.433	0.024	5.0	11.0	0.6
150822*400BB <sup>^</sup>	0.0082	0.236	0.650	0.024	6.0	16.5	0.6
150103*400AA <sup>^</sup>	0.0100	0.197	0.433	0.024	5.0	11.0	0.6
150103*400BB <sup>^</sup>	0.0100	0.236	0.650	0.024	6.0	16.5	0.6
150123*400AA <sup>^</sup>	0.0120	0.197	0.433	0.024	5.0	11.0	0.6
150123*400BB <sup>^</sup>	0.0120	0.236	0.650	0.024	6.0	16.5	0.6
150153*400BB <sup>^</sup>	0.0150	0.236	0.650	0.024	6.0	16.5	0.6
150183*400BB <sup>^</sup>	0.0180	0.236	0.650	0.024	6.0	16.5	0.6
150223*400BB <sup>^</sup>	0.0220	0.236	0.650	0.024	6.0	16.5	0.6
150273*400BB <sup>^</sup>	0.0270	0.236	0.650	0.024	6.0	16.5	0.6
150333*400BB <sup>^</sup>	0.0330	0.236	0.650	0.024	6.0	16.5	0.6
150393*400CB <sup>^</sup>	0.0390	0.256	0.650	0.024	6.5	16.5	0.6
150473*400DB <sup>^</sup>	0.0470	0.276	0.650	0.024	7.0	16.5	0.6
150563*400EB <sup>^</sup>	0.0560	0.315	0.650	0.024	8.0	16.5	0.6

Catalog Part Number	Cap (µF)	Inches Max			Millimeters Max		
		D	L	Ød	D	L	Ød
150683*400DC <sup>^</sup>	0.0680	0.276	0.807	0.024	7.0	20.5	0.6
150823*400EC <sup>^</sup>	0.0820	0.315	0.807	0.031	8.0	20.5	0.8
150104*400EC <sup>^</sup>	0.1000	0.315	0.807	0.031	8.0	20.5	0.8
150124*400EC <sup>^</sup>	0.1200	0.315	0.807	0.031	8.0	20.5	0.8
150154*400GC <sup>^</sup>	0.1500	0.354	0.807	0.031	9.0	20.5	0.8
150184*400EE <sup>^</sup>	0.1800	0.315	1.102	0.031	8.0	28.0	0.8
150224*400FE <sup>^</sup>	0.2200	0.335	1.102	0.031	8.5	28.0	0.8
150274*400GE <sup>^</sup>	0.2700	0.354	1.102	0.031	9.0	28.0	0.8
150334*400IE <sup>^</sup>	0.3300	0.394	1.102	0.031	10.0	28.0	0.8
150394*400JE <sup>^</sup>	0.3900	0.413	1.102	0.031	10.5	28.0	0.8
150474*400LF <sup>^</sup>	0.4700	0.453	1.299	0.031	11.5	33.0	0.8
150564*400LF <sup>^</sup>	0.5600	0.453	1.299	0.031	11.5	33.0	0.8
150684*400MF <sup>^</sup>	0.6800	0.492	1.299	0.031	12.5	33.0	0.8
150824*400PF <sup>^</sup>	0.8200	0.531	1.299	0.031	13.5	33.0	0.8
150105*400QF <sup>^</sup>	1.0000	0.571	1.299	0.031	14.5	33.0	0.8
150155*400WF <sup>^</sup>	1.5000	0.689	1.299	0.031	17.5	33.0	0.8
150225*400YF <sup>^</sup>	2.2000	0.807	1.299	0.031	20.5	33.0	0.8
<b>630 Vdc/220 Vac</b>							
150102*630AA <sup>^</sup>	0.0010	0.197	0.433	0.024	5.0	11.0	0.6
150102*630BB <sup>^</sup>	0.0010	0.236	0.650	0.024	6.0	16.5	0.6
150122*630AA <sup>^</sup>	0.0012	0.197	0.433	0.024	5.0	11.0	0.6
150122*630BB <sup>^</sup>	0.0012	0.236	0.650	0.024	6.0	16.5	0.6
150152*630AA <sup>^</sup>	0.0015	0.197	0.433	0.024	5.5	11.0	0.6
150152*630BB <sup>^</sup>	0.0015	0.236	0.650	0.024	6.0	16.5	0.6
150182*630AA <sup>^</sup>	0.0018	0.197	0.433	0.024	5.5	11.0	0.6
150182*630BB <sup>^</sup>	0.0018	0.236	0.650	0.024	6.0	16.5	0.6
150222*630AA <sup>^</sup>	0.0022	0.197	0.433	0.024	5.5	11.0	0.6
150222*630BB <sup>^</sup>	0.0022	0.236	0.650	0.024	6.0	16.5	0.6
150272*630AA <sup>^</sup>	0.0027	0.197	0.433	0.024	5.5	11.0	0.6
150272*630BB <sup>^</sup>	0.0027	0.236	0.650	0.024	6.0	16.5	0.6
150332*630AA <sup>^</sup>	0.0033	0.197	0.433	0.024	5.5	11.0	0.6
150332*630BB <sup>^</sup>	0.0033	0.236	0.650	0.024	6.0	16.5	0.6
150392*630AA <sup>^</sup>	0.0039	0.197	0.433	0.024	5.5	11.0	0.6
150392*630BB <sup>^</sup>	0.0039	0.236	0.650	0.024	6.0	16.5	0.6
150472*630AA <sup>^</sup>	0.0047	0.197	0.433	0.024	5.5	11.0	0.6
150472*630BB <sup>^</sup>	0.0047	0.236	0.650	0.024	6.0	16.5	0.6
150562*630AA <sup>^</sup>	0.0056	0.197	0.433	0.024	5.5	11.0	0.6
150562*630BB <sup>^</sup>	0.0056	0.236	0.650	0.024	6.0	16.5	0.6

\* Indicates capacitance tolerance <sup>^</sup>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 Part Number	Cap (μF)	Inches Max			Millimeters Max		
		D	L	Ød	D	L	Ød
<b>630 Vdc/220 Vac</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 Part Number	Cap (μF)	Inches Max			Millimeters Max		
		D	L	Ød	D	L	Ød
<b>1000 Vdc/250 Vac</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	0.8
150473*1000HE <sup>^</sup>	0.0470	0.374	1.102	0.031	9.5	28	0.8
150683*1000KE <sup>^</sup>	0.0680	0.433	1.102	0.031	11.0	28	0.8
150104*1000NE <sup>^</sup>	0.1000	0.512	1.102	0.031	13.0	28	0.8
150154*1000OF <sup>^</sup>	0.1500	0.551	1.299	0.031	14.0	33	0.8
150224*1000WF <sup>^</sup>	0.2200	0.689	1.299	0.031	17.5	33	0.8
150334*1000YF <sup>^</sup>	0.3300	0.807	1.299	0.031	20.5	33	0.8
150474*1000Z1F <sup>^</sup>	0.4700	0.945	1.299	0.031	24.0	33	0.8

\* Indicates capacitance tolerance

<sup>^</sup>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.