

# Type 160 Metallized Polyester Radial Lead Capacitors

## Radial Box Metallized Polyester Capacitors



The Type 160 series radial lead metallized polyester box capacitors are constructed in rugged rectangular plastic cases with lead spacings that are standard in the electronics industry. All Type 160 capacitors are available in bulk with a .217" ±.039" lead length, and they are good for general purpose applications such as bypass, decoupling, energy storage/discharge and arc suppression.

### Highlights

- RoHS compliant
- Rugged plastic case
- Case and epoxy fill meets UL94V0
- 10 mm through 27.5 mm lead spacings
- Non-inductively wound
- Non-polar
- Wire lead material, tinned copper clad steel

## Specifications

<b>Capacitance Range:</b>	0.0022 $\mu$ F to 10.0 $\mu$ F
<b>Voltage Range:</b>	63 Vdc to 1000 Vdc
<b>Capacitance Tolerance:</b>	±5%, ±10%, ±20%
<b>Operating Temperature Range:</b>	-55 °C to +105 °C (derating voltage to 1.25% per °C above 85 °C)
<b>Dielectric Withstand Voltage:</b>	1.6 x rated voltage for 2 sec @ +25 °C ±5 °C
<b>Dissipation Factor (DF):</b>	$\tan\delta \times 10^{-4}$ at 25 °C ±5 °C

kHz	C ≤ 1 $\mu$ F	C > 1 $\mu$ F
1	≤100	≤100
10	≥150	

### Total Self Inductance (L):

Pitch (mm)	10	15	22.5	27.5
L (nH) ≈	9	10	18	18

**Long Term Stability (after two years):** Capacitance change  $\Delta C/C \leq \pm 3\%$  under standard environmental conditions

**Corona (Partial Discharge Inception Voltage):** 200 Vac for 100 Vdc, 200 Vdc  
250 Vac for 400 Vdc, 630 Vdc  
300 Vac for 1000 Vdc

### Maximum Pulse Rise Time (dv/dt):

Vn	Pitch (mm)			
	10	15	22.5	27.5
63	3	1.5	1	1
100/160	6/8	3	2	1
250	11	7	4	3
400	20	10	5.5	5
630	30	15	8	7
1000	60	25	15	10

If the working voltage (V) is less than the nominal voltage (Vn), the capacitor can work at higher dv/dt. In this case, the maximum value allowed is obtained by multiplying the above value with the ratio Vn/V.



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 160 Metallized Polyester Radial Lead Capacitors

## Capacitor Outline Drawing

## Test Method and Performance



**Note:** The lead diameter is a maximum dimension for lead spacing  $\leq 15$  mm and a nominal for lead spacing  $> 15$  mm

Insulation Resistance	
<b>Test Conditions</b>	
Temperature	25 °C $\pm 5$ °C
Voltage Charge Time	1 minute
Voltage Charge	50 Vdc for $V_n < 100$ Vdc 100 Vdc for $V_n \geq 100$ Vdc
<b>Performance</b>	
For $V_n > 100$ Vdc	$\geq 30,000$ M $\Omega$ for $\leq 0.33\mu\text{F}$ $\geq 10,000$ M $\Omega \times \mu\text{F}$ for $C > 0.33\mu\text{F}$
For $V_n \leq 100$ Vdc	$\geq 10,000$ M $\Omega$ for $C \leq 0.1\mu\text{F}$ $\geq 1,000$ M $\Omega \times \mu\text{F}$ for $\leq 0.1\mu\text{F}$
Damp Heat Test	
<b>Test Conditions</b>	
Temperature	+40 °C
Relative Humidity	95%
Test Duration	21 days
<b>Performance</b>	
Capacitance Change $\Delta C/C$	$\leq \pm 5\%$
DF Change $\Delta \text{tg}\delta$	$\leq 50 \times 10^{-4}$ at 1 kHz
Insulation Resistance	$\geq 50\%$ of limit value
Life Test	
<b>Test Conditions</b>	
Temperature	+85 °C
Test Duration	1000 hrs
Voltage Applied	1.25 x $V_n$
<b>Performance</b>	
Capacitance Change $\Delta C/C$	$\leq \pm 5\%$
DF Change $\Delta \text{tg}\delta$	$\leq 30 \times 10^{-4}$ at 10 kHz for $C \leq 1.0 \mu\text{F}$ $\leq 20 \times 10^{-4}$ at 1 kHz for $C > 1.0 \mu\text{F}$
Insulation Resistance	$\geq 50\%$ of limit value

Soldering	
<b>Test Conditions</b>	
Soldering Temperature	260 °C $\pm 5$ °C
Soldering Duration	10 sec $\pm 1$ sec
<b>Performance</b>	
Capacitance Change $\Delta C/C$	$\leq \pm 2\%$
DF Change $\Delta \text{tg}\delta$	$\leq 30 \times 10^{-4}$ at 10 kHz for $C \leq 1.0 \mu\text{F}$ $\leq 20 \times 10^{-4}$ at 1 kHz for $C > 1.0 \mu\text{F}$

## Ratings

## RoHS Compliant

Cap ( $\mu\text{F}$ )	Catalog Part Number	Inches					Millimeters				
		L	T	H	S	$\varnothing d$	L	T	H	S	$\varnothing d$
<b>63 Vdc</b>											
.22	160224*63D-F	0.512	0.157	0.374	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.27	160274*63D-F	0.512	0.157	0.374	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.33	160334*63E-F	0.512	0.157	0.374	0.394	0.031	13.0	6.0	12.0	10.0	0.8
.39	160394*63E-F	0.512	0.157	0.374	0.394	0.031	13.0	6.0	12.0	10.0	0.8
.47	160474*63E-F	0.512	0.197	0.433	0.394	0.031	13.0	6.0	12.0	10.0	0.8
.56	160564*63D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.68	160684*63D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.68	160684*63G-F	0.709	0.236	0.472	0.591	0.031	18.0	6.0	12.0	15.0	0.8
.82	160824*63E-F	0.512	0.236	0.472	0.394	0.031	13.0	6.0	12.0	10.0	0.8
.82	160824*63H-F	0.709	0.197	0.433	0.591	0.031	18.0	7.5	13.5	15.0	0.8
1.0	160105*63H-F	0.709	0.197	0.433	0.591	0.031	18.0	7.5	13.5	15.0	0.8
1.5	160155*63G-F	0.709	0.236	0.472	0.591	0.031	18.0	6.0	12.5	15.0	0.8
2.2	160225*63H-F	0.709	0.295	0.531	0.591	0.031	18.0	7.5	14.0	15.0	0.8
3.3	160335*63M-F	1.043	0.276	0.650	0.886	0.031	18.0	10.0	16.0	15.0	0.8
4.7	160475*63N-F	1.043	0.335	0.669	0.886	0.031	26.5	8.5	17.0	22.5	0.8
6.8	160685*63O-F	1.043	0.394	0.748	0.886	0.031	26.5	10.0	19.0	22.5	0.8
10.0	160106*63P-F	1.260	0.433	0.787	1.083	0.031	26.5	13.0	23.0	22.5	0.8

\* Indicates capacitance tolerance: J =  $\pm 5\%$ , K =  $\pm 10\%$ , M =  $\pm 20\%$

# Type 160 Metallized Polyester Radial Lead Capacitors

**RoHS Compliant**

Cap ( $\mu$ F)	Catalog Part Number	Inches					Millimeters				
		L	T	H	S	$\varnothing$ d	L	T	H	S	$\varnothing$ d
<b>100 Vdc</b>											
.10	160104*100C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.12	160124*100C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.15	160154*100C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.18	160184*100C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.22	160224*100D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.27	160274*100D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.33	160334*100E-F	0.512	0.236	0.472	0.394	0.031	13.0	6.0	12.0	10.0	0.8
.33	160334*100F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.39	160394*100E-F	0.512	0.236	0.472	0.394	0.031	13.0	6.0	12.0	10.0	0.8
.39	160394*100F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.47	160474*100E-F	0.512	0.236	0.472	0.394	0.031	13.0	6.0	12.0	10.0	0.8
.47	160474*100F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.56	160564*100G-F	0.709	0.236	0.472	0.591	0.031	18.0	6.0	12.0	15.0	0.8
.68	160684*100G-F	0.709	0.236	0.472	0.591	0.031	18.0	6.0	12.0	15.0	0.8
.82	160824*100H-F	0.709	0.295	0.531	0.591	0.031	18.0	7.5	13.5	15.0	0.8
1.0	160105*100H-F	0.709	0.295	0.531	0.591	0.031	18.0	7.5	13.5	15.0	0.8
1.5	160155*100M-F	1.043	0.276	0.650	0.886	0.031	26.5	7.0	16.5	22.5	0.8
2.2	160225*100N-F	1.043	0.335	0.669	0.886	0.031	26.5	8.5	17.0	22.5	0.8
3.3	160335*100O-F	1.043	0.394	0.748	0.886	0.031	26.5	10.0	19.0	22.5	0.8
4.7	160475*100P-F	1.260	0.433	0.787	1.083	0.031	32.0	11.0	20.0	27.5	0.8
6.8	160685*100Q-F	1.260	0.512	0.886	1.083	0.031	32.0	13.0	22.5	27.5	0.8
10.0	160106*100S-F	1.457	0.709	1.299	1.083	0.031	37.0	18.0	33.0	27.5	0.8
<b>160 Vdc</b>											
.10	160104*160C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
<b>250 Vdc</b>											
.033	160333*250C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.039	160393*250C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.047	160473*250C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.056	160563*250C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.068	160683*250C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.082	160823*250D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.10	160104*250D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.10	160104*250F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.12	160124*250D-F	0.512	0.236	0.472	0.394	0.031	13.0	6.0	12.0	10.0	0.8
.12	160124*250F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.15	160154*250E-F	0.512	0.236	0.472	0.394	0.031	13.0	6.0	12.0	10.0	0.8
.15	160154*250F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.18	160184*250E-F	0.512	0.236	0.472	0.394	0.031	13.0	6.0	12.0	10.0	0.8
.18	160184*250F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.22	160224*250F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.27	160274*250G-F	0.709	0.236	0.472	0.591	0.031	18.0	6.0	12.0	15.0	0.8
.33	160334*250G-F	0.709	0.236	0.472	0.591	0.031	18.0	6.0	12.0	15.0	0.8
.39	160394*250H-F	0.709	0.295	0.531	0.591	0.031	18.0	7.5	13.5	15.0	0.8
.47	160474*250H-F	0.709	0.295	0.531	0.591	0.031	18.0	7.5	13.5	15.0	0.8
.47	160474*250L-F	1.043	0.236	0.591	0.886	0.031	26.5	6.0	15.0	22.5	0.8
.56	160564*250I-F	0.709	0.335	0.571	0.591	0.031	18.0	8.5	14.5	15.0	0.8
.56	160564*250M-F	1.043	0.276	0.650	0.886	0.031	26.5	7.0	16.5	22.5	0.8
.68	160684*250I-F	0.709	0.335	0.571	0.591	0.031	18.0	8.5	14.5	15.0	0.8
.68	160684*250M-F	1.043	0.276	0.650	0.886	0.031	26.5	7.0	16.5	22.5	0.8
.82	160824*250M-F	1.043	0.335	0.669	0.886	0.031	26.5	8.5	17.0	22.5	0.8

\* Indicates capacitance tolerance: J =  $\pm 5\%$ , K =  $\pm 10\%$ , M =  $\pm 20\%$

# Type 160 Metallized Polyester Radial Lead Capacitors

**RoHS Compliant**

Cap ( $\mu$ F)	Catalog Part Number	Inches					Millimeters				
		L	T	H	S	$\varnothing$ d	L	T	H	S	$\varnothing$ d
<b>250Vdc</b>											
1.0	160105*250N-F	1.043	0.335	0.669	0.886	0.031	26.5	8.5	17.0	22.5	0.8
1.5	160155*250O-F	1.043	0.394	0.748	0.886	0.031	26.5	10.0	19.0	22.5	0.8
2.2	160225*250P-F	1.260	0.433	0.787	1.083	0.031	32.0	11.0	20.0	27.5	0.8
3.3	160335*250Q-F	1.260	0.512	0.886	1.083	0.031	32.0	13.0	22.5	27.5	0.8
4.7	160475*250R-F	1.260	0.591	1.181	1.083	0.031	32.0	15.0	30.0	27.5	0.8
6.8	160685*250S-F	1.457	0.709	1.299	1.083	0.031	37.0	18.0	33.0	27.5	0.8
<b>400Vdc</b>											
.012	160123*400C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.015	160153*400C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.018	160183*400C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.022	160223*400C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.027	160273*400C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.033	160333*400D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.039	160393*400D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.047	160473*400E-F	0.512	0.236	0.472	0.394	0.031	13.0	6.0	12.0	10.0	0.8
.047	160473*400F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.056	160563*400F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.068	160683*400F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.082	160823*400F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.10	160104*400G-F	0.709	0.236	0.472	0.591	0.031	18.0	6.0	12.0	15.0	0.8
.12	160124*400G-F	0.709	0.236	0.472	0.591	0.031	18.0	6.0	12.0	15.0	0.8
.15	160154*400H-F	0.709	0.295	0.531	0.591	0.031	18.0	7.5	13.5	15.0	0.8
.15	160154*400L-F	1.043	0.236	0.591	0.886	0.031	26.5	6.0	15.0	22.5	0.8
.18	160184*400L-F	1.043	0.236	0.591	0.886	0.031	26.5	6.0	15.0	22.5	0.8
.22	160224*400L-F	1.043	0.236	0.591	0.886	0.031	26.5	6.0	15.0	22.5	0.8
.27	160274*400M-F	1.043	0.276	0.650	0.886	0.031	26.5	7.0	16.5	22.5	0.8
.33	160334*400M-F	1.043	0.276	0.650	0.886	0.031	26.5	7.0	16.5	22.5	0.8
.39	160394*400N-F	1.043	0.335	0.669	0.886	0.031	26.5	8.5	17.0	22.5	0.8
.47	160474*400N-F	1.043	0.335	0.669	0.886	0.031	26.5	8.5	17.0	22.5	0.8
.56	160564*400O-F	1.043	0.394	0.748	0.886	0.031	26.5	10.0	19.0	22.5	0.8
.68	160684*400P-F	1.260	0.433	0.787	1.083	0.031	32.0	11.0	20.0	27.5	0.8
.82	160824*400P-F	1.260	0.433	0.787	1.083	0.031	32.0	11.0	20.0	27.5	0.8
1.0	160105*400P-F	1.260	0.433	0.787	1.083	0.031	32.0	11.0	20.0	27.5	0.8
1.0	160105*400Q-F	1.260	0.512	0.886	1.083	0.031	32.0	13.0	22.5	27.5	0.8
<b>630Vdc</b>											
.0039	160392*630C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.0047	160472*630C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.0056	160562*630C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.0068	160682*630C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.0082	160822*630C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.010	160103*630C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.012	160123*630D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.015	160153*630D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.018	160183*630D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.022	160223*630E-F	0.512	0.236	0.472	0.394	0.031	13.0	6.0	12.0	10.0	0.8
.027	160273*630F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.033	160333*630F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.039	160393*630G-F	0.709	0.236	0.472	0.591	0.031	18.0	6.0	12.0	15.0	0.8
.047	160473*630G-F	0.709	0.236	0.472	0.591	0.031	18.0	6.0	12.0	15.0	0.8
.056	160563*630G-F	0.709	0.236	0.472	0.591	0.031	18.0	6.0	12.0	15.0	0.8

\* Indicates capacitance tolerance: J =  $\pm 5\%$ , K =  $\pm 10\%$ , M =  $\pm 20\%$

# Type 160 Metallized Polyester Radial Lead Capacitors

**RoHS Compliant**

Cap ( $\mu$ F)	Catalog Part Number	Inches					Millimeters				
		L	T	H	S	$\emptyset$ d	L	T	H	S	$\emptyset$ d
<b>630 Vdc</b>											
.068	160683*630H-F	0.709	0.295	0.531	0.591	0.031	18.0	7.5	13.5	15.0	0.8
.068	160683*630L-F	1.043	0.236	0.591	0.886	0.031	26.5	6.0	15.0	22.5	0.8
.082	160823*630L-F	1.043	0.236	0.591	0.886	0.031	26.5	6.0	15.0	22.5	0.8
.10	160104*630L-F	1.043	0.236	0.591	0.886	0.031	26.5	6.0	15.0	22.5	0.8
.12	160124*630M-F	1.043	0.276	0.650	0.886	0.031	26.5	7.0	16.5	22.5	0.8
.15	160154*630M-F	1.043	0.276	0.650	0.886	0.031	26.5	7.0	16.5	22.5	0.8
.18	160184*630N-F	1.043	0.335	0.669	0.886	0.031	26.5	8.5	17.0	22.5	0.8
.22	160224*630N-F	1.043	0.335	0.669	0.886	0.031	26.5	8.5	17.0	22.5	0.8
.27	160274*630Q-F	1.260	0.512	0.886	1.083	0.031	32.0	13.0	22.5	27.5	0.8
.33	160334*630P-F	1.260	0.433	0.787	1.083	0.031	32.0	11.0	20.0	27.5	0.8
.39	160394*630P-F	1.260	0.433	0.787	1.083	0.031	32.0	11.0	20.0	27.5	0.8
.47	160474*630Q-F	1.260	0.512	0.886	1.083	0.031	32.0	13.0	22.5	27.5	0.8
<b>1000 Vdc</b>											
.0022	160222*1000C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.0027	160272*1000C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.0033	160332*1000C-F	0.512	0.157	0.374	0.394	0.031	13.0	4.0	9.5	10.0	0.8
.0039	160392*1000D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.0047	160472*1000D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.0056	160562*1000D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.0068	160682*1000D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.0082	160822*1000D-F	0.512	0.197	0.433	0.394	0.031	13.0	5.0	11.0	10.0	0.8
.010	160103*1000F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.012	160123*1000F-F	0.709	0.197	0.433	0.591	0.031	18.0	5.0	11.0	15.0	0.8
.015	160153*1000F-F	0.709	0.236	0.472	0.591	0.031	18.0	6.0	12.0	15.0	0.8
.018	160183*1000G-F	0.709	0.236	0.472	0.591	0.031	18.0	6.0	12.0	15.0	0.8
.022	160223*1000G-F	0.709	0.236	0.472	0.591	0.031	18.0	6.0	12.0	15.0	0.8
.027	160273*1000H-F	0.709	0.295	0.531	0.591	0.031	18.0	7.5	13.5	15.0	0.8
.033	160333*1000L-F	1.043	0.236	0.591	0.886	0.031	26.5	6.0	15.0	22.5	0.8
.039	160393*1000L-F	1.043	0.236	0.591	0.886	0.031	26.5	6.0	15.0	22.5	0.8
.047	160473*1000L-F	1.043	0.236	0.591	0.886	0.031	26.5	6.0	15.0	22.5	0.8
.056	160563*1000M-F	1.043	0.276	0.650	0.886	0.031	26.5	7.0	16.5	22.5	0.8
.068	160683*1000M-F	1.043	0.276	0.650	0.886	0.031	26.5	7.0	16.5	22.5	0.8
.082	160823*1000N-F	1.043	0.335	0.669	0.886	0.031	26.5	8.5	17.0	22.5	0.8
.10	160104*1000N-F	1.043	0.335	0.669	0.886	0.031	26.5	8.5	17.0	22.5	0.8
.12	160124*1000O-F	1.043	0.394	0.748	0.886	0.031	26.5	10.0	19.0	22.5	0.8
.15	160154*1000P-F	1.260	0.433	0.787	1.083	0.031	32.0	11.0	20.0	27.5	0.8
.18	160184*1000Q-F	1.260	0.512	0.886	1.083	0.031	32.0	13.0	22.5	27.5	0.8
.22	160224*1000Q-F	1.260	0.512	0.886	1.083	0.031	32.0	13.0	22.5	27.5	0.8

\* Indicates capacitance tolerance: J =  $\pm$ 5%, K =  $\pm$ 10%, M =  $\pm$ 20%

## Part Numbering System

<b>160</b>	<b>104</b>	<b>K</b>	<b>100</b>	<b>C</b>	<b>-F</b>
<b>Series</b>	<b>Capacitance</b>	<b>Tolerance</b>	<b>Voltage</b>	<b>Case Code</b>	<b>ROHS Compliant</b>
160	392 = .0039 $\mu$ F	J = $\pm$ 5%	100 = 100 Vdc	C	
	103 = .01 $\mu$ F	K = $\pm$ 10%	250 = 250 Vdc	D	
	104 = .1 $\mu$ F	M = $\pm$ 20%	630 = 630 Vdc	E	
	105 = 1.0 $\mu$ F		1000 = 1000 Vdc	F	
				etc.	

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.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## 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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