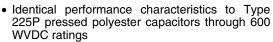


Vishay Sprague

Polyester Capacitors Filmite® "E", ORANGE DROP®, Radial Lead



FEATURES





gauge COMPLIANT

- Wound from PETP polyester film and thin gauge foil under carefully controlled atmospheric conditions
- Protected against moisture by a conformal coating of epoxy
- Specifically designed for printed wiring board applications
- Widely used in computers, instrumentation and telecommunications equipment

PERFORMANCE CHARACTERISTICS

Operating Temperature: - 55 °C to + 85 °C, standard; up to + 105 °C when WVDC is reduced to 70 % of + 85 °C rating. To + 125 °C when WVDC is 50 % of + 85 °C rating.

Insulation Resistance: After a 2 minute charge at rated voltage or 500 V, whichever is less.

At + 25 °C: 100 000 Megohm for C \leq 0.25 Microfarads 25000 Megohm - Microfarads for C > 0.25 Microfarads At + 85 °C: 10 000 Megohm for C \leq 0.15 Microfarads 1500 Megohm - Microfarads for C > 0.15 Microfarads At + 105 °C: 1500 Megohm for C \leq 0.17 Microfarads 250 Megohm - Microfarads for C > 0.17 Microfarads At + 125 °C: 200 Megohm for C \leq 0.13 Microfarads 25 Megohm - Microfarads for C > 0.13 Microfarads

Capacitance Tolerance and Dissipation Factor:

Capacitors shall be measured at a frequency for 1000 Hz at + 25 °C or else be referred to measurements made at that frequency and temperature. The maximum dissipation factor shall be 0.75 %.

Dielectric Withstanding Voltage:

Capacitors rated below 1000 volts shall withstand a DC potential of 250 % of rated voltage applied between terminals

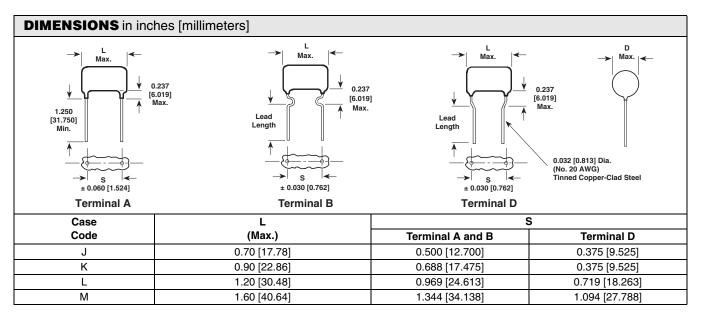
for not more than 5 seconds. Capacitance rated 1000 volts and above shall withstand a DC potential of 200 % of rated voltage applied between the terminals for not more than 5 seconds. The test voltage must be applied and discharged through a resistor of 1 ohm per volt.

Humidity Test:

Condition capacitors with no voltage applied for 72 hours at 95 % relative humidity and + 75 °C. Remove capacitors from humidity chamber, wipe surface dry of moisture and dry in circulating air for 4 hours. Measure insulation resistance after a 2 minute charge at 25 °C and rated voltage or 500 VDC, whichever is less. Minimum product of insulation resistance and capacitance shall be 5000 Megohm - Microfarads after test but need not exceed 10 000 Megohm. Not more than one failure allowed in 12 units tested.

DC Life Test:

Capacitance are capable of withstanding a 500 hour life test at + 85 °C at 150 % of rated working voltage. After test, capacitance shall not have changed by more than 5 % of initial value, insulation resistance shall not have decreased by more than 50 % of the initial limit and dissipation factor shall not have increased to more than 1 %.

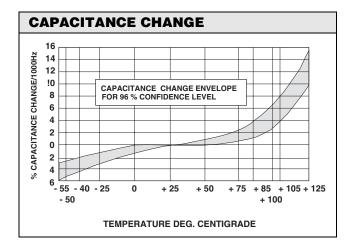


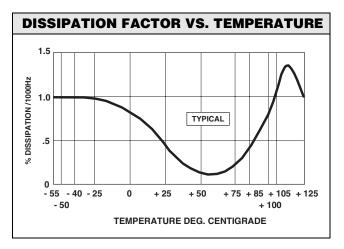
Document Number: 42017 Revision: 16-Feb-07

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Polyester Capacitors Filmite® "E", ORANGE DROP®, Radial Lead







μF		SI	ZE	
± 10 % TOLERANCE	PART NUMBER	L	Н	
		C/70 VAC**		
0.027	418P27391J	0.70 [17.78]	0.35 [8.89]	
0.033	418P33391J	0.70 [17.78]	0.35 [8.89]	
0.047	418P47391J	0.70 [17.78]	0.35 [8.89]	
0.082	418P82391K	0.90 [22.86]	0.40 [10.16]	
0.1	418P10491K	0.90 [22.86]	0.40 [10.16]	
0.15	418P15491K	0.90 [22.86]	0.45 [11.43]	
0.22	418P22491L	1.20 [30.48]	0.45 [11.43]	
0.33	418P33491L	1.20 [30.48]	0.50 [12.70]	
0.47	418P47491M	1.60 [40.64]	0.50 [12.70]	
0.68	418P68491M	1.60 [40.64]	0.60 [15.24]	
1.0	418P10591M	1.60 [40.64]	0.70 [17.78]	
	200 VDC	C/140 VAC**		
0.0056	418P56292J	0.70 [17.78]	0.33 [8.38]	
0.0068	418P68292J	0.70 [17.78]	0.33 [8.38]	
0.01	418P10392J	0.70 [17.78]	0.33 [8.38]	
0.015	418P15392J	0.70 [17.78]	0.33 [8.38]	
0.018	418P18392J	0.70 [17.78]	0.33 [8.38]	
0.022	418P22392J	0.70 [17.78]	0.33 [8.38]	
0.033	418P33392K	0.90 [22.86]	0.38 [9.65]	
0.039	418P39392K	0.90 [22.86]	0.38 [9.65]	
0.047	418P47392K	0.90 [22.86]	0.38 [9.65]	
0.056	418P56392L	1.20 [30.48]	0.38 [9.65]	
0.068	418P68392L	1.20 [30.48]	0.38 [9.65]	
0.082	418P82392L	1.20 [30.48]	0.40 [10.16]	
0.1	418P10492L	1.20 [30.48]	0.40 [10.16]	
0.15	418P15492L	1.20 [30.48]	0.45 [11.43]	
0.22	418P22492L	1.20 [30.48]	0.50 [12.70]	
0.27	418P27492M	1.60 [40.64]	0.47 [11.94]	
0.33	418P33492M	1.60 [40.64]	0.47 [11.94]	
0.47	418P47492M	1.60 [40.64]	0.55 [13.97]	

^{*} These standard ratings are available through Sprague® distribution on special order. For complete Part Number, add letter and number for terminal and lead length in accordance with How to Order (Ex: 418P47492MD3).

^{** 60} Hz rms



Polyester Capacitors Filmite® "E", ORANGE DROP®, Radial Lead

Vishay Sprague

0.001	μF SIZE				
0.001	10 % TOLERANCE	PART NUMBER		Н	
0.0015					
0.0022				0.30 [7.62]	
0.0033				0.30 [7.62]	
0.0047	0.0022	418P22294J		0.30 [7.62]	
0.0088	0.0033	418P33294J	0.70 [17.78]	0.30 [7.62]	
0.0082	0.0047	418P47294J	0.70 [17.78]	0.30 [7.62]	
0.01	0.0068	418P68294J	0.70 [17.78]	0.33 [8.38]	
0.01	0.0082	418P82294J	0.70 [17.78]	0.35 [8.89]	
0.015	0.01	418P10394J	0.70 [17.78]	0.35 [8.89]	
0.018		418P15394J	0.70 [17.78]	0.38 [9.65]	
0.022 418P22394K 0.90 [22.86] 0.38		418P18394K		0.38 [9.65]	
0.033				0.38 [9.65]	
0.047				0.40 [10.16]	
0.056 418P56394L 1.20 [30.48] 0.45 [0.068 418P68394L 1.20 [30.48] 0.45 [0.062 418P62394L 1.20 [30.48] 0.52 [0.1 418P10494L 1.20 [30.48] 0.52 [0.15 418P15494L 1.20 [30.48] 0.57 [0.18 418P18494M 1.60 [40.64] 0.60 [0.22 418P22494M 1.60 [40.64] 0.65 [0.27 418P27494M 1.60 [40.64] 0.65 [0.33 418P33494M 1.60 [40.64] 0.65 [0.39 418P39494M 1.60 [40.64] 0.72 [0.47 418P47494M 1.60 [40.64] 0.72 [0.01 418P10296J 0.70 [17.78] 0.30 [0.001 418P12296J 0.70 [17.78] 0.33 [0.0015 418P18296J 0.70 [17.78] 0.33 [0.0015 418P18296J 0.70 [17.78] 0.33 [0.0002 418P2296J 0.70 [17.78] 0.33 [0.0002 418P2296J 0.70 [17.78] 0.33 [0.0002 418P2296J 0.70 [17.78] 0.33 [0.0003 418P33296J 0.70 [17.78] 0.35 [0.0003 418P33296J 0.70 [17.78] 0.35 [0.0003 418P3296J 0.70 [17.78] 0.35 [0.00047 418P47296J 0.70 [17.78] 0.35 [0.00068 418P68296J 0.70 [17.78] 0.35 [0.0068 418P68296J 0.70 [17.78] 0.35 [0.0068 418P68296J 0.70 [17.78] 0.36 [0.0068 418P68296J 0.70 [17.78] 0.36 [0.0068 418P68296J 0.70 [17.78] 0.40 [0.011 418P10396K 0.90 [22.86] 0.40 [0.012 418P12396K 0.90 [22.86] 0.40 [0.015 418P33996L 1.20 [30.48] 0.45 [0.022 418P22396K 0.90 [22.86] 0.40 [0.015 418P33996L 1.20 [30.48] 0.55 [0.027 418P27396L 1.20 [30.48] 0.55 [0.024 418P33996L 1.20 [30.48] 0.55 [0.025 418P33996L 1.20 [30.48] 0.55 [0.026 418P36396L 1.20 [30.48] 0.55 [0.036 418P36396L 1.20 [30.48] 0.55 [0.056 418P36396L 1.20 [30.48] 0.65 [0.068 418P36396L 1.20 [30.48] 0.65 [0.068 418P36396L 1.20 [30.48] 0.65 [0.068 418P36396L 1.20 [30.48] 0.65 [0.069 418P36496M 1.60 [40.64] 0.70 [0.15 418P14996M 1.60 [40.64] 0.70 [0.40 [10.16]	
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0.001	0.39	418P39494M	1.60 [40.64]	0.72 [18.29]	
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0.0015 418P15296J 0.70 [17.78] 0.33 0.0018 418P18296J 0.70 [17.78] 0.33 0.0022 418P22296J 0.70 [17.78] 0.33 0.0027 418P27296J 0.70 [17.78] 0.35 0.0033 418P33296J 0.70 [17.78] 0.35 0.0039 418P3296J 0.70 [17.78] 0.38 0.0047 418P47296J 0.70 [17.78] 0.38 0.0056 418P56296J 0.70 [17.78] 0.40 0.0068 418P68296J 0.70 [17.78] 0.40 0.0082 418P82296K 0.90 [22.86] 0.40 0.01 418P10396K 0.90 [22.86] 0.40 0.012 418P12396K 0.90 [22.86] 0.40 0.018 418P15396K 0.90 [22.86] 0.45 0.022 418P2396K 0.90 [22.86] 0.45 0.023 418P2396L 1.20 [30.48] 0.45 0.033 418P3396L 1.20 [30.48] 0.45 0.033 418P33396L 1.20 [30.48] 0.45 0.047 418P4396L	0.0012	418P12296J	0.70 [17.78]	0.33 [8.38]	
0.0018 418P18296J 0.70 [17.78] 0.33 [0.0022 418P22296J 0.70 [17.78] 0.33 [0.033 [0.0027 418P2296J 0.70 [17.78] 0.33 [0.033 [0.0033 418P32296J 0.70 [17.78] 0.35 [0.0039 418P39296J 0.70 [17.78] 0.38 [0.0047 0.70 [17.78] 0.38 [0.0056 0.70 [17.78] 0.38 [0.0056 0.70 [17.78] 0.40 [0.0068 0.70 [17.78] 0.40 [0.0082 0.70 [17.78] 0.40 [0.01 0.418P82296K 0.90 [22.86] 0.40 [0.012 0.418P12396K 0.90 [22.86] 0.40 [0.012 0.418P12396K 0.90 [22.86] 0.40 [0.015 0.418P15396K 0.90 [22.86] 0.40 [0.018 0.48P18396K 0.90 [22.86] 0.45 [0.022 0.418P2396K 0.90 [22.86] 0.45 [0.027 0.418P2396L 1.20 [30.48] 0.45 [0.033 0.45 [0.039 0.418P2396L 1.20 [30.48] 0.45 [0.047 0.418P47396L 1.20 [30.48] 0.45 [0.056 0.48 [0.06 [0.068 0.48P6396L 1.20 [30.48] 0.65 [0.06 [0.068 0.418P6396L 1.20 [30.48] 0.65 [0.1 0.65 [0.1 0.65 [0.1 0.65 [0.1 0.66 [0.1 0.66 [0.1 0.66 [0.1 0.66 [0.15 </td <td>0.0015</td> <td>418P15296J</td> <td>0.70 [17.78]</td> <td>0.33 [8.38]</td>	0.0015	418P15296J	0.70 [17.78]	0.33 [8.38]	
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0.0027 418P27296J 0.70 [17.78] 0.35 [0.0033 418P33296J 0.70 [17.78] 0.35 [0.0039 418P39296J 0.70 [17.78] 0.38 [0.0047 418P47296J 0.70 [17.78] 0.38 [0.0056 418P56296J 0.70 [17.78] 0.40 [0.0068 418P68296J 0.70 [17.78] 0.40 [0.0082 418P82296K 0.90 [22.86] 0.40 [0.01 418P10396K 0.90 [22.86] 0.40 [0.012 418P15396K 0.90 [22.86] 0.40 [0.015 418P18396K 0.90 [22.86] 0.45 [0.022 418P22396K 0.90 [22.86] 0.45 [0.022 418P2396L 1.20 [30.48] 0.45 [0.033 418P33396L 1.20 [30.48] 0.45 [0.039 418P33996L 1.20 [30.48] 0.55 [0.047 418P47396L 1.20 [30.48] 0.55 [0.056 418P56396L 1.20 [30.48] 0.60 [0.082 418P3396L 1.20 [30.48] 0.60 [0.082 418P3396L				0.33 [8.38]	
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0.033 418P33396L 1.20 [30.48] 0.45 [0.039 418P39396L 1.20 [30.48] 0.55 [0.047 418P47396L 1.20 [30.48] 0.55 [0.056 418P56396L 1.20 [30.48] 0.60 [0.068 418P68396L 1.20 [30.48] 0.60 [0.082 418P82396L 1.20 [30.48] 0.65 [0.1 418P10496L 1.20 [30.48] 0.65 [0.12 418P12496M 1.60 [40.64] 0.70 [0.15 418P15496M 1.60 [40.64] 0.70 [0.18 418P18496M 1.60 [40.64] 0.80 [0.027	418P27396L	1.20 [30.48]	0.45 [11.43	
0.039 418P39396L 1.20 [30.48] 0.55 [0.047 418P47396L 1.20 [30.48] 0.55 [0.056 418P56396L 1.20 [30.48] 0.60 [0.068 418P68396L 1.20 [30.48] 0.60 [0.082 418P82396L 1.20 [30.48] 0.65 [0.1 418P10496L 1.20 [30.48] 0.65 [0.12 418P12496M 1.60 [40.64] 0.70 [0.15 418P15496M 1.60 [40.64] 0.70 [0.18 418P18496M 1.60 [40.64] 0.80 [0.033	418P33396L	1.20 [30.48]	0.45 [11.43	
0.047 418P47396L 1.20 [30.48] 0.55 [0.056 418P56396L 1.20 [30.48] 0.60 [0.068 418P68396L 1.20 [30.48] 0.60 [0.082 418P82396L 1.20 [30.48] 0.65 [0.1 418P10496L 1.20 [30.48] 0.65 [0.12 418P12496M 1.60 [40.64] 0.70 [0.15 418P15496M 1.60 [40.64] 0.70 [0.18 418P18496M 1.60 [40.64] 0.80 [0.55 [13.97	
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0.068 418P68396L 1.20 [30.48] 0.60 [0.082 418P82396L 1.20 [30.48] 0.65 [0.1 418P10496L 1.20 [30.48] 0.65 [0.12 418P12496M 1.60 [40.64] 0.70 [0.15 418P15496M 1.60 [40.64] 0.70 [0.18 418P18496M 1.60 [40.64] 0.80 [0.60 [15.24	
0.082 418P82396L 1.20 [30.48] 0.65 [0.1 418P10496L 1.20 [30.48] 0.65 [0.12 418P12496M 1.60 [40.64] 0.70 [0.15 418P15496M 1.60 [40.64] 0.70 [0.18 418P18496M 1.60 [40.64] 0.80 [2				0.60 [15.24	
0.1 418P10496L 1.20 [30.48] 0.65 [0.12 418P12496M 1.60 [40.64] 0.70 [0.15 418P15496M 1.60 [40.64] 0.70 [0.18 418P18496M 1.60 [40.64] 0.80 [0.65 [16.51]	
0.12 418P12496M 1.60 [40.64] 0.70 [0.15 418P15496M 1.60 [40.64] 0.70 [0.18 418P18496M 1.60 [40.64] 0.80 [0.65 [16.51]	
0.15 418P15496M 1.60 [40.64] 0.70 [0.18 418P18496M 1.60 [40.64] 0.80 [0.70 [17.78]	
0.18 418P18496M 1.60 [40.64] 0.80 [2				-	
				0.70 [17.78]	
				0.80 [20.32]	
	0.22	418P22496M	1.60 [40.64]	0.80 [20.32] 0.80 [20.32]	

^{*} These standard ratings are available through Sprague® distribution on special order. For complete Part Number, add letter and number for terminal and lead length in accordance with How to Order (Ex: 418P47492MD3).

** 60 Hz rms

Type 418P

Vishay Sprague

Polyester Capacitors Filmite[®] "E", ORANGE DROP[®], Radial Lead



μF		SI	ZE
± 10 % TOLERANCE	PART NUMBER	L	Н
	1000 VD0	C/200 VAC**	
0.001	418P102910J	0.70 [17.78]	0.33 [8.38]
0.0015	418P152910J	0.70 [17.78]	0.33 [8.38]
0.0018	418P182910J	0.70 [17.78]	0.35 [8.89]
0.0022	418P222910J	0.70 [17.78]	0.35 [8.89]
0.0033	418P332910K	0.90 [22.86]	0.35 [8.89]
0.0047	418P472910K	0.90 [22.86]	0.40 [10.16]
0.0056	418P562910K	0.90 [22.86]	0.43 [10.92]
0.0068	418P682910K	0.90 [22.86]	0.43 [10.92]
0.0082	418P822910K	0.90 [22.86]	0.48 [12.19]
0.01	418P103910K	0.90 [22.86]	0.48 [12.19]
0.015	418P153910L	1.20 [30.48]	0.48 [12.19]
0.018	418P183910L	1.20 [30.48]	0.58 [14.73]
0.022	418P223910L	1.20 [30.48]	0.58 [14.73]
0.027	418P273910L	1.20 [30.48]	0.65 [16.51]
0.033	418P333910L	1.20 [30.48]	0.65 [16.51]
0.039	418P393910M	1.60 [40.64]	0.65 [16.51]
0.047	418P473910M	1.60 [40.64]	0.65 [16.51]
0.056	418P563910M	1.60 [40.64]	0.75 [19.05]
0.068	418P683910M	1.60 [40.64]	0.75 [19.05]
0.082	418P823910M	1.60 [40.64]	0.85 [21.59]
0.1	418P104910M	1.60 [40.64]	0.85 [21.59]

^{*} These standard ratings are available through Sprague® distribution on special order. For complete Part Number, add letter and number for terminal and lead length in accordance with How to Order (Ex: 418P47492MD3)

^{** 60} Hz rms

ORI	ORDERING INFORMATION							
418P	104	9	1	J, K, L or M	D	3	(-XXX)	
TYPE	CAPACITANCE	TOLERANCE	DC VOLTAGE	CASE CODE	TERMINAL	LEAD LENGTH	SPECIAL	
			RATING				CONSTRUCTION	
	Capacitance is	0 = ± 20 %	This is	See Dimensional	A = Straight Lead	1 = 0.187" ± 0.030"	A three-digit suffi	
	expressed in	9 = ± 10 %	expressed in	Configurations	B = Hairpin Crimped	$[4.750 \pm 0.762]$	may be added by	
	picofarads. The	5 = ± 5 %	hundred of		D = Hockey Crimped	$2 = 0.250$ " ± 0.030 "	the factory to	
	first two digits are		volts.			$[6.350 \pm 0.762]$	denote special	
	significant. The					3 = 1.250" [31.750]	construction.	
	third is the number					Minimum		
	of zeros to follow.							
	Values must							
	conform to Decade							
	Rating for the							
	tolerance							
	specified.							

Document Number: 42017 Revision: 16-Feb-07



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Revision: 18-Jul-08

Document Number: 91000 www.vishay.com