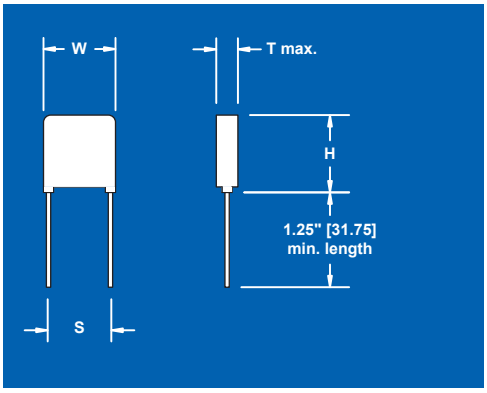
High Voltage Multi-Layer Ceramic Capacitors - Military & Commercial
X7R and NPO (125°C)



Part Number & Ordering Information

20	HV03	B	562	K	M	R

Voltage
20=2,000
100=10,000
etc.

Style
HV
(See table)

Dielectric
B= X7R
N= NPO

Capacitance Value in pF
First two digits are significant, the last is the number of zeros, i.e. 562=5600pF

Tolerance
J=±5% (NPO Only)
K=±10%
M=±20%
P=-0%/+100%
Z=-20%/+80%

Screening*
Group A

ROHS Compliant

General Information

- Conformally coated multi-layer ceramic (MLC)
- Designed for high voltage performance and reliability
- Low Dissipation Factor in X7R and NPO
- DSCC equivalents
- Group A screening available per Mil-Prf-49467 (except Corona). Contact factory if Corona testing is required.
- No Insulation Resistance reduction with life
- SLAM/C-SAM testing available

Lead Type
Standard - 0.025" [0.65mm] 22AWG solder plated Copper-clad steel (CCFE)
ROHS - 0.025" [0.65mm] 22AWG 100% tin plated Copper-clad steel (CCFE)

Specifications	Dielectric Type (EIA Designation)	
	NPO	X7R
Temperature Range	-55°C to 125°C	-55°C to 125°C
Temperature Coefficient	± 30 ppm/°C	±15%
Voltage Range	500V to 10,000V	500V to 10,000V
IR @ 25°C	100,000MΩ or 1,000MΩ - μF whichever is less	100,000MΩ or 1,000MΩ - μF whichever is less
IR @ 125°C	10,000MΩ or 100MΩ - μF whichever is less	10,000MΩ or 100MΩ - μF whichever is less
Dissipation Factor @ 1kHz, 25 °C	0.1% max	2.5% max
Aging Rate	0	-2% max/decade hour

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High Voltage Commercial and Military Quality Multi-Layer Ceramic Capacitors

Style	Sizes (max)			Lead Spacing ± 0.030 Inches [0.762 mm]
	Width Inches [mm]	Height Inches [mm]	Thickness Inches [mm]	
HV01	0.250 [6.35]	0.220 [5.59]	0.200 [5.08]	0.170 [4.32]
HV02	0.320 [8.13]	0.280 [7.11]	0.250 [6.35]	0.220 [5.59]
HV03	0.370 [9.40]	0.300 [7.62]	0.250 [6.35]	0.275 [6.99]
HV10	0.450 [11.43]	0.220 [5.59]	0.200 [5.08]	0.300 [7.62]
HV04	0.470 [11.94]	0.400 [10.16]	0.270 [6.86]	0.375 [9.53]
HV11	0.550 [13.97]	0.280 [7.11]	0.270 [6.86]	0.400 [10.16]
HV05	0.570 [14.48]	0.500 [12.70]	0.270 [6.86]	0.475 [12.07]
HV06	0.670 [17.02]	0.600 [15.24]	0.270 [6.86]	0.575 [14.61]
HV07	0.770 [19.56]	0.720 [18.29]	0.270 [6.86]	0.675 [17.15]
HV13	0.850 [21.59]	0.400 [10.16]	0.270 [6.86]	0.700 [17.78]
HV14	1.050 [26.67]	0.500 [12.70]	0.270 [6.86]	0.975 [24.77]
HV15	1.250 [31.75]	0.600 [15.24]	0.270 [6.86]	1.175 [29.85]
HV16	1.450 [36.83]	0.720 [18.29]	0.270 [6.86]	1.300 [33.02]

X7R Dielectric Capacitance Ranges

Style	500 VDC		1 KVDC		2 KVDC		3 KVDC		4 KVDC		5 KVDC		7 KVDC		10 KVDC	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
HV01	.250 µF	.082 µF	680 pF	.022 µF	270 pF	3900 pF	-	-	-	-	-	-	-	-	-	-
HV02	1200 pF	.180 µF	1200 pF	.068 µF	560 pF	.012 µF	560 pF	3900 pF	-	-	-	-	-	-	-	-
HV03	1200 pF	.220 µF	1200 pF	.082 µF	680 pF	.018 µF	680 pF	5600 pF	-	-	-	-	-	-	-	-
HV04	3300 pF	.560 µF	3300 pF	.270 µF	1200 pF	.033 µF	1200 pF	.015 µF	270 pF	6800 pF	-	-	-	-	-	-
HV05	6800 pF	1.20 µF	6800 pF	.470 µF	2700 pF	.068 µF	2700 pF	.033 µF	470 pF	.010 µF	470 pF	6800 pF	-	-	-	-
HV06	.010 µF	1.80 µF	.010 µF	.680 µF	3900 pF	.100 µF	3900 pF	.039 µF	680 pF	.015 µF	680 pF	.010 µF	-	-	-	-
HV07	.015 µF	2.50 µF	.015 µF	1.00 µF	6800 pF	.180 µF	6800 pF	.082 µF	1200 pF	.027 µF	1200 pF	.015 µF	-	-	-	-
HV10	1800 pF	.220 µF	1800 pF	.056 µF	390 pF	8200 pF	390 pF	2200 pF	150 pF	1200 pF	-	-	-	-	-	-
HV11	2700 pF	.390 µF	2700 pF	.150 µF	680 pF	.022 µF	680 pF	8200 pF	270 pF	4700 pF	270 pF	2700 pF	-	-	-	-
HV13	.010 µF	1.50 µF	.010 µF	.680 µF	1800 pF	.082 µF	1800 pF	.027 µF	680 pF	.012 µF	6800 pF	8200 pF	220 pF	3300 pF	-	-
HV14	.012 µF	2.20 µF	.012 µF	1.00 µF	3300 pF	.150 µF	3300 pF	.056 µF	1200 pF	.027 µF	1200 pF	.022 µF	470 pF	6800 pF	470 pF	3900 pF
HV15	.018 µF	3.90 µF	.018 µF	1.50 µF	5600 pF	.250 µF	5600 pF	.082 µF	2200 pF	.047 µF	2200 pF	.027 µF	820 pF	.010 µF	820 pF	5600 pF
HV16	.027 µF	5.60 µF	.027 µF	2.20 µF	8200 pF	.330 µF	8200 pF	.120 µF	3300 pF	.068	3300 pF	.039 µF	1200 pF	.018 µF	1200 pF	.010 µF

NPO Dielectric Capacitance Ranges

Style	500 VDC		1 KVDC		2 KVDC		3 KVDC		4 KVDC		5 KVDC		7 KVDC		10 KVDC	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
HV01	27 pF	4700 pF	27 pF	1500 pF	12 pF	680 pF	12 pF	150 pF	-	-	-	-	-	-	-	-
HV02	39 pF	8200 pF	39 pF	3900 pF	22 pF	820 pF	22 pF	560 pF	-	-	-	-	-	-	-	-
HV03	47 pF	.010 µF	47 pF	6800 pF	27 pF	1200 pF	27 pF	680 pF	-	-	-	-	-	-	-	-
HV04	120 pF	.022 µF	120 pF	.018 µF	47 pF	3300 pF	47 pF	1500 pF	27 pF	680 pF	-	-	-	-	-	-
HV05	220 pF	.056 µF	220 pF	.033 µF	100 pF	6800 pF	100 pF	3900 pF	18 pF	1500 pF	18 pF	1000 pF	-	-	-	-
HV06	390 pF	.082 µF	390 pF	.047 µF	150 pF	.010 µF	150 pF	6800 pF	27 pF	2200 pF	27 pF	2200 pF	-	-	-	-
HV07	470 pF	.100 µF	470 pF	.068 µF	270 pF	.022 µF	270 pF	8200 pF	47 pF	3900 pF	47 pF	2700 pF	-	-	-	-
HV10	68 pF	.015 µF	68 pF	4700 pF	15 pF	1000 pF	15 pF	390 pF	10 pF	220 pF	-	-	-	-	-	-
HV11	82 pF	.027 µF	82 pF	.010 µF	27 pF	2200 pF	27 pF	820 pF	10 pF	560 pF	10 pF	390 pF	-	-	-	-
HV13	330 pF	.120 µF	330 pF	.068 µF	68 pF	.010 µF	68 pF	4700 pF	27 pF	1500 pF	27 pF	1200 pF	12 pF	470 pF	-	-
HV14	470 pF	.150 µF	470 pF	.056 µF	120 pF	.015 µF	120 pF	5600 pF	47 pF	3300 pF	47 pF	2200 pF	18 pF	1000 pF	18 pF	820 pF
HV15	680 pF	.220 µF	680 pF	.100 µF	220 pF	.022 µF	220 pF	.015 µF	82 pF	5600 pF	82 pF	3900 pF	33 pF	1800 pF	33 pF	1200 pF
HV16	1000 pF	.330 µF	1000 pF	.150 µF	270 pF	.039 µF	270 pF	.018 µF	120 pF	8200 pF	56 pF	5600 pF	56 pF	2700 pF	56 pF	2200 pF

Custom voltages, sizes, and capacitance values are available. Contact Factory.