



# High Voltage MLC Chips

## FLEXITERM® - 600V to 5000V Applications



### NP0 (C0G) CAPACITANCE RANGE

#### PREFERRED SIZES ARE SHADED

Case Size	1825								2220								2225											
	Soldering								Soldering								Soldering											
(L) Length	Reflow Only 4.60 ± 0.50 (0.181 ± 0.020)								Reflow Only 5.70 ± 0.50 (0.224 ± 0.020)								Reflow Only 5.72 ± 0.25 (0.225 ± 0.010)											
W) Width	6.30 ± 0.40 (0.248 ± 0.016)								5.00 ± 0.40 (0.197 ± 0.016)								6.35 ± 0.25 (0.250 ± 0.010)											
(T) Thickness	3.40 (0.134)								3.40 (0.134)								3.40 (0.134)											
(t) Terminal	0.75 ± 0.35 (0.030 ± 0.014)								0.85 ± 0.35 (0.033 ± 0.014)								0.85 ± 0.35											
Voltage (V)	600	630	1000	1500	2000	2500	3000	4000	600	630	1000	1500	2000	2500	3000	4000	5000	600	630	1000	1500	2000	2500	3000	4000	5000		
Cap (pF)	1.5	1R5							1.5	1R5								1.5	1R5									
	1.8	1R8							1.8	1R8								1.8	1R8									
	2.2	2R2							2.2	2R2								2.2	2R2									
	2.7	2R7							2.7	2R7								2.7	2R7									
	3.3	3R3							3.3	3R3								3.3	3R3									
	3.9	3R9							3.9	3R9								3.9	3R9									
	4.7	4R7							4.7	4R7								4.7	4R7									
	5.6	5R6							5.6	5R6								5.6	5R6									
	6.8	6R8							6.8	6R8								6.8	6R8									
	8.2	8R2							8.2	8R2								8.2	8R2									
	10	100	E	E	E	E	E	E	10	100	E	E	E	E	E	E	E	10	100	E	E	E	E	E	E	F	F	
	12	120	E	E	E	E	E	E	12	120	E	E	E	E	E	E	E	12	120	E	E	E	E	E	E	F	F	
	15	150	E	E	E	E	E	E	15	150	E	E	E	E	E	E	E	15	150	E	E	E	E	E	E	F	F	
	18	180	E	E	E	E	E	E	18	180	E	E	E	E	E	E	E	18	180	E	E	E	E	E	E	F	F	
	22	220	E	E	E	E	E	E	22	220	E	E	E	E	E	E	E	22	220	E	E	E	E	E	E	F	F	
	27	270	E	E	E	E	E	E	27	270	E	E	E	E	E	E	E	27	270	E	E	E	E	E	E	F	F	
	33	330	E	E	E	E	E	E	33	330	E	E	E	E	E	E	E	33	330	E	E	E	E	E	E	F	F	
	39	390	E	E	E	E	E	E	39	390	E	E	E	E	E	E	E	39	390	E	E	E	E	E	E	F	F	
	47	470	E	E	E	E	E	E	47	470	E	E	E	E	E	E	E	47	470	E	E	E	E	E	E	F	F	
	56	560	E	E	E	E	E	F	56	560	E	E	E	E	E	E	F	56	560	E	E	E	E	E	E	F	G	
	68	680	E	E	E	E	E	F	68	680	E	E	E	E	E	E	F	68	680	E	E	E	E	E	E	F	G	
	82	820	E	E	E	E	E	F	82	820	E	E	E	E	E	E	F	82	820	E	E	E	E	E	E	F	G	
	100	101	E	E	E	E	E	F	100	101	E	E	E	E	E	E	F	100	101	E	E	E	E	E	E	F	G	
	120	121	E	E	E	E	E	F	120	121	E	E	E	E	E	E	F	120	121	E	E	E	E	E	E	F	G	
	150	151	E	E	E	E	E	F	150	151	E	E	E	E	E	E	F	150	151	E	E	E	E	E	E	F	G	
	180	181	E	E	E	E	E	F	180	181	E	E	E	E	E	E	F	180	181	E	E	E	E	E	E	F	G	
	220	221	E	E	E	E	E	F	220	221	E	E	E	E	E	E	F	220	221	E	E	E	E	E	E	F	G	
	270	271	E	E	E	E	E	F	270	271	E	E	E	E	E	E	F	270	271	E	E	E	E	E	E	F	G	
	330	331	E	E	E	E	E	F	330	331	E	E	E	E	E	E	F	330	331	E	E	E	E	E	E	F	G	
	390	391	E	E	E	E	E	F	390	391	E	E	E	E	E	E	F	390	391	E	E	E	E	E	E	F	G	
	470	471	E	E	E	E	E	F	470	471	E	E	E	E	E	E	F	470	471	E	E	E	E	E	E	F	G	
	560	561	E	E	E	E	E	F	560	561	E	E	E	E	E	E	F	560	561	E	E	E	E	E	E	F	G	
	680	681	E	E	E	E	E	F	680	681	E	E	E	E	E	E	F	680	681	E	E	E	E	E	E	F	G	
	750	751	E	E	E	E	E	F	750	751	E	E	E	E	E	E	F	750	751	E	E	E	E	E	E	F	G	
	820	821	E	E	E	E	E	F	820	821	E	E	E	E	E	E	F	820	821	E	E	E	E	E	E	F	G	
	1000	102	E	E	E	E	E	F	1000	102	E	E	E	E	E	E	F	1000	102	E	E	E	E	E	E	F	G	
	1200	122	E	E	E	E	E	G	1200	122	E	E	E	E	E	E	G	1200	122	E	E	E	E	E	E	F	G	
	1500	152	E	E	E	E	E	G	1500	152	E	E	E	E	E	E	G	1500	152	E	E	E	E	E	E	F	G	
	1800	182	E	E	E	E	E	G	1800	182	E	E	E	E	E	E	G	1800	182	E	E	E	E	E	E	F	G	
	2200	222	E	E	E	E	E	G	2200	222	E	E	E	E	E	E	G	2200	222	E	E	E	E	E	E	F	G	
	2700	272	E	E	E	E	E	G	2700	272	E	E	E	E	E	E	G	2700	272	E	E	E	E	E	E	F	G	
	3300	332	E	E	E	E	E	G	3300	332	E	E	E	E	E	E	G	3300	332	E	E	E	E	E	E	F	G	
	3900	392	E	E	E	E	E	G	3900	392	E	E	E	E	E	E	G	3900	392	E	E	E	E	E	E	F	G	
	4700	472	E	E	E	E	E	G	4700	472	E	E	E	E	E	E	G	4700	472	E	E	E	E	E	E	F	G	
	5600	562	F	F	F	F	G	5600	562	F	F	F	F	G	5600	562	F	F	F	F	G	5600	562	F	F	F	F	G
	6800	682	F	F	F	F	G	6800	682	F	F	F	F	G	6800	682	F	F	F	F	G	6800	682	F	F	F	F	G
	8200	822	G	G	G	G		8200	822	G	G	G	G		8200	822	G	G	G	G		8200	822	G	G	G	G	
Cap (µF)	0.010	103							0.010	103								0.010	103									
	0.012	123							0.012	123								0.012	123									
	0.015	153							0.015	153								0.015	153									
	0.018	183							0.018	183								0.018	183									
	0.022	223							0.022	223								0.022	223									
	0.033	333							0.033	333								0.033	333									
	0.047	473							0.047	473								0.047	473									
	0.056	563							0.056	563								0.056	563									
	0.068	683							0.068	683								0.068	683									
	0.100	104							0.100	104								0.100	104									
Voltage (V)	600	630	1000	1500	2000	2500	3000	4000	600	630	1000	1500	2000	2500	3000	4000	5000	600	630	1000	1500	2000	2500	3000	4000	5000		
Case Size	1825								2220								2225											

NOTE: Contact factory for non-specified capacitance

Letter	A	C	E	F	G	X
Max.	0.813	1.448	1.803	2.210	2.794	0.940
Thickness	(0.032)	(0.057)	(0.071)	(0.087)	(0.110)	(0.037)



The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at [www.avx.com/disclaimer/](http://www.avx.com/disclaimer/) by reference and should be reviewed in full before placing any order.

043019

# High Voltage MLC Chips

## FLEXITERM® - 600V to 5000V Applications



### X7R Dielectric

Performance Characteristics

Capacitance Range	10 pF to 0.82 µF (25°C, 1.0 ± 0.2 Vrms at 1kHz)
Capacitance Tolerances	±10%; ±20%; +80%, -20%
Dissipation Factor	2.5% max. (+25°C, 1.0 ± 0.2 Vrms, 1kHz)
Operating Temperature Range	-55°C to +125°C
Temperature Characteristic	±15% (0 VDC)
Voltage Ratings	600, 630, 1000, 1500, 2000, 2500, 3000, 4000 & 5000 VDC (+125°C)
Insulation Resistance (+25°C, at 500 VDC)	100K MΩ min. or 1000 MΩ · µF min., whichever is less
Insulation Resistance (+125°C, at 500 VDC)	10K MΩ min. or 100 MΩ · µF min., whichever is less
Dielectric Strength	Minimum 120% rated voltage for 5 seconds at 50 mA max. current

### X7R CAPACITANCE RANGE

#### PREFERRED SIZES ARE SHADED

Case Size	0805				1206				1210				1808				1812			
	Soldering				Soldering				Soldering				Soldering				Soldering			
(L) Length	Reflow/Wave 2.10 ± 0.20 (0.083 ± 0.008)				Reflow/Wave 3.30 ± 0.30 (0.130 ± 0.012)				Reflow Only 3.30 ± 0.40 (0.130 ± 0.016)				Reflow Only 4.60 ± 0.50 (0.181 ± 0.020)				Reflow Only 4.60 ± 0.50 (0.181 ± 0.020)			
W) Width	1.25 ± 0.20 (0.049 ± 0.008)				1.60 ± 0.30/0.10 (0.063 ± 0.012/-0.004)				2.50 ± 0.30 (0.098 ± 0.012)				2.00 ± 0.20 (0.079 ± 0.008)				3.00 ± 0.30 (0.126 ± 0.012)			

# High Voltage MLC Chips

## FLEXITERM® - 600V to 5000V Applications



### X7R CAPACITANCE RANGE

#### PREFERRED SIZES ARE SHADED

Case Size	1825								2220								2225								3640													
Soldering	Reflow Only								Reflow Only								Reflow Only								Reflow Only													
(L) Length	4.60 ± 0.50 (0.181 ± 0.020)								5.70 ± 0.50 (0.224 ± 0.020)								5.72 ± 0.25 (0.225 ± 0.010)								9.14 ± 0.25 (0.360 ± 0.010)													
(W) Width	6.30 ± 0.40 (0.248 ± 0.016)								6.00 ± 0.40 (0.197 ± 0.016)								6.35 ± 0.25 (0.250 ± 0.010)								6.72 ± 0.25 (0.225 ± 0.010)													
(T) Thickness	3.40 (0.134)								3.40 (0.134)								2.54 (0.100)								2.54 (0.100)													
(t) Terminal	0.75 ± 0.35 (0.030 ± 0.014)								0.85 ± 0.35 (0.033 ± 0.014)								0.85 ± 0.35 (0.033 ± 0.014)								0.76 ± 0.030 (1.52 ± 0.062)													
Voltage (V)	600	630	1000	1500	2000	2500	3000	4000	600	630	1000	1500	2000	2500	3000	4000	5000	600	630	1000	1500	2000	2500	3000	4000	5000	600	630	1000	1500	2000	2500	3000	4000	5000			
Cap (pF)	100	101							100	101								100	101								100	101										
120																																						
150																																						
180																																						
220																																						
270																																						
330																																						
390																																						
470																																						
560																																						
680																																						
750																																						
820																																						
1000	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	F	F	F	F	G	G	G	G	G	G	G	G	G				
1200	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	F	F	F	F	G	G	G	G	G	G	G	G	G				
1500	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	F	F	F	F	G	G	G	G	G	G	G	G	G				
1800	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	F	F	F	F	G	G	G	G	G	G	G	G	G				
2200	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	F	F	F	F	G	G	G	G	G	G	G	G	G				
2700	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	F	F	F	F	G	G	G	G	G	G	G	G	G				
3300	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	F	F	F	F	G	G	G	G	G	G	G	G	G				
3900	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	F	F	F	F	G	G	G	G	G	G	G	G	G				
4700	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	F	F	F	F	G	G	G	G	G	G	G	G	G				
5600	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	F	F	F	F	G	G	G	G	G	G	G	G	G				
6800	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	F	F	F	F	G	G	G	G	G	G	G	G	G				
8200	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	F	F	F	F	G	G	G	G	G	G	G	G	G				
Cap (pF)	1070	108							F	F	F	F	F	F	F	F	G	F	F	F	F	F	F	F	F	G	G	G	G	G	G	G	G	G				
0015	F	F	F	G	G	G	G	G	F	F	F	G	G	G	G	G	F	F	F	G	G	G	G	F	F	G	G	G	G	G	G	G	G	G	G	G	G	G
0078	F	F	F	G	G				F	F	F	G	G	G			F	F	F	G	G	G		F	F	G	G	G		G	G	G	G	G	G			
0022	F	F	F	G	G				F	F	F	G	G			F	F	F	G	G	G		F	F	G	G	G		G	G	G	G	G	G				
0027	F	F	F	G					F	F	F	G				F	F	F	G				F	F	G				G	G	G	G						
0033	F	F	F	G					F	F	F	G				F	F	F	G				F	F	G				G	G	G	G						
0039	F	F	F	G					F	F	F	G				F	F	F	G				F	F	G				G	G	G	G						
0047	F	F	F	P					F	F	F	G				F	F	F	G				F	F	G				G	G	G	G						
0056	F	F	F	G					F	F	F	G				F	F	F	G				F	F	G				G	G	G	G						
0068	F	F	F	G					F	F	F	G				F	F	F	G				F	F	G				G	G	G	G						
0082	F	F	F	G					F	F	F	G				F	F	F	G				F	F	G				G	G	G	G						
0100	F	F	F	G					F	F	F	G				F	F	F	G				F	F	G				G	G	G	G						
0150	F	F	F						F	F	F	G				F	F	F	G				F	F	G				G	G	G	G						
0220	F	F	F						F	F	F	G				F	F	F	G				F	F	G				G	G	G	G						
0270	F	F	F						F	F	F	G				F	F	F	G				F	F	G				G	G	G	G						
0330	F	F	F						F	F	F	G				F	F	F	G				F	F	G				G	G	G	G						
0390	F	F	F						F	F	F	G				F	F	F	G				F	F	G				G	G	G	G						
0450	F	F	F						F	F	F	G				F	F	F	G				F	F	G				G	G	G	G						
0560	G	G	G						G	G	G					F	F	F					F	F					G	G	G	G						
0580	G	G	G						G	G	G					F	F	F					F	F					G	G	G	G						
0580	G	G	G						G	G	G					F	F	F					F	F					G	G	G	G						
0820	G	G	G						G	G	G					F	F	F					F	F					G	G	G	G						
1000	G	G	G						G	G	G					F	F	F					F	F					G	G	G	G						
Voltage (V)	600	630	1000	1500	2000	2500	3000	4000	600	630	1000	1500	2000	2500	3000	4000	5000	600	630	1000	1500	2000	2500	3000	4000	5000	600	630	1000	1500	2000	2500	3000	4000	5000			
Case Size	1825								2220								2225								3640													

Letter	A	C	E	F	G	P	X
Max. Thickness	0.813 (0.032)	1.448 (0.057)	1.8034 (0.071)	2.2098 (0.087)	2.794 (0.110)	3.048 (0.120)	0.940 (0.037)

NOTE: Contact factory for non-specified capacitance values



The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at [www.avx.com/disclaimer/](http://www.avx.com/disclaimer/) by reference and should be reviewed in full before placing any order.