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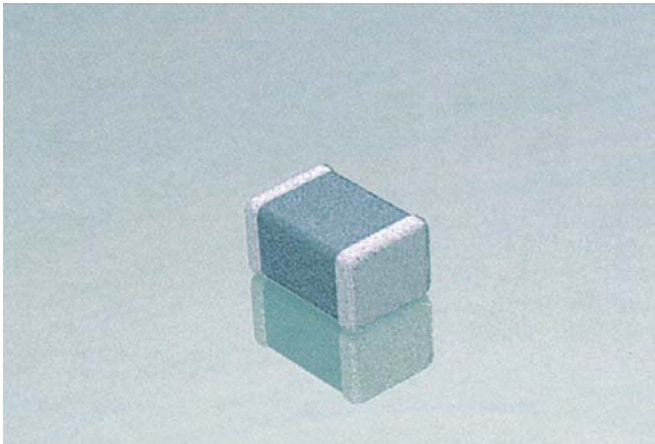
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Jameco Part Number 1067602

MLCC Tin/Lead Termination “B”



General Specifications



AVX Corporation will support those customers for commercial and military Multilayer Ceramic Capacitors with a termination consisting of 5% minimum lead. This termination is indicated by the use of a “B” in the 12th position of the AVX Catalog Part Number. This fulfills AVX’s commitment to providing a full range of products to our customers. AVX has provided in the following pages a full range of values that we are currently offering in this special “B” termination. Please contact the factory if you require additional information on our MLCC Tin/Lead Termination “B” products.

PART NUMBER (see page 2 for complete part number explanation)

LD05	5	A	101	J	A	B	2	A
Size	Voltage	Dielectric	Capacitance Code (In pF)	Capacitance Tolerance	Failure Rate	Terminations	Packaging	Special Code
LD02 - 0402 LD03 - 0603 LD04 - 0504* LD05 - 0805 LD06 - 1206 LD10 - 1210 LD12 - 1812 LD13 - 1825 LD14 - 2225	6.3V = 6 10V = Z 16V = Y 25V = 3 50V = 5 100V = 1 200V = 2 500V = 7	COG (NPO) = A X7R = C X5R = D X8R = F	2 Sig. Digits + Number of Zeros	B = ±.10 pF (<10pF) C = ±.25 pF (<10pF) D = ±.50 pF (<10pF) F = ±1% (≥ 10 pF) G = ±2% (≥ 10 pF) J = ±5% K = ±10% M = ±20%	A = Not Applicable	B = 5% min lead X = FLEXITERM™ with 5% min lead	2 = 7" Reel 4 = 13" Reel 7 = Bulk Cass. 9 = Bulk	A = Std. Product
							Contact Factory For Multiples	

*LD04 has the same CV ranges as LD03.

NOTE: Contact factory for availability of Tolerance Options for Specific Part Numbers.
Contact factory for non-specific capacitance values.

See FLEXITERM™ section
for CV options

NP0	Refer to page 4 for Electrical Graphs
X7R	Refer to page 14 for Electrical Graphs
X7S	Refer to page 18 for Electrical Graphs
X5R	Refer to page 21 for Electrical Graphs
Y5V	Refer to page 24 for Electrical Graphs

MLCC Tin/Lead Termination “B”



Capacitance Range (X8R Dielectric)

SIZE		LD03		LD05		LD06	
	WVDC	25V	50V	25V	50V	25V	50V
271	Cap 270	G	G				
331	(pF) 330	G	G	J	J		
471	470	G	G	J	J		
681	680	G	G	J	J		
102	1000	G	G	J	J	J	J
152	1500	G	G	J	J	J	J
182	1800	G	G	J	J	J	J
222	2200	G	G	J	J	J	J
272	2700	G	G	J	J	J	J
332	3300	G	G	J	J	J	J
392	3900	G	G	J	J	J	J
472	4700	G	G	J	J	J	J
562	5600	G	G	J	J	J	J
682	6800	G	G	J	J	J	J
822	8200	G	G	J	J	J	J
103	Cap 0.01	G	G	J	J	J	J
123	(µF) 0.012	G	G	J	J	J	J
153	0.015	G	G	J	J	J	J
183	0.018	G	G	J	J	J	J
223	0.022	G	G	J	J	J	J
273	0.027	G	G	J	J	J	J
333	0.033	G	G	J	J	J	J
393	0.039	G	G	J	J	J	J
473	0.047	G	G	J	J	J	J
563	0.056	G		N	N	M	M
683	0.068	G		N	N	M	M
823	0.082			N	N	M	M
104	0.1			N	N	M	M
124	0.12			N	N	M	M
154	0.15			N	N	M	M
184	0.18			N		M	M
224	0.22			N		M	M
274	0.27					M	M
334	0.33					M	M
394	0.39					M	
474	0.47					M	
684	0.68						
824	0.82						
105	1						
SIZE	WVDC	25V	50V	25V	50V	25V	50V
		LD03		LD05		LD06	

Letter	A	C	E	G	J	K	M	N	P	Q	X	Y	Z
Max. Thickness	0.33 (0.013)	0.56 (0.022)	0.71 (0.028)	0.86 (0.034)	0.94 (0.037)	1.02 (0.040)	1.27 (0.050)	1.40 (0.055)	1.52 (0.060)	1.78 (0.070)	2.29 (0.090)	2.54 (0.100)	2.79 (0.110)
	PAPER					EMBOSSED							

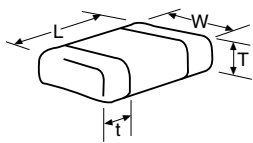
MLCC Tin/Lead Termination "B"



Capacitance Range (NP0 Dielectric)

PREFERRED SIZES ARE SHADED

SIZE		LD02			LD03			LD05					LD06						
Soldering		Reflow Only			Reflow Only			Reflow/Wave					Reflow/Wave						
Packaging		All Paper			All Paper			Paper/Embossed					Paper/Embossed						
(L) Length	MM (in.)	1.00 ± 0.10 (0.040 ± 0.004)			1.60 ± 0.15 (0.063 ± 0.006)			2.01 ± 0.20 (0.079 ± 0.008)					3.20 ± 0.20 (0.126 ± 0.008)						
(W) Width	MM (in.)	0.50 ± 0.10 (0.020 ± 0.004)			0.81 ± 0.15 (0.032 ± 0.006)			1.25 ± 0.20 (0.049 ± 0.008)					1.60 ± 0.20 (0.063 ± 0.008)						
(t) Terminal	MM (in.)	0.25 ± 0.15 (0.010 ± 0.006)			0.35 ± 0.15 (0.014 ± 0.006)			0.50 ± 0.25 (0.020 ± 0.010)					0.50 ± 0.25 (0.020 ± 0.010)						
WVDC		16	25	50	6.3	25	50	100	16	25	50	100	200	16	25	50	100	200	500
Cap (pF)	0.5	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J
	1.0	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J
	1.2	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J
	1.5	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J
	1.8	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J
2.2	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
2.7	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
3.3	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
3.9	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
4.7	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
5.6	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
6.8	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
8.2	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
10	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
12	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
15	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
18	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
22	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
27	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
33	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
39	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
47	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
56	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
68	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
82	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
100	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
120	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
150	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
180	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
220	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	M	
270				G	G	G	G	J	J	J	J	M	J	J	J	J	J	M	
330				G	G	G	G	J	J	J	J	M	J	J	J	J	J	M	
390				G	G	G	G	J	J	J	J	M	J	J	J	J	J	M	
470				G	G	G	G	J	J	J	J	M	J	J	J	J	J	M	
560				G	G	G	G	J	J	J	J	M	J	J	J	J	J	M	
680				G	G	G	G	J	J	J	J		J	J	J	J	J	P	
820				G	G	G	G	J	J	J	J		J	J	J	J	M		
1000				G	G	G		J	J	J	J		J	J	J	J	Q		
1200								J	J	J	J		J	J	J	J	Q		
1500								J	J	J			J	J	J	M	Q		
1800								J	J	J			J	J	M	M			
2200								J	J	M			J	J	M	P			
2700								J	J	M			J	J	M	P			
3300													J	J	M	P			
3900													J	J	M	P			
4700													J	J	M	P			
5600													J	J	M				
6800													M	M					
8200													M	M					
Cap (µF)														M	M				
0.010																			
0.012																			
0.015																			
0.018																			
0.022																			
0.027																			
0.033																			
0.039																			
0.047																			
0.068																			
0.082																			
0.1																			
WVDC		16	25	50	6.3	25	50	100	16	25	50	100	200	16	25	50	100	200	500
SIZE		LD02			LD03			LD05					LD06						
Letter		A	C	E	G	J	K	M	N	P	Q	X	Y	Z					
Max. Thickness		0.33 (0.013)	0.56 (0.022)	0.71 (0.028)	0.86 (0.034)	0.94 (0.037)	1.02 (0.040)	1.27 (0.050)	1.40 (0.055)	1.52 (0.060)	1.78 (0.070)	2.29 (0.090)	2.54 (0.100)	2.79 (0.110)					
		PAPER					EMBOSS												



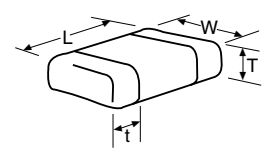
MLCC Tin/Lead Termination "B"



Capacitance Range (NP0 Dielectric)

PREFERRED SIZES ARE SHADED

SIZE		LD10					LD12					LD13			LD14		
Soldering		Reflow Only					Reflow Only					Reflow Only			Reflow Only		
Packaging		Paper/Embossed					All Embossed					All Embossed			All Embossed		
(L) Length	MM (in.)	3.20 ± 0.20 (0.126 ± 0.008)					4.50 ± 0.30 (0.177 ± 0.012)					4.50 ± 0.30 (0.177 ± 0.012)			5.72 ± 0.25 (0.225 ± 0.010)		
(W) Width	MM (in.)	2.50 ± 0.20 (0.098 ± 0.008)					3.20 ± 0.20 (0.126 ± 0.008)					6.40 ± 0.40 (0.252 ± 0.016)			6.35 ± 0.25 (0.250 ± 0.010)		
(t) Terminal	MM (in.)	0.50 ± 0.25 (0.020 ± 0.010)					0.61 ± 0.36 (0.024 ± 0.014)					0.61 ± 0.36 (0.024 ± 0.014)			0.64 ± 0.39 (0.025 ± 0.015)		
WVDC		25	50	100	200	500	25	50	100	200	500	50	100	200	50	100	200
Cap (pF)	0.5																
	1.0																
	1.2																
	1.5																
	1.8																
	2.2																
	2.7																
	3.3																
	3.9																
	4.7																
	5.6																
	6.8																
	8.2																
	10					J											
	12					J											
	15					J											
	18					J											
	22					J											
	27					J											
	33					J											
	39					J											
	47					J											
	56					J											
	68					J											
	82					J											
	100					J											
	120					J											
	150					J											
	180					J											
	220					J											
	270					J											
	330					J											
	390					M											
	470					M											
	560	J	J	J	J	M											
	680	J	J	J	J	M											
	820	J	J	J	J	M											
	1000	J	J	J	J	M	K	K	K	K	M	M	M	M	M	M	P
	1200	J	J	J	M		K	K	K	K	M	M	M	M	M	M	P
	1500	J	J	J	M		K	K	K	K	M	M	M	M	M	M	P
	1800	J	J	J	M		K	K	K	K	M	M	M	M	M	M	P
	2200	J	J	J	Q		K	K	K	K	P	M	M	M	M	M	P
	2700	J	J	J	Q		K	K	K	P	Q	M	M	M	M	M	P
	3300	J	J	J			K	K	K	P	Q	M	M	M	M	M	P
	3900	J	J	M			K	K	K	P	Q	M	M	M	M	M	P
	4700	J	J	M			K	K	K	P	Q	M	M	M	M	M	P
	5600						K	K	M	P	X	M	M	M	M	M	P
	6800						K	K	M	X		M	M	M	M	M	P
	8200						K	M	M			M	M	M	M	M	P
Cap (µF)	0.010						K	M	M			M	M		M	M	P
	0.012						K	M				M	M		M	M	P
	0.015						M	M				M	M		M	M	Y
	0.018						M	M				P	M		M	M	Y
	0.022						M	M				P			M	Y	Y
	0.027														P	Y	Y
	0.033																
	0.039																
	0.047																
	0.068																
	0.082																
	0.1																
WVDC		25	50	100	200	500	25	50	100	200	500	50	100	200	50	100	200



Letter	A	C	E	G	J	K	M	N	P	Q	X	Y	Z
Max. Thickness	0.33 (0.013)	0.56 (0.022)	0.71 (0.028)	0.86 (0.034)	0.94 (0.037)	1.02 (0.040)	1.27 (0.050)	1.40 (0.055)	1.52 (0.060)	1.78 (0.070)	2.29 (0.090)	2.54 (0.100)	2.79 (0.110)
	PAPER					EMBOSS							



MLCC Tin/Lead Termination “B”



Capacitance Range (X7R Dielectric)

PREFERRED SIZES ARE SHADED

SIZE	LD02			LD03						LD05						LD06										
Soldering	Reflow Only			Reflow Only						Reflow/Wave						Reflow/Wave										
Packaging	All Paper			All Paper						Paper/Embossed						Paper/Embossed										
(L) Length	MM	MM	MM	1.60 ± 0.15 (0.063 ± 0.006)						2.01 ± 0.20 (0.079 ± 0.008)						3.20 ± 0.20 (0.126 ± 0.008)										
(W) Width	MM	MM	MM	0.81 ± 0.15 (0.032 ± 0.006)						1.25 ± 0.20 (0.049 ± 0.008)						1.60 ± 0.20 (0.063 ± 0.008)										
(t) Terminal	MM	MM	MM	0.35 ± 0.15 (0.014 ± 0.006)						0.50 ± 0.25 (0.020 ± 0.010)						0.50 ± 0.25 (0.020 ± 0.010)										
WVDC	16	25	50	6.3	10	16	25	50	100	200	6.3	10	16	25	50	100	200	6.3	10	16	25	50	100	200	500	
Cap (pF)	100																									
	150																									
	220		C																							
	330		C					G	G	G		J	J	J	J	J	J									K
	470		C					G	G	G		J	J	J	J	J	J									K
	680		C					G	G	G		J	J	J	J	J	J									K
	1000		C					G	G	G		J	J	J	J	J	J									K
	1500		C					G	G	G		J	J	J	J	J	J		J	J	J	J	J	J	J	M
	2200		C					G	G	G		J	J	J	J	J	J		J	J	J	J	J	J	J	M
	3300		C	C				G	G	G		J	J	J	J	J	J		J	J	J	J	J	J	J	M
	4700		C	C				G	G	G		J	J	J	J	J	J		J	J	J	J	J	J	J	M
	6800		G	C				G	G	G		J	J	J	J	J	J		J	J	J	J	J	J	J	M
Cap (µF)	0.010	C						G	G	G		J	J	J	J	J	J		J	J	J	J	J	J	J	P
	0.015	C						G	G	G		J	J	J	J	J	J		J	J	J	J	J	J	J	M
	0.022	C						G	G	G		J	J	J	J	J	J		J	J	J	J	J	J	J	M
	0.033							G	G	G		J	J	J	J	N			J	J	J	J	J	J	J	M
	0.047							G	G	G		J	J	J	J	N			J	J	J	J	J	J	J	M
	0.068							G	G	G		J	J	J	J	N			J	J	J	J	J	J	J	P
	0.10							G	G	G		J	J	J	J	N			J	J	J	J	J	J	J	M
	0.15							G	G	G		J	J	J	J	N			J	J	J	J	J	J	J	P
	0.22							G	G	G		J	J	J	N				J	J	J	J	J	J	J	
	0.33											N	N	N	N				J	J	M	P				Q
	0.47											N	N	N	N	N			M	M	M	P				
	0.68											N	N	N	N				M	M	M	Q				
	1.0						J	J				N	N	N					M	M	Q	Q				Q
	1.5																		P	Q	Q	Q				
	2.2						J								N				Q	Q	Q	Q				
	3.3																									
	4.7												P	P						Q	Q	Q				
	10																			Q	Q	Q				
	22																			Q						
	47																									
	100																									
WVDC	16	25	50	6.3	10	16	25	50	100	200	6.3	10	16	25	50	100	200	6.3	10	16	25	50	100	200	500	
SIZE	LD02			LD03						LD05						LD06										

Letter	A	C	E	G	J	K	M	N	P	Q	X	Y	Z
Max. Thickness	0.33 (0.013)	0.56 (0.022)	0.71 (0.028)	0.86 (0.034)	0.94 (0.037)	1.02 (0.040)	1.27 (0.050)	1.40 (0.055)	1.52 (0.060)	1.78 (0.070)	2.29 (0.090)	2.54 (0.100)	2.79 (0.110)
	PAPER					EMBOSS							

= Under Development

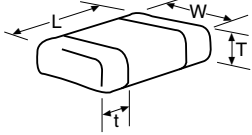
MLCC Tin/Lead Termination “B”

Capacitance Range (X7R Dielectric)



PREFERRED SIZES ARE SHADED

SIZE	LD10							LD12				LD13		LD14	
	Reflow Only							Reflow Only				Reflow Only		Reflow Only	
Packaging	Paper/Embossed							All Embossed				All Embossed		All Embossed	
(L) Length	3.20 ± 0.20 (0.126 ± 0.008)							4.50 ± 0.30 (0.177 ± 0.012)				4.50 ± 0.30 (0.177 ± 0.012)		5.72 ± 0.25 (0.225 ± 0.010)	
(W) Width	2.50 ± 0.20 (0.098 ± 0.008)							3.20 ± 0.20 (0.126 ± 0.008)				6.40 ± 0.40 (0.252 ± 0.016)		6.35 ± 0.25 (0.250 ± 0.010)	
(t) Terminal	0.50 ± 0.25 (0.020 ± 0.010)							0.61 ± 0.36 (0.024 ± 0.014)				0.61 ± 0.36 (0.024 ± 0.014)		0.64 ± 0.39 (0.025 ± 0.015)	
WVDC	10	16	25	50	100	200	500	50	100	200	500	50	100	50	100
Cap (pF)															
100															
150															
220															
330															
470															
680															
1000															
1500	J	J	J	J	J	J	M								
2200	J	J	J	J	J	J	M								
3300	J	J	J	J	J	J	M								
4700	J	J	J	J	J	J	M								
6800	J	J	J	J	J	J	M								
Cap (μF)															
0.010	J	J	J	J	J	J	M	K	K	K	K	M	M	M	P
0.015	J	J	J	J	J	J	P	K	K	K	P	M	M	M	P
0.022	J	J	J	J	J	J	Q	K	K	K	P	M	M	M	P
0.033	J	J	J	J	J	J	M	K	K	K	X	M	M	M	P
0.047	J	J	J	J	J	J	M	K	K	K	Z	M	M	M	P
0.068	J	J	J	J	J	J	M	K	K	K		M	M	M	P
0.10	J	J	J	J	J	M		K	K	K		M	M	M	P
0.15	J	J	J	J	M			K	K	P		M	M	M	P
0.22	J	J	J	J	P			K	K	P		M	M	M	P
0.33	J	J	J	J	Z			K	M			M	M	M	P
0.47	M	M	M	M	Z			K	P			M	M	M	P
0.68	M	M	P	X	Z			M	Q			M		M	P
1.0	N	N	P	X	Z			M	X			M		M	P
1.5	N	N	Z	Z	Z			Z	Z			M		M	X
2.2	Z	Z	Z	Z	Z			Z	Z					M	
3.3	Z	Z	Z	Z				Z							
4.7	Z	Z	Z	Z				Z							
10	Z	Z	Z												
22	Z	Z													
47															
100															
WVDC	10	16	25	50	100	200	500	50	100	200	500	50	100	50	100



Letter	A	C	E	G	J	K	M	N	P	Q	X	Y	Z
Max. Thickness	0.33 (0.013)	0.56 (0.022)	0.71 (0.028)	0.86 (0.034)	0.94 (0.037)	1.02 (0.040)	1.27 (0.050)	1.40 (0.055)	1.52 (0.060)	1.78 (0.070)	2.29 (0.090)	2.54 (0.100)	2.79 (0.110)
	PAPER					EMBOSS							

= Under Development

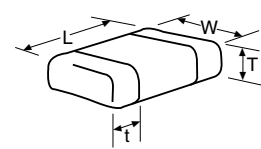
MLCC Tin/Lead Termination “B”



Capacitance Range (X5R Dielectric)

PREFERRED SIZES ARE SHADED

SIZE	LD02					LD03					LD05					LD06					LD10					LD12									
	4	6.3	10	16	25	50	4	6.3	10	16	25	35	50	6.3	10	16	25	35	50	6.3	10	16	25	35	50	4	6.3	10	16	25	35	50	6.3	10	25
Soldering	Reflow Only					Reflow Only					Reflow/Wave					Reflow/Wave					Reflow/Wave														
Packaging	All Paper					All Paper					Paper/Embossed					Paper/Embossed					Paper/Embossed														
(L) Length	1.00 ± 0.10 (0.040 ± 0.004)					1.60 ± 0.15 (0.063 ± 0.006)					2.01 ± 0.20 (0.079 ± 0.008)					3.20 ± 0.20 (0.126 ± 0.008)					3.20 ± 0.20 (0.126 ± 0.008)														
(W) Width	0.50 ± 0.10 (0.020 ± 0.004)					0.81 ± 0.15 (0.032 ± 0.006)					1.25 ± 0.20 (0.049 ± 0.008)					1.60 ± 0.20 (0.063 ± 0.008)					2.50 ± 0.20 (0.098 ± 0.008)														
(T) Max Thickness	0.60 (0.024)					0.90 (0.035)					1.30 (0.051)					1.50 (0.059)					1.70 (0.067)														
(t) Terminal	0.25 ± 0.15 (0.010 ± 0.006)					0.35 ± 0.15 (0.014 ± 0.006)					0.50 ± 0.25 (0.020 ± 0.010)					0.50 ± 0.25 (0.020 ± 0.010)					0.50 ± 0.25 (0.020 ± 0.010)														
Cap (pF)	100 150 220																																		
	330 470 680																																		
	1000 1500 2200																																		
Cap (µF)	3300 4700 6800																																		
	0.010 0.015 0.022																																		
	0.033 0.047 0.068																																		
	0.10 0.15 0.22																																		
	0.33 0.47 0.68																																		
	1.0 1.5 2.2																																		
	3.3 4.7 10																																		
	22 47 100																																		



Letter	E	G	J	K	M	N	Q	X	Y	Z
Max. Thickness	0.71 (0.028)	0.86 (0.034)	0.94 (0.037)	1.02 (0.040)	1.27 (0.050)	1.40 (0.055)	1.78 (0.070)	2.29 (0.090)	2.54 (0.100)	2.79 (0.110)
	PAPER			EMBOSSSED						

 = Under Development

*Optional Specifications – Contact factory

NOTE: Contact factory for non-specified capacitance values