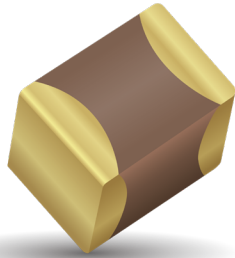


MLCC Gold Termination – AU Series

General Specifications



KYOCERA AVX will support those customers for commercial and military Multilayer Ceramic Capacitors with a termination consisting of Gold. This termination is indicated by the use of a "7" or "G" in the 12th position of the KYOCERA AVX Catalog Part Number. This fulfills KYOCERA AVX's commitment to providing a full range of products to our customers. Please contact the factory if you require additional information on our MLCC Gold Termination.

PART NUMBER

AU03	Y	G	104	K	A	7	2	A
Size	Voltage	Dielectric	Capacitance Code (In pF)	Capacitance Tolerance	Failure Rate	Terminations	Packaging	Special Code
AU02 - 0402 AU03 - 0603 AU05 - 0805 AU06 - 1206 AU10 - 1210 AU12 - 1812 AU13 - 1825 AU14 - 2225 AU16 - 0306 AU17 - 0508 AU18 - 0612	6.3V = 6 10V = Z 16V = Y 25V = 3 35V = D 50V = 5 100V = 1 200V = 2 500V = 7	C0G (NP0) = A X7R = C X5R = D	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	G* = 1.9 μ" to 7.87 μ" 7 = 100 μ" minimum	2 = 7" Reel 4 = 13" Reel U = 4mm TR (01005) Contact Factory For Multiples*	A = Std. Product

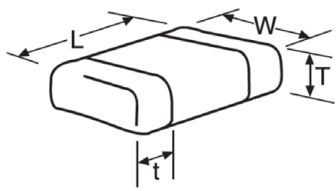
MLCC Gold Termination – AU Series

Capacitance Range (NP0 Dielectric)



PREFERRED SIZES ARE SHADED

SIZE	AU02			AU03				AU05					AU06						
Soldering	Reflow/Epoxy/ Wire Bond*			Reflow/Epoxy/ Wire Bond*				Reflow/Epoxy/ Wire Bond*					Reflow/Epoxy/ Wire Bond*						
Packaging	All Paper			All Paper				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)						
(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)						
(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)						
WVDC	16	25	50	16	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	C	C	C	G	G	G	G	J	J	J	J	M	J	J	J	J	J	M
	330	C	C	C	G	G	G	G	J	J	J	J	M	J	J	J	J	J	M
	390	C	C	C	G	G	G	G	J	J	J	J	M	J	J	J	J	J	M
	470	C	C	C	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	M	J	J	J	J	J	P
	820				G	G	G	G	J	J	J	J	M	J	J	J	J	J	M
	1000				G	G	G	G	J	J	J	J	M	J	J	J	J	J	Q
	1200								J	J	J	J		J	J	J	J	J	Q
	1500								J	J	J	J		J	J	J	J	J	Q
	1800								J	J	J			J	J	M	M		
	2200								J	J	J	N		J	J	M	P		
	2700								J	J	J	N		J	J	M	P		
	3300								J	J				J	J	M	P		
	3900								J	J				J	J	M	P		
	4700								J	J				J	J	M	P		
	5600													J	J	M			
	6800													M	M				
	8200													M	M				
	0.010													M	M				
	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	16	25	50	100	16	25	50	100	200	16	25	50	100	200	500	
SIZE	AU02			AU03				AU05					AU06						



* Contact Factory

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)	0.90 (0.035)	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					EMBOSSSED							



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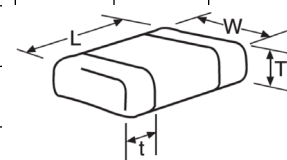
MLCC Gold Termination – AU Series

Capacitance Range (NP0 Dielectric)



PREFERRED SIZES ARE SHADED

SIZE		AU10					AU12					AU13			AU14		
Soldering		Reflow/Epoxy/ Wire Bond*					Reflow/Epoxy/ Wire Bond*					Reflow/Epoxy/ Wire Bond*			Reflow/Epoxy/ Wire Bond*		
Packaging		Paper/Embossed					All Embossed					All Embossed			All Embossed		
(L) Length	mm	3.20 ± 0.20					4.50 ± 0.30					4.50 ± 0.30			5.72 ± 0.25		
	(in.)	(0.126 ± 0.008)					(0.177 ± 0.012)					(0.177 ± 0.012)			(0.225 ± 0.010)		
W) Width	mm	2.50 ± 0.20					3.20 ± 0.20					6.40 ± 0.40			6.35 ± 0.25		
	(in.)	(0.098 ± 0.008)					(0.126 ± 0.008)					(0.252 ± 0.016)			(0.250 ± 0.010)		
(t) Terminal	mm	0.50 ± 0.25					0.61 ± 0.36					0.61 ± 0.36			0.64 ± 0.39		
	(in.)	(0.020 ± 0.010)					(0.024 ± 0.014)					(0.024 ± 0.014)			(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	J	M											
680	J	J	J	J	J	M											
820	J	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	M	K	K	K	K	M	M	M	M	M	M	P	
1500	J	J	J	M	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	K	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	J	J				K	K	M	P	X	M	M	M	M	M	P	
6800	J	J				K	K	M	X		M	M	M	M	M	P	
8200	J	J				K	M	M			M	M	M	M	M	P	
0.010	J	J				K	M	M			M	M		M	M	P	
0.012	J	J				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						M	M				P			P	Y	Y	
0.033						M	M				P			P			
0.039						M	M				P			P			
0.047						M	M				P			P			
0.068						M	M							P			
0.082						M	M							Q			
0.1														Q			
WVDC		25	50	100	200	500	25	50	100	200	500	50	100	200	50	100	200
SIZE		AU10					AU12					AU13			AU14		



* Contact Factory

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)	0.90 (0.035)	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 Gold Termination – AU Series

Capacitance Range (X7R Dielectric)



PREFERRED SIZES ARE SHADED

SIZE	AU02					AU03					AU05					AU06											
Soldering	Reflow/Epoxy/ Wire Bond*					Reflow/Epoxy/ Wire Bond*					Reflow/Epoxy/ Wire Bond*					Reflow/Epoxy/ Wire Bond*											
Packaging	All Paper					All Paper					Paper/Embossed					Paper/Embossed											
(L) Length	mm	1.00 ± 0.10				1.60 ± 0.15					2.01 ± 0.20					3.20 ± 0.20											
	(in.)	(0.040 ± 0.004)				(0.063 ± 0.006)					(0.079 ± 0.008)					(0.126 ± 0.008)											
(W) Width	mm	0.50 ± 0.10				0.81 ± 0.15					1.25 ± 0.20					1.60 ± 0.20											
	(in.)	(0.020 ± 0.004)				(0.032 ± 0.006)					(0.049 ± 0.008)					(0.063 ± 0.008)											
(t) Terminal	mm	0.25 ± 0.15				0.35 ± 0.15					0.50 ± 0.25					0.50 ± 0.25											
	(in.)	(0.010 ± 0.006)				(0.014 ± 0.006)					(0.020 ± 0.010)					(0.020 ± 0.010)											
WVDC		10	16	25	50	63	10	16	25	50	100	200	63	10	16	25	50	100	200	63	10	16	25	50	100	200	500
Cap (pF)	100																										
	150																										
	220				C				G																		
	330				C					G	G	G		J	J	J	J	J	J								K
	470				C					G	G	G		J	J	J	J	J	J								K
Cap (pF)	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			J	J	J	J	J	J		J	J	J	J	J	J	M
	2200				C					G	G			J	J	J	J	J	J		J	J	J	J	J	J	M
	3300				C					G	G			J	J	J	J	J	J		J	J	J	J	J	J	M
Cap (pF)	4700			C	C					G	G			J	J	J	J	J	J		J	J	J	J	J	J	M
	6800		C	C						G	G			J	J	J	J	J	J		J	J	J	J	J	J	P
	0.010		C						G		G	G		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	M
	0.022	C	C						G	G	G			J	J	J	J	J	J	N		J	J	J	J	J	M
Cap (pF)	0.033	C							G	G	G			J	J	J	J	N			J	J	J	J	J	J	M
	0.047								G	G	G			J	J	J	J	N			J	J	J	J	J	J	M
	0.068								G	G	G			J	J	J	J	N			J	J	J	J	J	J	P
	0.10								G	G	G			J	J	J	J				J	J	J	J	J	M	P
	0.15						G	G						J	J	J	N	N			J	J	J	J	J	J	
Cap (pF)	0.22						G	G						J	J	N	N	N			J	J	J	J	J	Q	
	0.33													N	N	N	N	N			J	J	M	P	Q		
	0.47													N	N	N	N	N			M	M	M	P	Q		
	0.68													N	N	N	N	N			M	M	M	Q	Q		
	1.0													N	N	N					M	M		Q	Q		
Cap (pF)	1.5																				P	Q	Q				
	2.2																				Q	Q	Q				
	3.3																				Q	Q					
	4.7																				P*						
	10																				Q*	Q*					
Cap (pF)	22																				Q*						
	47																										
	100																										
WVDC		10	16	25	50	63	10	16	25	50	100	200	63	10	16	25	50	100	200	63	10	16	25	50	100	200	500
SIZE		AU02				AU03					AU05					AU06											

* Contact Factory

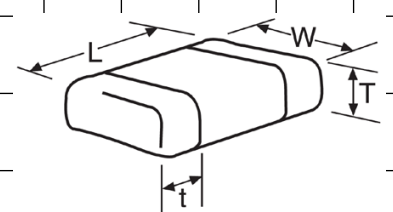
Letter	A	C	E	G	J	K	M	N	P	Q	X	Y	Z
Max. Thickness	0.33 (0.013)	0.56 (0.022)	0.71 (0.028)	0.90 (0.035)	0.94 (0.037)	1.02 (0.040)	1.27 (0.050)	1.40 (0.055)	1.52 (0.060)	1.78 (0.070)	2.29 (0.090)	2.54 (0.100)	2.79 (0.110)
	PAPER					EMBOSS							

MLCC Gold Termination – AU Series

Capacitance Range (X7R Dielectric)

PREFERRED SIZES ARE SHADED

SIZE	AU10							AU12				AU13		AU14		
Soldering	Reflow/Epoxy/ Wire Bond*							Reflow/Epoxy/ Wire Bond*				Reflow/Epoxy/ Wire Bond*		Reflow/Epoxy/ Wire Bond*		
Packaging	Paper/EmbossedU							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	M									
	6800	J	J	J	J	J	M									
Cap (µF)	0.010	J	J	J	J	J	M	K	K	K	K	M	M	M	P	
	0.015	J	J	J	J	J	P	K	K	K	P	M	M	M	P	
	0.022	J	J	J	J	J	Q	K	K	K	P	M	M	M	P	
0.033	J	J	J	J	J	J	Q	K	K	K	X	M	M	M	P	
	0.047	J	J	J	J	J		K	K	K	Z	M	M	M	P	
	0.068	J	J	J	J	J	M	K	K	K	Z	M	M	M	P	
0.10	J	J	J	J	J	M		K	K	K	Z	M	M	M	P	
	0.15	J	J	J	J	M	Z	K	K	P		M	M	M	P	
	0.22	J	J	J	J	P	Z	K	K	P		M	M	M	P	
0.33	J	J	J	J	J	Q		K	M	X		M	M	M	P	
	0.47	M	M	M	M	Q		K	P			M	M	M	P	
	0.68	M	M	P	X	X		M	Q			M	P	M	P	
1.0	N	N		X	Z			M	X			M	P	M	P	
	1.5	N	N	Z	Z	Z		Z	Z	Z		M		M	X	
	2.2	X	X	Z	Z	Z		Z	Z					M		
3.3	X	X	Z	Z				Z								
	4.7	X	X	Z	Z			Z								
	10	Z	Z	Z												
22																
	47															
	100															
WVDC	10	16	25	50	100	200	500	50	100	200	500	50	100	50	100	
SIZE	AU10							AU12				AU13		AU14		



* Contact Factory

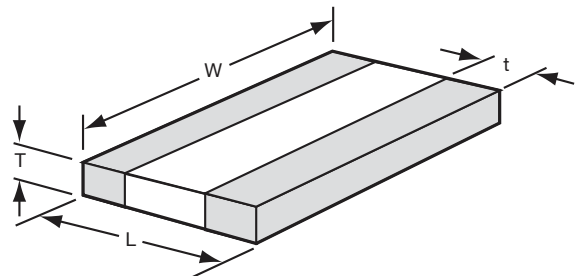
Letter	A	C	E	G	J	K	M	N	P	Q	X	Y	Z
Max. Thickness	0.33 (0.013)	0.56 (0.022)	0.71 (0.028)	0.90 (0.035)	0.94 (0.037)	1.02 (0.040)	1.27 (0.050)	1.40 (0.055)	1.52 (0.060)	1.78 (0.070)	2.29 (0.090)	2.54 (0.100)	2.79 (0.110)
	PAPER					EMBOSSSED							

MLCC Gold Termination – AU Series

AU16/AU17/AU18

SIZE		AU16 (0306)					AU17 (0508)					AU18 (0612)				
Packaging		Embossed					Embossed					Embossed				
Length	mm (in.)	0.81 ± 0.15 (0.032 ± 0.006)					1.27 ± 0.25 (0.050 ± 0.010)					1.60 ± 0.25 (0.063 ± 0.010)				
Width	mm (in.)	1.60 ± 0.15 (0.063 ± 0.006)					2.00 ± 0.25 (0.080 ± 0.010)					3.20 ± 0.25 (0.126 ± 0.010)				
Cap Code	WVDC	4	6.3	10	16	25	6.3	10	16	25	50	6.3	10	16	25	50
102	Cap .001	A	A	A	A	S	S	S	S	V	S	S	S	S	V	
222	(µF) .0022	A	A	A	A	S	S	S	S	V	S	S	S	S	V	
332	0.0033	A	A	A	A	S	S	S	S	V	S	S	S	S	V	
472	0.0047	A	A	A	A	S	S	S	S	V	S	S	S	S	V	
682	0.0068	A	A	A	A	S	S	S	S	V	S	S	S	S	V	
103	0.01	A	A	A	A	S	S	S	S	V	S	S	S	S	V	
153	0.015	A	A	A	A	S	S	S	S	V	S	S	S	S	W	
223	0.022	A	A	A	A	S	S	S	S	V	S	S	S	S	W	
333	0.033	A	A	A	A	S	S	S	V	V	S	S	S	S	W	
473	0.047	A	A	A	A	S	S	S	V	A	S	S	S	S	W	
683	0.068	A	A	A	A	S	S	S	A	A	S	S	S	V	W	
104	0.1	A	A	A	A	S	S	V	A	A	S	S	S	V	W	
154	0.15	A	A	A	A	S	S	V	A	A	S	S	S	W	W	
224	0.22	A	A	A	A	S	S	A	A	A	S	S	V	W		
334	0.33					V	V	A	A	A	S	S	V			
474	0.47					V	V	A	A	A	S	S	V			
684	0.68					A	A	A	A	A	V	V	W			
105	1	A				A	A	A	A	A	V	V	A			
155	1.5					A	A	A	A	A	W	W				
225	2.2										A	A				
335	3.3										A	A				
475	4.7															
685	6.8															
106	10															

PHYSICAL DIMENSIONS AND PAD LAYOUT



PHYSICAL DIMENSIONS

MM (IN.)

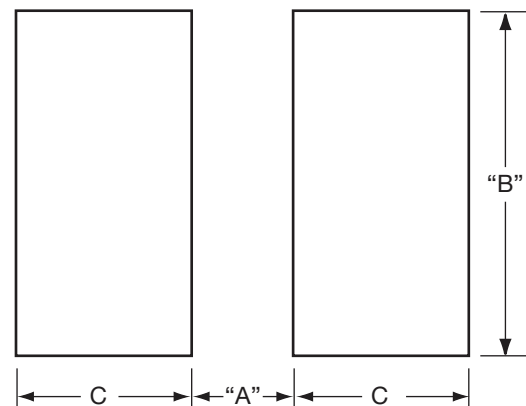
	L	W	t
AU16 (0306)	0.81 ± 0.15 (0.032 ± 0.006)	1.60 ± 0.15 (0.063 ± 0.006)	0.13 min. (0.005 min.)
AU17 (0508)	1.27 ± 0.25 (0.050 ± 0.010)	2.00 ± 0.25 (0.080 ± 0.010)	0.13 min. (0.005 min.)
AU18 (0612)	1.60 ± 0.25 (0.063 ± 0.010)	3.20 ± 0.25 (0.126 ± 0.010)	0.13 min. (0.005 min.)

T - See Range Chart for Thickness and Codes

PAD LAYOUT DIMENSIONS

MM (IN.)

	A	B	C
AU16 (0306)	0.31 (0.012)	1.52 (0.060)	0.51 (0.020)
AU17 (0508)	0.51 (0.020)	2.03 (0.080)	0.51 (0.020)
AU18 (0612)	0.76 (0.030)	3.05 (0.120)	0.635 (0.025)



Solid = X7R

= X5R

= X7S

mm (in.)

AU16 (0306)	
Code	Thickness
A	0.56 (0.022)

mm (in.)

AU16 (0508)	
Code	Thickness
S	0.56 (0.022)
V	0.76 (0.030)
A	1.02 (0.040)

mm (in.)

AU16 (0612)	
Code	Thickness
S	0.56 (0.022)
V	0.76 (0.030)
W	1.02 (0.040)
A	1.27 (0.050)