

MLCC Gold Termination – AU Series



General Specifications



AVX Corporation 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 AVX Catalog Part Number. This fulfills 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	C	104	K	A	7	2	A
Size	Voltage	Dielectric	Capacitance Code (In pF)	Capacitance Tolerance	Failure Rate	Terminations	Packaging	Special Code
AU01 - 0201 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 = $\pm 1\%$ (≥ 10 pF) G = $\pm 2\%$ (≥ 10 pF) J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$	A = Not Applicable	G* = 1.9 μ " to 7.87 μ " 7 = 100 μ " minimum	2 = 7" Reel 4 = 13" Reel 9 = Bulk Contact Factory For Multiples*	A = Std. Product

* Contact factory for availability.

MLCC Gold Termination – AU Series



Capacitance Range (NP0 Dielectric)

PREFERRED SIZES ARE SHADED

SIZE		AU01			AU02			AU03				AU05					AU06					
Soldering		Reflow/Epoxy/ Wire Bond*			Reflow/Epoxy/ Wire Bond*			Reflow/Epoxy/ Wire Bond				Reflow/Epoxy/ Wire Bond					Reflow/Epoxy/ Wire Bond					
Packaging		All Paper			All Paper			All Paper				Paper/Embossed					Paper/Embossed					
(L) Length	mm (in.)	0.60 ± 0.03 (0.024 ± 0.001)			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.)	0.30 ± 0.03 (0.011 ± 0.001)			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.)	0.15 ± 0.05 (0.006 ± 0.002)			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	16	25	50	16	25	50	100	16	25	50	100	200	16	25	50	100	200	500	
Cap (pF)	0.5	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	1.0	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	1.2	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	1.5	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	1.8	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	2.2	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	2.7	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	3.3	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	3.9	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	4.7	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	5.6	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	6.8	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	8.2	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	10	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	12	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	15	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	18	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	22	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	27	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	33	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	39	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	47	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	56	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	68	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	82	A	A	C	C	C	G	G	G	G	J	J	J	J	J	J	J	J	J	J	J	
	100	A	A	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		J	J	J	J	M	J	J	J	J	J	M	
	470			C	C	C	G	G	G		J	J	J	J	M	J	J	J	J	J	M	
		560						G	G	G		J	J	J	J	M	J	J	J	J	J	M
680							G	G	G		J	J	J	J		J	J	J	J	J	P	
820							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	Q		
	1500										J	J	J			J	J	J	M	Q		
	1800										J	J	J			J	J	M	M			
	2200										J	J	N			J	J	M	P			
	2700										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					
Cap (μF)	0.010															M	M					
	0.012															M	M					
	0.015																					
	0.018																					
	0.022																					
	0.027																					
	0.033																					
	0.039																					
	0.047																					
	0.068																					
	0.082																					
	0.1																					
WVDC		16	25	16	25	50	16	25	50	100	16	25	50	100	200	16	25	50	100	200	500	
SIZE		AU01			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					EMBOSSED							



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)		
WDC		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	J	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	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	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	K	M			M	M	M	M	M	P
Cap (µF)	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								Q		
	0.1														Q		
WDC		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						EMBOSS							



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 (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	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	M	
	2200			C					G	G	G		J	J	J	J	J	J		J	J	J	J	J	J	M	
	3300			C					G	G	G		J	J	J	J	J	J		J	J	J	J	J	J	M	
	4700			C					G	G	G		J	J	J	J	J	J		J	J	J	J	J	J	M	
	6800	C		C					G	G	G		J	J	J	J	J	J		J	J	J	J	J	J	P	
Cap (µF)	0.010	C							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	M		
	0.022	C							G	G		J	J	J	J	J	J	N	J	J	J	J	J	J	M		
	0.033								G	G		J	J	J	J	J	N		J	J	J	J	J	J	M		
	0.047							G	G	G		J	J	J	J	J	N		J	J	J	J	J	J	M		
	0.068							G	G	G		J	J	J	J	J	N		J	J	J	J	J	J	P		
	0.10		C*				G	G	G	G		J	J	J	J	J	N		J	J	J	J	J	M	P		
	0.15						G	G				J	J	J	J	J	N		J	J	J	J	J	Q			
	0.22						G	G				J	J	J	N	N	N		J	J	J	J	J	Q			
	0.33											N	N	N	N	N	N		J	J	M	P	Q	Q			
	0.47							J*				N	N	N	N				M	N	M	P	Q	Q			
	0.68											N	N	N	N				M	M	Q	Q	Q	Q			
	1.0						J*	J*				N	N	N*					M	M	Q	Q	Q				
	1.5																		P	Q	Q						
	2.2						J*								P*				Q	Q	Q	Q					
	3.3																										
	4.7												P*	P*						Q*	Q*	Q*					
	10											P*								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	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							

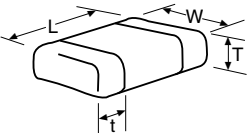
 = Under Development

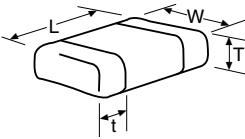
MLCC Gold Termination – AU Series



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/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		10	16	25	50	100	200	500	50	100	200	500	50	100	50	100
Cap (pF)	100															
	150															
	220															
	330															
	470															
Cap (μF)	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								
Cap (μF)	4700	J	J	J	J	J	J	M								
	6800	J	J	J	J	J	J	M								
	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
Cap (μF)	0.033	J	J	J	J	J	J	Q	K	K	K	X	M	M	M	P
	0.047	J	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
Cap (μF)	0.22	J	J	J	J	P	Z		K	K	P		M	M	M	P
	0.33	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	P	X	Z			M	X			M	P	M	P
Cap (μF)	1.5	N	N	Z	Z	Z			Z	Z			M		M	X
	2.2	X	X	Z	Z	Z			Z	Z			M		M	
	3.3	X	X	Z	Z				Z							
	4.7	X	X	Z	Z				Z							
	10	Z	Z	Z												
Cap (μF)	22	Z	Z													
	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							

PREFERRED SIZES ARE SHADED

A 3D perspective diagram of a rectangular block. The dimensions are labeled: L for length, W for width, T for total thickness, and t for the thickness of the central core.

[illegible]

☐ = *Optional Specifications – Contact factory

AVX

MLCC Gold Termination – AU Series



0612/0508/0306/Gold LICC (Low Inductance Chip Capacitors)

SIZE	0306						0508					0612				
Packaging	Embossed						Embossed					Embossed				
Length	mm	0.81 ± 0.15 (0.032 ± 0.006)					1.27 ± 0.25 (0.050 ± 0.010)					1.60 ± 0.25 (0.063 ± 0.010)				
	(in.)															
Width	mm	1.60 ± 0.15 (0.063 ± 0.006)					2.00 ± 0.25 (0.080 ± 0.010)					3.20 ± 0.25 (0.126 ± 0.010)				
	(in.)															
WVDC	4	6.3	10	16	25	50	6.3	10	16	25	50	6.3	10	16	25	50
CAP	0.001															
(μF)	0.0022															
	0.0047															
	0.010															
	0.015															
	0.022															
	0.047															
	0.068															
	0.10															
	0.15															
	0.22															
	0.47															
	0.68															
	1.0															
	1.5															
	2.2															
	3.3															
	4.7															
	10															

Solid = X7R

= X5R

= X7S

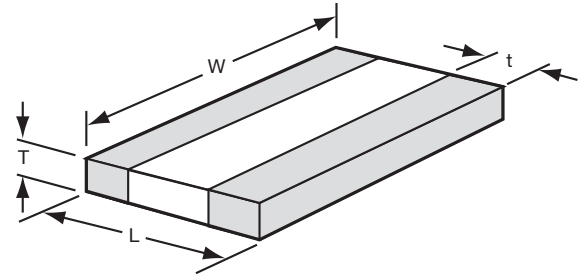
= X6S

mm (in.)	
0306	
Code	Thickness
A	0.61 (0.024)

mm (in.)	
0508	
Code	Thickness
S	0.56 (0.022)
V	0.76 (0.030)
A	1.02 (0.040)

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

PHYSICAL DIMENSIONS AND PAD LAYOUT



PHYSICAL CHIP DIMENSIONS mm (in)

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

T - See Range Chart for Thickness and Codes

PAD LAYOUT DIMENSIONS mm (in)

	A	B	C
0612	0.76 (0.030)	3.05 (0.120)	.635 (0.025)
0508	0.51 (0.020)	2.03 (0.080)	0.51 (0.020)
0306	0.31 (0.012)	1.52 (0.060)	0.51 (0.020)

