



Monolithic Ceramic Chip Capacitors
Low ESL and Low Profile (Cont.)



Size Code	Type	WV DC	Capacitance	Tolerance	Dimensions – mm			Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape and Reel		Murata Part No.
					L	W	T		10	100	500		Qty.	Pricing	
1206	X7R	4	2.2µF	±20%	3.2	1.6	0.85	490-4446-1-ND	9.22	54.45	157.06	490-4446-2-ND	3,000	150.55/M	LLA319R70G225MA01L
	X7R	6.3	1µF	±20%	3.2	1.6	0.5	490-4452-1-ND	6.51	38.47	110.96	490-4452-2-ND	4,000	106.51/M	LLA315R70J105MA14L
	X7R	6.3	2.2µF	±20%	3.2	1.6	0.5	490-4454-1-ND	8.38	49.55	142.94	490-4454-2-ND	4,000	136.94/M	LLA315R70J225MA14L
	X7R	10	.47µF	±20%	3.2	1.6	0.5	490-4450-1-ND	6.45	38.16	110.06	490-4450-2-ND	4,000	105.71/M	LLA315R71A474MA14L
	X7R	10	1µF	±20%	3.2	1.6	0.85	490-4442-1-ND	6.87	40.60	117.12	490-4442-2-ND	3,000	112.12/M	LLA319R71A105MA01L
	X7R	16	.1µF	±20%	3.2	1.6	0.5	490-4749-1-ND	5.37	31.75	91.60	490-4749-2-ND	4,000	88.09/M	LLA315R71C104MA14L
	X7R	16	.1µF	±20%	3.2	1.6	0.85	490-4750-1-ND	5.88	34.72	100.15	490-4750-2-ND	3,000	96.10/M	LLA319R71C104MA01L
	X7R	16	.22µF	±20%	3.2	1.6	0.5	490-4448-1-ND	6.07	35.87	103.46	490-4448-2-ND	4,000	99.30/M	LLA315R71C224MA14L
	X7R	16	.22µF	±20%	3.2	1.6	0.85	490-4437-1-ND	7.08	41.85	120.72	490-4437-2-ND	3,000	116.12/M	LLA319R71C224MA01L
	X7R	16	.47µF	±20%	3.2	1.6	0.85	490-4439-1-ND	6.50	38.41	110.81	490-4439-2-ND	3,000	106.51/M	LLA319R71C474MA01L
LLM Series – Ten Terminals															
0805	X7R	6.3	.22µF	±20%	2.0	1.25	0.5	490-4478-1-ND	9.77	57.73	166.52	490-4478-2-ND	4,000	160.16/M	LLM215R70J224MA11L
	X7R	6.3	.47µF	±20%	2.0	1.25	0.5	490-4480-1-ND	6.25	36.96	106.61	490-4480-2-ND	4,000	102.51/M	LLM215R70J474MA11L
	X7R	16	47000pF	±20%	2.0	1.25	0.5	490-4474-1-ND	8.01	47.32	136.49	490-4474-2-ND	4,000	131.33/M	LLM215R71C473MA11L
	X7R	16	.1µF	±20%	2.0	1.25	0.5	490-4476-1-ND	7.59	44.87	129.43	490-4476-2-ND	4,000	124.13/M	LLM215R71C104MA11L
	X7R	25	10000pF	±20%	2.0	1.25	0.5	490-4470-1-ND	7.72	45.60	131.53	490-4470-2-ND	4,000	126.53/M	LLM215R71E103MA11L
	X7R	25	22000pF	±20%	2.0	1.25	0.5	490-4472-1-ND	7.24	42.79	123.43	490-4472-2-ND	4,000	118.52/M	LLM215R71E223MA11L
1206	X7S	4	1µF	±20%	2.0	1.25	0.5	490-4482-1-ND	8.62	50.91	146.85	490-4482-2-ND	4,000	140.94/M	LLM215C70G105MA11L
	X7S	4	2.2µF	±20%	2.0	1.25	0.5	490-4484-1-ND	8.80	52.00	150.00	490-4484-2-ND	4,000	144.15/M	LLM215C70G225ME11L
	X7R	6.3	2.2µF	±20%	3.2	1.6	0.5	490-4501-1-ND	8.66	51.22	147.75	490-4501-2-ND	4,000	141.75/M	LLM315R70J225MA11L
	X7R	10	.47µF	±20%	3.2	1.6	0.5	490-4499-1-ND	12.05	71.21	205.41	490-4499-2-ND	4,000	197.00/M	LLM315R71A474MA11L
X7R	16	.1µF	±20%	3.2	1.6	0.5	490-4495-1-ND	9.88	58.40	168.47	490-4495-2-ND	4,000	161.77/M	LLM315R71C104MA11L	
X7R	16	.22µF	±20%	3.2	1.6	0.5	490-4497-1-ND	11.86	70.06	202.11	490-4497-2-ND	4,000	193.80/M	LLM315R71C224MA11L	

† Tolerance ±0.1mm ‡ Tolerance +0 / -0.15mm

Monolithic Ceramic Chip Capacitors Safety Standard

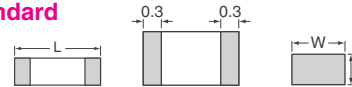
General Features: • New monolithic structure for small, high capacitance capable of operating at high voltage levels • 125°C guaranteed • Only for reflow soldering

GB Series: Features: • Chip monolithic ceramic capacitor (certified as conforming to safety standards) for AC lines • Compared to lead type capacitors, this new capacitor is greatly downsized and low-profiled to 1/10 or less in volume, and 1/4 or less in height. **Applications:** • Ideal for use as X capacitor for various switching power supplies

GD Series: Features: • Available for equipment based on IEC/EN60950 and UL1950 • The low-profile type (thickness: 1.5mm maximum) is available for use

on thinner type equipment. **Applications:** • For use on line filters and couplings for DAA modems without transformers • Line filters for information equipment

GF Series: Features: • Available for equipment based on IEC/EN60950 and UL1950. The GA352/355 types are available for equipment based on IEC/EN60065, UL1492 and UL6500 • The low-profile type (thickness: 1.5mm maximum) is available for use on thinner type equipment **Applications:** • For use on line filters and couplings for DAA modems without transformers • Use on line filters for information equipment • Use as Y capacitor or X capacitor for various switching power supplies (GA352/355 types only)



Standard Recognition

Series	Size Code	Safety Standard	Standard No.	Status of Recognition	Switching Power Supplies	Communication Network Devices such as a Modem
GB	2220	VDE, SEV, SEMKO	EN132400	⊙	⊙	⊙
	1808/1812	SEMKO	EN132400	⊙	—	⊙
GF	1808	SEMKO	EN132400	⊙	—	⊙
	2211/2220	UL	UL1414	⊙	—	⊙
	2211/2220	SEMKO	EN132400	⊙	⊙	⊙

Size Code	Type	WV AC	Capacitance	Tolerance	Dimensions – mm			Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape and Reel		Murata Part No.
					L	W	T		10	100	500		Qty.	Pricing	
GB Series – Class X2															
2220	X7R	250	10000pF	±10%	5.7	5.0	2.0	490-4235-1-ND	18.43	147.46	552.98	490-4235-2-ND	1,000	884.88	GA355DR7GB103KY02L
	X7R	250	15000pF	±10%	5.7	5.0	2.0	490-4236-1-ND	20.60	164.83	618.11	490-4236-2-ND	1,000	988.99	GA355DR7GB153KY02L
	X7R	250	22000pF	±10%	5.7	5.0	2.0	490-4237-1-ND	23.79	190.32	713.70	490-4237-2-ND	1,000	1141.94	GA355DR7GB223KY02L
	X7R	250	33000pF	±10%	5.7	5.0	2.7	490-4238-1-ND	28.61	228.90	—	490-4238-2-ND	500	686.69	GA355XR7GB333KY06L
GD Series – Class Y3															
1808	X7R	250	100pF	±10%	4.5	2.0	1.5	490-3483-1-ND	8.30	49.03	141.45	490-3483-2-ND	2,000	136.14/M	GA342QR7GD101KW01L
	X7R	250	150pF	±10%	4.5	2.0	1.5	490-3484-1-ND	8.54	50.49	145.65	490-3484-2-ND	2,000	140.14/M	GA342QR7GD151KW01L
	X7R	250	220pF	±10%	4.5	2.0	1.5	490-3485-1-ND	7.89	46.59	134.38	490-3485-2-ND	2,000	128.93/M	GA342QR7GD221KW01L
	X7R	250	330pF	±10%	4.5	2.0	1.5	490-3486-1-ND	7.89	46.59	134.38	490-3486-2-ND	2,000	128.93/M	GA342QR7GD331KW01L
	X7R	250	470pF	±10%	4.5	2.0	1.5	490-3487-1-ND	6.87	40.60	117.12	490-3487-2-ND	2,000	112.11/M	GA342QR7GD471KW01L
	X7R	250	680pF	±10%	4.5	2.0	1.5	490-3488-1-ND	6.87	40.60	117.12	490-3488-2-ND	2,000	112.11/M	GA342QR7GD681KW01L
	X7R	250	1000pF	±10%	4.5	2.0	1.5	490-3489-1-ND	7.56	44.66	128.83	490-3489-2-ND	2,000	123.33/M	GA342QR7GD102KW01L
	X7R	250	1500pF	±10%	4.5	2.0	1.5	490-3490-1-ND	7.89	46.59	134.38	490-3490-2-ND	2,000	128.93/M	GA342QR7GD152KW01L
1812	X7R	250	1800pF	±10%	4.5	3.2	1.5	490-3491-1-ND	10.73	63.40	182.89	490-3491-2-ND	1,000	175.38	GA343QR7GD182KW01L
	X7R	250	2200pF	±10%	4.5	3.2	1.5	490-3492-1-ND	10.73	63.40	182.89	490-3492-2-ND	1,000	175.38	GA343QR7GD222KW01L
	X7R	250	4700pF	±10%	4.5	3.2	2.0	490-3493-1-ND	10.73	63.40	182.89	490-3493-2-ND	1,000	175.38	GA343DR7GD472KW01L
GF Series – Class Y2															
1808	SL (JIS)	250	10pF	±5%	4.5	2.0	2.0	490-3459-1-ND	11.08	65.43	188.74	490-3459-2-ND	2,000	180.98/M	GA342D1XGF100JY02L
	SL (JIS)	250	12pF	±5%	4.5	2.0	2.0	490-3460-1-ND	13.97	82.51	237.99	490-3460-2-ND	2,000	228.23/M	GA342D1XGF120JY02L
	SL (JIS)	250	15pF	±5%	4.5	2.0	2.0	490-3461-1-ND	13.97	82.51	237.99	490-3461-2-ND	2,000	228.23/M	GA342D1XGF150JY02L
	SL (JIS)	250	18pF	±5%	4.5	2.0	2.0	490-3462-1-ND	13.97	82.51	237.99	490-3462-2-ND	2,000	228.23/M	GA342D1XGF180JY02L
	SL (JIS)	250	22pF	±5%	4.5	2.0	2.0	490-3463-1-ND	13.97	82.51	237.99	490-3463-2-ND	2,000	228.23/M	GA342D1XGF220JY02L
	SL (JIS)	250	27pF	±5%	4.5	2.0	2.0	490-3464-1-ND	12.52	74.02	213.52	490-3464-2-ND	2,000	205.01/M	GA342D1XGF270JY02L
	SL (JIS)	250	33pF	±5%	4.5	2.0	2.0	490-3465-1-ND	11.68	68.97	198.95	490-3465-2-ND	2,000	191.39/M	GA342D1XGF330JY02L
	SL (JIS)	250	39pF	±5%	4.5	2.0	2.0	490-3466-1-ND	12.52	74.02	213.52	490-3466-2-ND	2,000	205.01/M	GA342D1XGF390JY02L
	SL (JIS)	250	47pF	±5%	4.5	2.0	2.0	490-3467-1-ND	12.52	74.02	213.52	490-3467-2-ND	2,000	205.01/M	GA342D1XGF470JY02L
	SL (JIS)	250	56pF	±5%	4.5	2.0	2.0	490-3468-1-ND	12.75	75.32	217.27	490-3468-2-ND	2,000	208.21/M	GA342D1XGF560JY02L
	SL (JIS)	250	68pF	±5%	4.5	2.0	2.0	490-3469-1-ND	12.75	75.32	217.27	490-3469-2-ND	2,000	208.21/M	GA342D1XGF680JY02L
	SL (JIS)	250	82pF	±5%	4.5	2.0	2.0	490-3470-1-ND	12.75	75.32	217.27	490-3470-2-ND	2,000	208.21/M	GA342D1XGF820JY02L
	X7R	250	100pF	±10%	4.5	2.0	1.5	490-3471-1-ND	10.10	59.65	172.08	490-3471-2-ND	2,000	164.97/M	GA342QR7GF101KW01L
	X7R	250	150pF	±10%	4.5	2.0	1.5	490-3472-1-ND	10.10	59.65	172.08	490-3472-2-ND	2,000	164.97/M	GA342QR7GF151KW01L
	X7R	250	220pF	±10%	4.5	2.0	2.0	490-3473-1-ND	12.64	74.70	215.46	490-3473-2-ND	2,000	206.61/M	GA342DR7GF221KW02L
	X7R	250	330pF	±10%	4.5	2.0	2.0	490-3474-1-ND	12.64	74.70	215.46	490-3474-2-ND	2,000	206.61/M	GA342DR7GF331KW02L
2211	X7R	250	470pF	±10%	5.7	2.8	1.5	490-3475-1-ND	12.68	74.91	216.06	490-3475-2-ND	1,000	207.41	GA352QR7GF471KW01L
	X7R	250	680pF	±10%	5.7	2.8	1.5	490-3476-1-ND							