

MURATA Low ESL Ceramic Chip Capacitors

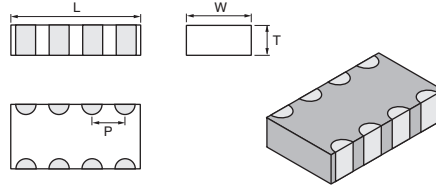


Murata offers a standard profile and low profile low inductance series of capacitors. Murata's Low ESL product line up includes the standard 2 terminal, reversed geometry type, (LLL Series), Eight (8) terminal type (LLA Series) and Ten (10) terminal type (LLM Series). These three series are plated with Ni and Matte Sn, and are RoHS compliant. Murata's Low ESL series provide high capacitance in small case sizes. The Low ESL series is especially ideal for high-speed microprocessors and high frequency digital equipment.

LLA SERIES - EIGHT TERMINAL LOW ESL TYPE

- Features:**
- Low ESL: 80 to 120pH. Suitable for high speed (800MHz to 4GHz) IC decoupling.
 - Operating Temperature: X7R: -55°C to 125°C w/ a ±15% cap change over temperature range. X7S: -55°C to 125°C w/ a ±22% cap change over temperature range.

Part No.	Dimensions: mm			
	L	W	T	P
LLA185	1.6±0.1	0.8±0.1	0.5 +0.05/-0.1	0.4±0.1
LLA215	2.0±0.1	1.25±0.1	0.5 +0.05/-0.1	0.5±0.05
LLA219			0.85±0.1	0.5±0.05
LLA315	3.2±0.15	1.6±0.15	0.5 +0.05/-0.1	0.8±0.1
LLA319			0.85±0.1	0.8±0.1
LLA31M			1.15±0.1	0.8±0.1



RoHS Compliant



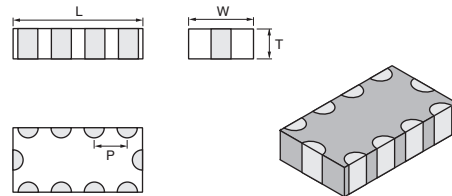
For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Murata Part No.	Case Size	Type	Temperature Coefficient	Voltage	Value	Price Per Piece				Reel Qty.	Price Per Piece
							1	50	100	500		
81-LLA185C70G104MA1L	LLA185C70G104MA01L	0603	Standard	X7S	4V	0.1uF	.45	.267	.227	.142	4000	.091
81-LLA185C70G224MA1L	LLA185C70G224MA01L	0603	Standard	X7S	4V	0.22uF	.51	.304	.259	.161	4000	.103
81-LLA185C70G474MA1L	LLA185C70G474MA01L	0603	Standard	X7S	4V	0.47uF	.49	.278	.232	.148	4000	.079
81-LLA185C70G105ME1L	LLA185C70G105ME01L	0603	Standard	X7S	4V	1.0uF	.42	.241	.201	.129	4000	.061
81-LLA185C70G225ME6L	LLA185C70G225ME16L	0603	Standard	X7S	4V	2.2uF	.56	.331	.282	.176	4000	.112
81-LLA215R71E103MA4L	LLA215R71E103MA14L	0805	Low Profile	X7R	25V	0.01uF	.23	.162	.146	.125	4000	.075
81-LLA219R71E103MA1L	LLA219R71E103MA01L	0805	Standard	X7R	25V	0.01uF	.59	.354	.31	.221	3000	.105
81-LLA215R71E223MA4L	LLA215R71E223MA14L	0805	Low Profile	X7R	25V	0.022uF	.56	.322	.269	.172	4000	.076
81-LLA219R71E223MA1L	LLA219R71E223MA01L	0805	Standard	X7R	25V	0.022uF	.40	.281	.261	.229	3000	.137
81-LLA215R71C473MA4L	LLA215R71C473MA14L	0805	Low Profile	X7R	16V	0.047uF	.31	.219	.204	.179	4000	.107
81-LLA219R71E473MA1L	LLA219R71E473MA01L	0805	Standard	X7R	25V	0.047uF	.40	.281	.261	.229	3000	.137
81-LLA215R71C104MA4L	LLA215R71C104MA14L	0805	Low Profile	X7R	16V	0.1uF	.19	.133	.12	.102	4000	.062
81-LLA219R71C104MA01L	LLA219R71C104MA01L	0805	Standard	X7R	16V	0.1uF	.47	.268	.224	.143	4000	.081
81-LLA215R71A224MA4L	LLA215R71A224MA14L	0805	Low Profile	X7R	10V	0.22uF	.48	.271	.226	.145	4000	.077
81-LLA219R71C224MA1L	LLA219R71C224MA01L	0805	Standard	X7R	16V	0.22uF	.31	.217	.202	.177	3000	.106
81-LLA215R70J474MA14	LLA215R70J474MA14L	0805	Low Profile	X7R	6.3V	0.47uF	.51	.285	.21	.12	4000	.055
81-LLA219R71A474MA1L	LLA219R71A474MA01L	0805	Standard	X7R	10V	0.47uF	.64	.364	.303	.194	3000	.086
81-LLA219R70J105MA01L	LLA219R70J105MA01L	0805	Standard	X7R	6.3V	1.0uF	.26	.183	.164	.14	3000	.084
81-LLA215C70G105MA4L	LLA215C70G105MA14L	0805	Low Profile	X7S	4V	1.0uF	.54	.307	.256	.164	4000	.07
81-LLA215C70G225ME1L	LLA215C70G225ME11L	0805	Low Profile	X7S	4V	2.2uF	.54	.306	.255	.163	4000	.087
81-LLA219C70G225M	LLA219C70G225MA01L	0805	Standard	X7S	4V	2.2uF	.46	.261	.218	.139	3000	.078
81-LLA215C70G475ME9L	LLA215C70G475ME19L	0805	Low Profile	X7S	4V	4.7uF	1.20	.705	.60	.375	4000	.24
81-LLA219C70G475ME1L	LLA219C70G475ME01L	0805	Standard	X7S	4V	4.7uF	.67	.399	.349	.249	3000	.148
81-LLA315R71C104MA4L	LLA315R71C104MA14L	1206	Low Profile	X7R	16V	0.1uF	.64	.366	.305	.195	4000	.104
81-LLA319R71C104MA1L	LLA319R71C104MA01L	1206	Standard	X7R	16V	0.1uF	.54	.306	.255	.163	3000	.087
81-LLA315R71C224MA4L	LLA315R71C224MA14L	1206	Low Profile	X7R	16V	0.22uF	.63	.38	.332	.237	4000	.141
81-LLA319R71C224MA01L	LLA319R71C224MA01L	1206	Standard	X7R	16V	0.22uF	.42	.293	.272	.238	3000	.142
81-LLA315R71A474MA4L	LLA315R71A474MA14L	1206	Low Profile	X7R	10V	0.47uF	.67	.404	.353	.252	4000	.12
81-LLA319R71C474MA1L	LLA319R71C474MA01L	1206	Standard	X7R	16V	0.47uF	.68	.407	.356	.254	3000	.151
81-LLA315R70J105MA14	LLA315R70J105MA14L	1206	Low Profile	X7R	6.3V	1.0uF	.42	.293	.272	.238	4000	.142
81-LLA319R71A105MA01L	LLA319R71A105MA01L	1206	Standard	X7R	10V	1.0uF	.67	.404	.353	.252	3000	.12
81-LLA319R70G225MA1L	LLA319R70G225MA01L	1206	Standard	X7R	4V	2.2uF	.84	.502	.439	.313	3000	.134
81-LLA315R70J225MA4L	LLA315R70J225MA14L	1206	Low Profile	X7R	6.3V	2.2uF	.48	.333	.309	.271	4000	.162
81-LLA31MR71A225MA1L	LLA31MR71A225MA01L	1206	Standard	X7R	10V	2.2uF	.66	.438	.35	.25	3000	.142

LLM SERIES - TEN TERMINAL LOW ESL TYPE

- Features:**
- Low ESL: 35 to 45pH. Suitable for high speed (1GHz to 4GHz) IC decoupling.
 - Operating Temperature: X7R: -55°C to 125°C w/ a ±15% cap change over temperature range. X7S: -55°C to 125°C w/ a ±22% cap change over temperature range.

Part No.	Dimensions: mm			
	L	W	T	P
LLM215	2.0±0.1	1.25±0.1	0.5 +0.05/-0.1	0.5±0.05
LLM315	3.2±0.15	1.6±0.15	0.5 +0.05/-0.1	0.8±0.1



RoHS Compliant



For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Murata Part No.	Case Size	Type	Temperature Coefficient	Voltage	Value	Price Per Piece				Reel Qty.	Price Per Piece
							1	50	100	500		
81-LLM215R71E103MA1L	LLM215R71E103MA11L	0805	Low Profile	X7R	25V	0.01uF	.81	.483	.423	.302	4000	.151
81-LLM215R71E223MA1L	LLM215R71E223MA11L	0805	Low Profile	X7R	25V	0.022uF	.76	.453	.396	.283	4000	.142
81-LLM215R71C333MA1L	LLM215R71C333MA11L	0805	Low Profile	X7R	16V	0.033uF	.66	.414	.362	.255	4000	.129
81-LLM215R71C473MA1L	LLM215R71C473MA11L	0805	Low Profile	X7R	16V	0.047uF	.84	.501	.438	.313	4000	.157
81-LLM215R71C104MA1L	LLM215R71C104MA11L	0805	Low Profile	X7R	16V	0.1uF	.79	.475	.416	.297	4000	.129
81-LLM215R70J224MA1L	LLM215R70J224MA11L	0805	Low Profile	X7R	6.3V	0.22uF	1.02	.612	.535	.382	4000	.191
81-LLM215R70J474MA1L	LLM215R70J474MA11L	0805	Low Profile	X7R	6.3V	0.47uF	.65	.391	.342	.244	4000	.122
81-LLM215C70G105MA1L	LLM215C70G105MA11L	0805	Low Profile	X7S	4V	1.0uF	.90	.539	.472	.337	4000	.169
81-LLM215C70G225ME1L	LLM215C70G225ME11L	0805	Low Profile	X7S	4V	2.2uF	.92	.551	.482	.344	4000	.172
81-LLM315R71C104MA1L	LLM315R71C104MA11L	1206	Low Profile	X7R	16V	0.1uF	1.03	.618	.541	.386	4000	.193
81-LLM319R71C224MA1L	LLM319R71C224MA11L	1206	Low Profile	X7R	16V	0.22uF	.97	.618	.556	.448	4000	.217
81-LLM315R71A474MA1L	LLM315R71A474MA11L	1206	Low Profile	X7R	10V	0.47uF	.98	.629	.566	.456	4000	.22
81-LLM315R70J225MA1L	LLM315R70J225MA11L	1206	Low Profile	X7R	6.3V	2.2uF	.91	.543	.475	.339	4000	.17