

# Automotive MLCC

## Part Selection Recommendations



**SAMSUNG**  
ELECTRO-MECHANICS

Size	Voltage	<10p	<100p	100p	220p	470p	1n	2.2n	4.7n	10n	22n	47n	100n	220n	470n	1u	2.2u	4.7u	10u	22u	47u	100u	Voltage	
1210"	100V																X7R						100V	
	50V																						50V	
	25V																						25V	
	16V																						16V	
	6.3V																						6.3V	
	4V																						21.Q2	4V
1206"	100V															X7R							100V	
	50V																						50V	
	25V																						25V	
	16V																						16V	
	6.3V																						20.Q4	6.3V
	4V																						20.Q4	4V
0805"	100V									COG				X7R									100V	
	50V																						50V	
	25V																						20.Q4	25V
	16V																							16V
	6.3V																							6.3V
	4V																							20.Q4
0603"	100V									COG			X7R										100V	
	50V																						20.Q4	50V
	25V																						21.Q2	25V
	16V																							16V
	10V																							10V
	6.3V																							20.Q4
0402"	100V									COG			X7R										100V	
	50V																						50V	
	25V																						25V	
	16V																						16V	
	10V																						10V	
	6.3V																							'21

**COG**

- 5% tolerance is standard
- 50V & 100V are most used
- E6 is recommended

1 | 1.5 | 2.2 | 3.3 | 4.7 | 6.8

**X7R | X7S | X7T**

- 10% tolerance is standard
- 6.3V | 16V | 50V | 100V in focus
- E3 is recommended

1 | 2.2 | 4.7

Under Development	
Recommended	
Downsize if possible	Use only if ESD, pulse, DC-Bias or other constraints require it
Downsizing or higher V Recommended	Usually no downsizing limitations exist