



Chip Multilayer Ceramic Capacitors for Consumer Electronics & Industrial Equipment

This is Murata primary products renowned for both small size and large capacitance value with latest advanced technology.

- [↓ Specific Applications](#)
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- [↓ Specifications](#)
- [↓ Lineup](#)

Specific Applications

For the detail of specific applications, please refer to the following links or specification sheets.

- [> Specific Applications Details](#)
- [> Precautions for use](#)

Consumer equipment	Industrial equipment	Automotive infotainment/comfort equipment	Automotive powertrain/safety equipment	Medical equipment [GHTF A/B/C] except for implant equipment	Implanted medical equipment / medical equipment [GHTF D]
✓	✓	✓		✓	

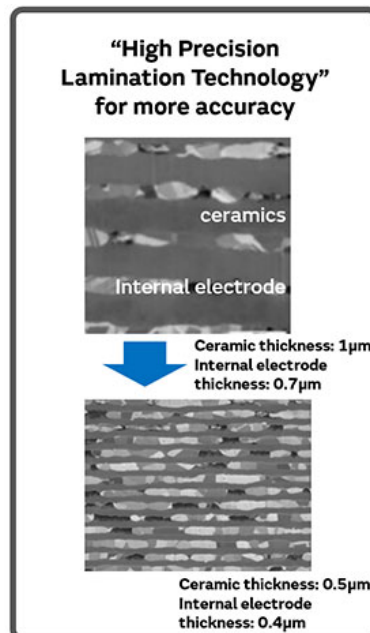
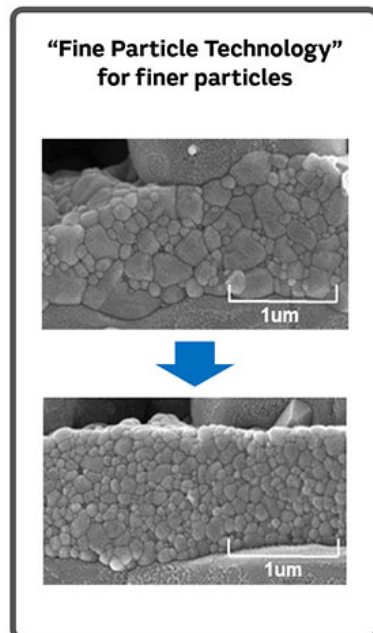
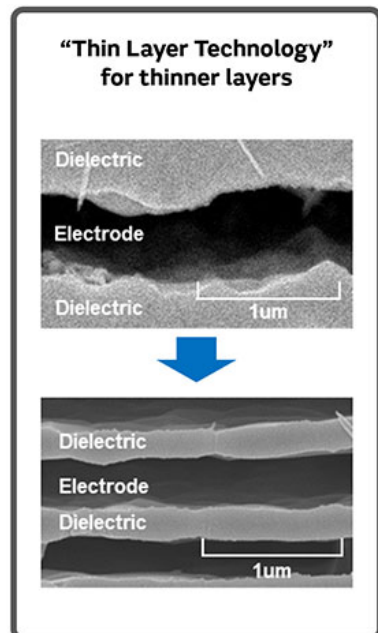
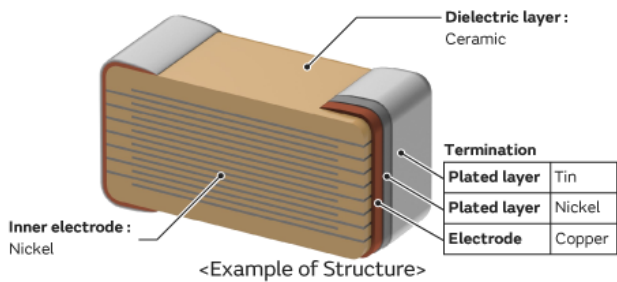
<Related Links>

You can find the recommended uses for each series in the "Applications" section of the FAQ below.

- [> What are the differences between the GCM, GRT, and GRM series?](#)

Features

1. Achieves large-capacity and small size in a multilayer structure.



2. Sn plating is applied to the external electrodes; excellent solderability.

3. High quality and no polarity.

Excellent > Good > Average > Poor

Capacitor classification	Chip multilayer ceramic capacitors		Tantalum capacitors	Can-type aluminum electrolytic capacitors (SMD)	Polymer Aluminum Capacitors
	High dielectric constant series	Temperature compensation type			
Polarity	No	No	Yes	Yes	Yes
Low ESR	Excellent	Excellent	Average	Average	Excellent
Temperature characteristics	Good	Excellent	Good	Good	Excellent
DC bias characteristics	Average	Excellent	Excellent	Excellent	Excellent
High-frequency compatible	Excellent	Excellent	Poor	Poor	Average
Small / thin	Excellent	Excellent	Average	Poor	Average
Acoustic noise	Average	Excellent	Excellent	Excellent	Excellent
Long life	Excellent	Excellent	Average	Average	Excellent
Failure mode	Short	Short	Short	Open	Open

Specifications

Size (mm)	0.25x0.125mm - 5.7x5mm
Rated Voltage	2.5Vdc - 3,150Vdc
Capacitance	0.1pF - 330µF
Main applications	<p>1. Rated voltage 100V Max. High Dielectric Constant Type . . . For decoupling and smoothing circuits Temperature Compensating Type . . . For tuning circuits, oscillating circuits, and high frequency filter circuits</p> <p>2. Rated voltage 200V min. High Dielectric Constant Type . . . For clamp snubber circuits and smoothing circuits Temperature Compensating Type . . . Power supply damper snubber</p>

Lineup

[Go to the part number list](#) ?

[Download CSV](#) ↓ ?

You can see the search result of the item you click on the capacitance chart.

Temperature compensating type

Use narrowed products' rows ?

Clearing all the conditions ?

Maximum operating temperature	<input type="checkbox"/> 85°C <input type="checkbox"/> 125°C
LxW	<input type="checkbox"/> 1.0x0.5 <input type="checkbox"/> 1.6x0.8 <input type="checkbox"/> 2.0x1.25 <input type="checkbox"/> 3.2x1.6 <input type="checkbox"/> 0.25x0.125 <input type="checkbox"/> 0.4x0.2 <input type="checkbox"/>

	<input type="checkbox"/> 0.6×0.3 <input type="checkbox"/> 1.8×1.0 <input type="checkbox"/> 3.2×2.5 <input type="checkbox"/> 4.5×2.0 <input type="checkbox"/> 4.5×3.2 <input type="checkbox"/> 5.7×5.0
Rated Voltage	<input type="checkbox"/> 10Vdc <input type="checkbox"/> 50Vdc <input type="checkbox"/> 6.3Vdc <input type="checkbox"/> 25Vdc <input type="checkbox"/> 16Vdc <input type="checkbox"/> 35Vdc <input type="checkbox"/> 100Vdc <input type="checkbox"/> 250Vdc <input type="checkbox"/> 630Vdc <input type="checkbox"/> 2,000Vdc <input type="checkbox"/> 1,000Vdc <input type="checkbox"/> 1,250Vdc <input type="checkbox"/> 3,150Vdc


■ Available ■ Under development

Maximum operating temperature	LxW	Rated Voltage	Capacitance												Capacitance range		
			pF					μF									
			0.1	1	10	100	1000	0.01	0.1	1	10	100	1000				
85°C	1.0×0.5	10Vdc															2,400pF - 4,700pF
	1.6×0.8	50Vdc															2,200pF - 4,700pF
		10Vdc															5,600pF - 33,000pF
	2.0×1.25	6.3Vdc															24,000pF - 33,000pF
		50Vdc															39,000pF - 47,000pF
	3.2×1.6	10Vdc															33,000pF - 0.1μF
125°C	0.25×0.125	50Vdc															68,000pF - 0.1μF
		16Vdc															0.2pF - 100pF
	0.4×0.2	25Vdc															0.2pF - 100pF
		35Vdc															100pF
		25Vdc															0.2pF - 220pF
		16Vdc															0.2pF - 220pF
	0.6×0.3	10Vdc															51pF - 220pF
		6.3Vdc															51pF - 220pF
		100Vdc															0.1pF - 100pF
		50Vdc															0.1pF - 1,000pF
	1.0×0.5	25Vdc															0.1pF - 1,000pF
		100Vdc															1pF - 1,000pF
		50Vdc															1pF - 10,000pF
		35Vdc															10,000pF
	1.6×0.8	25Vdc															10,000pF
		10Vdc															2,400pF - 4,700pF
		250Vdc															10pF - 47pF
		100Vdc															1,000pF - 3,900pF
		50Vdc															1,000pF - 10,000pF
	1.8×1.0	10Vdc															5,600pF - 33,000pF
6.3Vdc																24,000pF - 33,000pF	
2.0×1.25	50Vdc															0.1μF	
	630Vdc															10pF - 2,200pF	
	250Vdc															10pF - 10,000pF	
		100Vdc														1,000pF - 68,000pF	

Maximum operating temperature	LxW	Rated Voltage	Capacitance										Capacitance range						
			pF					μF											
			0.1	1	10	100	1000	0.01	0.1	1	10	100		1000					
		50Vdc															2,400pF - 47,000pF		
		10Vdc																33,000pF - 0.1μF	
3.2×1.6		2,000Vdc																10pF - 68pF	
		1,000Vdc																10pF - 3,900pF	
		630Vdc																10pF - 10,000pF	
		250Vdc																6,800pF - 22,000pF	
		100Vdc																4,300pF - 0.1μF	
		50Vdc																	11,000pF - 0.22μF
		25Vdc																	0.15μF - 0.47μF
		2,000Vdc																	82pF - 220pF
3.2×2.5		1,250Vdc																4,700pF - 15,000pF	
		1,000Vdc																1,200pF - 22,000pF	
		630Vdc																1,200pF - 33,000pF	
		250Vdc																27,000pF - 47,000pF	
		3,150Vdc																	10pF - 100pF
4.5×2.0		1,000Vdc																2,700pF - 4,700pF	
		630Vdc																12,000pF - 22,000pF	
4.5×3.2		1,000Vdc																5,600pF - 10,000pF	
		630Vdc																27,000pF - 47,000pF	
5.7×5.0		1,000Vdc																5,600pF - 10,000pF	
		630Vdc																27,000pF - 47,000pF	

High dielectric constant type

Use narrowed products' rows 

Clearing all the conditions 

Maximum operating temperature	<input type="checkbox"/> 85°C <input type="checkbox"/> 105°C <input type="checkbox"/> 125°C <input type="checkbox"/> 150°C
LxW	<input type="checkbox"/> 0.25×0.125 <input type="checkbox"/> 0.4×0.2 <input type="checkbox"/> 0.5×0.25 <input type="checkbox"/> 0.6×0.3 <input type="checkbox"/> 1.0×0.5 <input type="checkbox"/> 1.6×0.8 <input type="checkbox"/> 1.8×1.0 <input type="checkbox"/> 2.0×1.25 <input type="checkbox"/> 3.2×1.6 <input type="checkbox"/> 3.2×2.5 <input type="checkbox"/> 4.5×3.2 <input type="checkbox"/> 5.7×5.0
Rated Voltage	<input type="checkbox"/> 16Vdc <input type="checkbox"/> 10Vdc <input type="checkbox"/> 6.3Vdc <input type="checkbox"/> 4Vdc <input type="checkbox"/> 25Vdc <input type="checkbox"/> 63Vdc <input type="checkbox"/> 50Vdc <input type="checkbox"/>

Maximum operating temperature	LxW	Rated Voltage	Capacitance												Capacitance range			
			pF					μF										
			0.1	1	10	100	1000	0.01	0.1	1	10	100	1000					
		25Vdc																22μF
		16Vdc																22μF
		10Vdc																47μF
		6.3Vdc																47μF - 100μF
		4Vdc																100μF - 220μF
		2.5Vdc																220μF
	4.5×3.2	1,250Vdc																33,000pF - 47,000pF
		1,000Vdc																33,000pF - 0.1μF
		630Vdc																68,000pF - 0.22μF
		250Vdc																0.15μF - 0.47μF
	5.7×5.0	1,250Vdc																68,000pF - 0.1μF
		1,000Vdc																68,000pF - 0.22μF
		630Vdc																0.15μF - 0.47μF
		250Vdc																0.33μF - 1μF
150°C	3.2×1.6	100Vdc															2.2μF	
	3.2×2.5	100Vdc															4.7μF	

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Ceramic Capacitor

- > Polymer Aluminum Electrolytic Capacitors
- > Single-Layer Microchip Capacitors
- > Thin Film Circuit Substrates (RUSUB)
- > Variable Capacitors
- > Silicon Capacitors
- > High Temperature Film Capacitor

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