

Automotive Capacitors for Power Train/Safety Applications

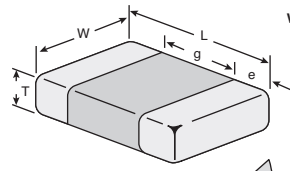


GCM SERIES

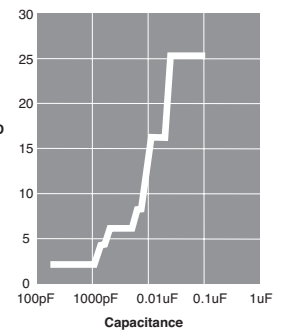
RoHS Compliant This product is RoHS compliant.

Modern vehicle design is driven by the need for increased comfort, safety and security. As a result, automobiles are becoming intelligent and increasingly reliant upon electronics. In the automotive sector, Murata's products are used in communication, safety, information, and power train systems, just to name a few. The acceptance of Murata's capacitor products in these applications is based upon the core competencies of Murata - ceramic material and processing technology. Murata's GCM series is designed for the more rigorous demands of safety, under-hood, and power train systems. The GCM series is designed specifically to meet the test conditions of the AEC-Q200.

- Features:**
- Meets AEC-Q200 requirements
 - GCM15 and 32 types are suited for only reflow soldering
 - GCM18, 21, and 31 types are suited for flow and reflow soldering
 - GCM Series is offered with a nickel (Ni) barrier termination finished with matte tin (Sn) plating
 - Available in paper or embossed tape and reel packaging for automatic placement
 - The GCM Series is RoHS compliant.



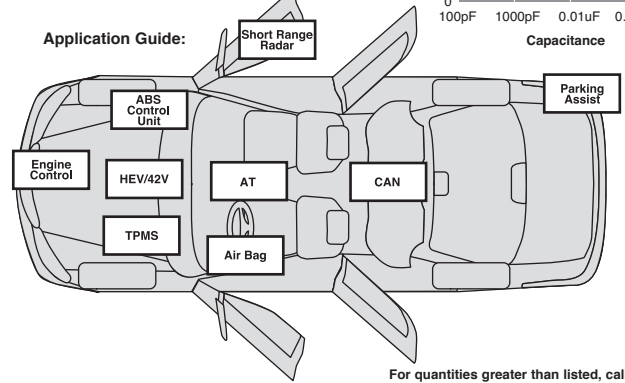
ESD level based on AEC-Q200 test method [GCM18(0603)X7R]



Murata Ceramic Caps, SMD

Part No.	Dimensions: mm				
	L	W	T	e (Min.)	g (Min.)
GCM155	1.0±0.05	0.5±0.05	0.5±0.05	0.15 to 0.3	0.4
GCM188	1.6±0.1	0.8±0.1	0.8±0.1	0.2 to 0.5	0.5
GCM219	2.0±0.15	1.25±0.15	0.85±0.1	0.2 to 0.7	0.7
GCM21A	2.0±0.2	1.25±0.2	1.0±0.3	0.3	0.7
GCM21B	2.0±0.2	1.25±0.2	1.25±0.15	0.2 to 0.7	0.7
GCM319	3.2±0.15	1.6±0.15	0.85±0.1	0.3 to 0.8	1.5
GCM31M	3.2±0.15	1.6±0.15	1.15±0.1	0.3 to 0.8	1.5
GCM31A	3.2±0.2	1.6±0.2	1.25±0.3	0.3	1.5
GCM31C	3.2±0.2	1.6±0.2	1.6±0.2	0.3 to 0.8	1.5
GCM31B	3.2±0.2	1.6±0.2	1.25±0.3	0.3	1.2
GCM32E	3.2±0.3	2.5±0.2	2.5±0.2	0.3	1.0
GCM32A	3.2±0.2	2.5±0.2	1.0±0.3	0.3	1.5

Application Guide:



Temperature Characteristics				
Code	Temperature Coefficient	Temperature Range	Capacitance Change	Operating Temperature Range
5C	C0G	25° to 125°C	0 ±30ppm/°C	-55°C to +125°C
R7	X7R	-55°C to +125°C	±15%	-55°C to +125°C

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Murata Part No.	Value (pF)	Volt (DC)	Temperature Coefficient	Case Size	Tolerance	Price Each				Reel Qty.	Price Per Piece
							1	50	100	500		
81-GCM1555C1H1R0CZ3D	GCM1555C1H1R0CZ13D	1.0	50	C0G	0402	±0.25pF	.10	.03	.026	.022	10000	.012
81-GCM1555C1H1R5CZ13D	GCM1555C1H1R5CZ13D	1.5	50	C0G	0402	±0.25pF	.10	.03	.026	.022	10000	.012
81-GCM1555C1H2R2CZ13D	GCM1555C1H2R2CZ13D	2.2	50	C0G	0402	±0.25pF	.10	.03	.026	.022	10000	.012
81-GCM1555C1H3R3CZ13D	GCM1555C1H3R3CZ13D	3.3	50	C0G	0402	±0.25pF	.10	.03	.026	.022	10000	.012
81-GCM1555C1H4R7CZ13D	GCM1555C1H4R7CZ13D	4.7	50	C0G	0402	±0.25pF	.10	.03	.026	.022	10000	.012
81-GCM1555C1H6R8DZ13D	GCM1555C1H6R8DZ13D	6.8	50	C0G	0402	±0.5pF	.10	.03	.026	.022	10000	.012
81-GCM1555C1H100JZ3D	GCM1555C1H100JZ13D	10	50	C0G	0402	5%	.10	.03	.026	.022	10000	.012
81-GCM1555C1H150J13D	GCM1555C1H150J13D	15	50	C0G	0402	5%	.10	.026	.022	.017	10000	.01
81-GCM1555C1H220J13D	GCM1555C1H220J13D	22	50	C0G	0402	5%	.10	.026	.022	.017	10000	.01
81-GCM1555C1H330J13D	GCM1555C1H330J13D	33	50	C0G	0402	5%	.10	.026	.022	.017	10000	.01
81-GCM1555C1H470J13D	GCM1555C1H470J13D	47	50	C0G	0402	5%	.10	.026	.022	.017	10000	.01
81-GCM1555C1H680J13D	GCM1555C1H680J13D	68	50	C0G	0402	5%	.10	.026	.022	.017	10000	.01
81-GCM1555C1H101JZ3D	GCM1555C1H101JZ13D	100	50	C0G	0402	5%	.10	.026	.022	.017	10000	.01
81-GCM1555C1H151JA16D	GCM1555C1H151JA16D	150	50	C0G	0402	5%	.12	.054	.04	.021	10000	.008
81-GCM1555C1H221JA16D	GCM1555C1H221JA16D	220	50	C0G	0402	5%	.11	.023	.02	.016	10000	.009
81-GCM1555C1H331JA16D	GCM1555C1H331JA16D	330	50	C0G	0402	5%	.15	.072	.054	.028	10000	.012
81-GCM1555C1H471JA16D	GCM1555C1H471JA16D	470	50	C0G	0402	5%	.15	.072	.054	.028	10000	.012
81-GCM155R71H221K37D	GCM155R71H221KA37D	220	50	X7R	0402	10%	.10	.08	.033	.017	10000	.008
81-GCM155R72A221K37D	GCM155R72A221KA37D	220	100	X7R	0402	10%	.09	.019	.016	.014	10000	.007
81-GCM155R71H471K37D	GCM155R71H471KA37D	470	50	X7R	0402	10%	.10	.08	.033	.017	10000	.008
81-GCM155R72A471K37D	GCM155R72A471KA37D	470	100	X7R	0402	10%	.09	.019	.016	.014	10000	.007
81-GCM155R71H102KA7D	GCM155R71H102KA37D	1,000	50	X7R	0402	10%	.09	.036	.027	.014	10000	.005
81-GCM155R72A102KA7D	GCM155R72A102KA37D	1,000	100	X7R	0402	10%	.11	.06	.037	.02	10000	.009
81-GCM155R71H222K37D	GCM155R71H222KA37D	2,200	50	X7R	0402	10%	.09	.014	.012	.01	10000	.004
81-GCM155R72A222K37D	GCM155R72A222KA37D	2,200	100	X7R	0402	10%	.12	.054	.04	.021	10000	.008
81-GCM155R71H472K37D	GCM155R71H472KA37D	4,700	50	X7R	0402	10%	.09	.033	.024	.013	10000	.006
81-GCM155R72A472KA7D	GCM155R72A472KA37D	4,700	100	X7R	0402	10%	.12	.054	.04	.021	10000	.008
81-GCM155R71H103KA5D	GCM155R71H103KA55D	0.01uF	50	X7R	0402	10%	.09	.014	.012	.01	10000	.004
81-GCM155R71H223KA5D	GCM155R71H223KA55D	0.022uF	50	X7R	0402	10%	.10	.023	.02	.017	10000	.009
81-GCM155R71E473KA5D	GCM155R71E473KA55D	0.047uF	25	X7R	0402	10%	.10	.024	.021	.017	10000	.009
81-GCM155R71C104KA5D	GCM155R71C104KA55D	0.1uF	16	X7R	0402	10%	.11	.06	.037	.02	10000	.009
81-GCM1885C1H1R0CZ3D	GCM1885C1H1R0CZ13D	1.0	50	C0G	0603	±0.25pF	.09	.056	.05	.043	4000	.026
81-GCM1885C2A1R0CZ3D	GCM1885C2A1R0CZ13D	1.0	100	C0G	0603	±0.25pF	.37	.19	.15	.086	4000	.048
81-GCM1885C1H1R5CZ13D	GCM1885C1H1R5CZ13D	1.5	50	C0G	0603	±0.25pF	.09	.056	.05	.043	4000	.026
81-GCM1885C2A1R5CZ13D	GCM1885C2A1R5CZ13D	1.5	100	C0G	0603	±0.25pF	.15	.105	.094	.08	4000	.048
81-GCM1885C1H2R2CZ13D	GCM1885C1H2R2CZ13D	2.2	50	C0G	0603	±0.25pF	.09	.056	.05	.043	4000	.026
81-GCM1885C2A2R2CZ13D	GCM1885C2A2R2CZ13D	2.2	100	C0G	0603	±0.25pF	.15	.105	.094	.08	4000	.048
81-GCM1885C1H3R3CZ13D	GCM1885C1H3R3CZ13D	3.3	50	C0G	0603	±0.25pF	.09	.056	.05	.043	4000	.026
81-GCM1885C2A3R3CZ13D	GCM1885C2A3R3CZ13D	3.3	100	C0G	0603	±0.25pF	.15	.105	.094	.08	4000	.048
81-GCM1885C1H4R7CZ13D	GCM1885C1H4R7CZ13D	4.7	50	C0G	0603	±0.25pF	.09	.056	.05	.043	4000	.026
81-GCM1885C2A4R7CZ13D	GCM1885C2A4R7CZ13D	4.7	100	C0G	0603	±0.25pF	.15	.105	.094	.08	4000	.048
81-GCM1885C1H6R8DZ13D	GCM1885C1H6R8DZ13D	6.8	50	C0G	0603	±0.5pF	.09	.056	.05	.043	4000	.026
81-GCM1885C2A6R8DZ13D	GCM1885C2A6R8DZ13D	6.8	100	C0G	0603	±0.5pF	.15	.105	.094	.08	4000	.048
81-GCM1885C1H100JA16D	GCM1885C1H100JA16D	10	50	C0G	0603	5%	.10	.025	.022	.018	4000	.012
81-GCM1885C2A100JA16D	GCM1885C2A100JA16D	10	100	C0G	0603	5%	.10	.036	.031	.026	4000	.017
81-GCM1885C1H150J16D	GCM1885C1H150J16D	15	50	C0G	0603	5%	.10	.025	.022	.018	4000	.012
81-GCM1885C2A150J16D	GCM1885C2A150JA16D	15	100	C0G	0603	5%	.10	.034	.029	.024	4000	.016
81-GCM1885C1H220J16D	GCM1885C1H220JA16D	22	50	C0G	0603	5%	.15	.073	.054	.029	4000	.014
81-GCM1885C2A220J16D	GCM1885C2A220JA16D	22	100	C0G	0603	5%	.10	.034	.029	.024	4000	.016
81-GCM1885C1H330J16D	GCM1885C1H330JA16D	33	50	C0G	0603	5%	.15	.073	.054	.029	4000	.014
81-GCM1885C2A330J16D	GCM1885C2A330JA16D	33	100	C0G	0603	5%	.10	.084	.063	.033	4000	.02
81-GCM1885C1H470J16D	GCM1885C1H470JA16D	47	50	C0G	0603	5%	.15	.073	.054	.029	4000	.014
81-GCM1885C2A470J16D	GCM1885C2A470JA16D	47	100	C0G	0603	5%	.10	.034	.029	.024	4000	.016
81-GCM1885C1H680J16D	GCM1885C1H680JA16D	68	50	C0G	0603	5%	.15	.073	.054	.029	4000	.014
81-GCM1885C2A680J16D	GCM1885C2A680JA16D	68	100	C0G	0603	5%	.10	.034	.029	.024	4000	.016

