

Automotive Capacitors for Power Train/Safety Applications



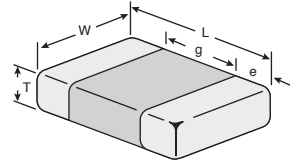
RoHS Compliant This page of product is RoHS compliant.

GCM SERIES

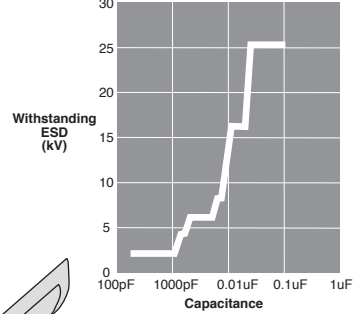
Modern vehicle design is driven by the need for increased comfort, safety and security. As a result, automobiles are becoming intelligent and increasingly reliant upon electronics. In the automotive sector, Murata's products are used in communication, safety, information, and power train systems, just 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.



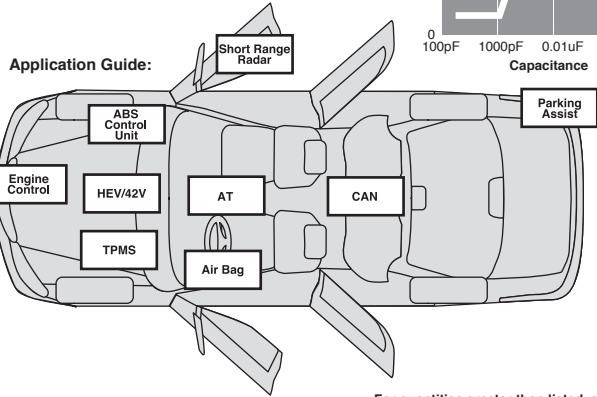
INNOVATOR IN ELECTRONICS
ESD level based on AEC-Q200 test method
[GCM18(0603)/X7R]



Murata Ceramic Caps, SMD

Part No.	Dimensions: mm				
	Length (L)	Width (W)	Thickness (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
GCM31A	3.2±0.15	1.6±0.15	1.15±0.1	0.3 to 0.8	1.5
GCM31M	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

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



MOUSER STOCK NO.	Murata Part No.	Value (pF)	Volt (DC)	Temperature Coefficient	Case Size	Tolerance	Price Each				Reel Qty.	Price Per Piece
							1	10	100	1000		
81-GCM1555C1H151JA16D	GCM1555C1H151JA16D	150	50	C0G	0402	5%	.11	.03	.018	.013	10000	.009
81-GCM1555C1H221JA16D	GCM1555C1H221JA16D	220	50	C0G	0402	5%	.11	.034	.021	.015	10000	.011
81-GCM1555C1H331JA16D	GCM1555C1H331JA16D	330	50	C0G	0402	5%	.10	.039	.024	.018	10000	.013
81-GCM1555C1H471JA16D	GCM1555C1H471JA16D	470	50	C0G	0402	5%	.10	.039	.024	.018	10000	.013
81-GCM155R71H221KA37D	GCM155R71H221KA37D	220	50	X7R	0402	10%	.11	.024	.014	.011	10000	.008
81-GCM155R72A221KA37D	GCM155R72A221KA37D	220	100	X7R	0402	10%	.10	.028	.017	.013	10000	.01
81-GCM155R71H471KA37D	GCM155R71H471KA37D	470	50	X7R	0402	10%	.10	.025	.015	.012	10000	.008
81-GCM155R72A471KA37D	GCM155R72A471KA37D	470	100	X7R	0402	10%	.10	.028	.017	.013	10000	.009
81-GCM155R71H102KA7D	GCM155R71H102KA7D	1,000	50	X7R	0402	10%	.11	.02	.012	.009	10000	.006
81-GCM155R72A102KA7D	GCM155R72A102KA7D	1,000	100	X7R	0402	10%	.10	.027	.016	.013	10000	.009
81-GCM155R71H222KA37D	GCM155R71H222KA37D	2,200	50	X7R	0402	10%	.11	.021	.012	.009	10000	.007
81-GCM155R72A222KA37D	GCM155R72A222KA37D	2,200	100	X7R	0402	10%	.10	.055	.02	.013	10000	.009
81-GCM155R71H472KA37D	GCM155R71H472KA37D	4,700	50	X7R	0402	10%	.11	.02	.012	.009	10000	.007
81-GCM155R72A472KA37D	GCM155R72A472KA37D	4,700	100	X7R	0402	10%	.10	.055	.02	.013	10000	.009
81-GCM155R71H103KA5D	GCM155R71H103KA5D	0.01uF	50	X7R	0402	10%	.11	.021	.013	.009	10000	.007
81-GCM155R71H223KA5D	GCM155R71H223KA5D	0.022uF	50	X7R	0402	10%	.11	.034	.02	.015	10000	.011
81-GCM155R71E473KA5D	GCM155R71E473KA5D	0.047uF	25	X7R	0402	10%	.11	.032	.021	.016	10000	.011
81-GCM155R71C104KA5D	GCM155R71C104KA5D	0.1uF	16	X7R	0402	10%	.10	.027	.022	.013	10000	.009
81-GCM1885C2A4R7C13D	GCM1885C2A4R7C13D	4.7	100	C0G	0603	±0.25pF	.26	.215	.08	.063	4000	.049
81-GCM1885C1H100JA6D	GCM1885C1H100JA6D	10	50	C0G	0603	5%	.11	.037	.022	.017	4000	.014
81-GCM1885C2A100JA6D	GCM1885C2A100JA6D	10	100	C0G	0603	5%	.11	.046	.027	.022	4000	.016
81-GCM1885C1H150J16D	GCM1885C1H150J16D	15	50	C0G	0603	5%	.10	.038	.023	.018	4000	.014
81-GCM1885C2A150J16D	GCM1885C2A150J16D	15	100	C0G	0603	5%	.11	.076	.03	.02	4000	.016
81-GCM1885C1H220J16D	GCM1885C1H220J16D	22	50	C0G	0603	5%	.11	.04	.023	.018	4000	.015
81-GCM1885C2A220J16D	GCM1885C2A220J16D	22	100	C0G	0603	5%	.11	.076	.03	.02	4000	.016
81-GCM1885C1H330J16D	GCM1885C1H330J16D	33	50	C0G	0603	5%	.11	.04	.023	.018	4000	.015
81-GCM1885C2A330J16D	GCM1885C2A330J16D	33	100	C0G	0603	5%	.07	.047	.028	.022	4000	.018
81-GCM1885C1H470J16D	GCM1885C1H470J16D	47	50	C0G	0603	5%	.11	.04	.024	.018	4000	.015
81-GCM1885C2A470J16D	GCM1885C2A470J16D	47	100	C0G	0603	5%	.12	.044	.025	.02	4000	.015
81-GCM1885C1H680J16D	GCM1885C1H680J16D	68	50	C0G	0603	5%	.11	.04	.023	.018	4000	.015
81-GCM1885C2A680J16D	GCM1885C2A680J16D	68	100	C0G	0603	5%	.11	.044	.026	.021	4000	.017
81-GCM1885C1H101JA6D	GCM1885C1H101JA6D	100	50	C0G	0603	5%	.11	.04	.024	.018	4000	.015
81-GCM1885C2A101JA6D	GCM1885C2A101JA6D	100	100	C0G	0603	5%	.12	.044	.025	.02	4000	.015
81-GCM1885C1H151J16D	GCM1885C1H151J16D	150	50	C0G	0603	5%	.13	.048	.029	.022	4000	.017
81-GCM1885C2A151J16D	GCM1885C2A151J16D	150	100	C0G	0603	5%	.12	.084	.033	.023	4000	.018
81-GCM1885C1H221J16D	GCM1885C1H221J16D	220	50	C0G	0603	5%	.12	.045	.027	.021	4000	.016
81-GCM1885C2A221J16D	GCM1885C2A221J16D	220	100	C0G	0603	5%	.16	.107	.042	.029	4000	.023
81-GCM1885C1H331J16D	GCM1885C1H331J16D	330	50	C0G	0603	5%	.11	.046	.027	.022	4000	.016
81-GCM1885C2A331J16D	GCM1885C2A331J16D	330	100	C0G	0603	5%	.17	.117	.046	.032	4000	.025
81-GCM1885C1H471J16D	GCM1885C1H471J16D	470	50	C0G	0603	5%	.12	.045	.026	.021	4000	.016
81-GCM1885C2A471J16D	GCM1885C2A471J16D	470	100	C0G	0603	5%	.20	.075	.044	.035	4000	.026
81-GCM1885C1H681J16D	GCM1885C1H681J16D	680	50	C0G	0603	5%	.17	.065	.038	.031	4000	.023
81-GCM1885C2A681J16D	GCM1885C2A681J16D	680	100	C0G	0603	5%	.18	.124	.051	.038	4000	.03
81-GCM1885C1H102JA6D	GCM1885C1H102JA6D	1,000	50	C0G	0603	5%	.12	.044	.026	.021	4000	.015
81-GCM1885C2A102JA6D	GCM1885C2A102JA6D	1,000	100	C0G	0603	5%	.15	.062	.036	.029	4000	.022
81-GCM1885C1H152J16D	GCM1885C1H152J16D	1,500	50	C0G	0603	5%	.15	.056	.033	.026	4000	.019
81-GCM1885C2A152J16D	GCM1885C2A152J16D	1,500	100	C0G	0603	5%	.22	.085	.049	.04	4000	.029
81-GCM1885C1H222J16D	GCM1885C1H222J16D	2,200	50	C0G	0603	5%	.15	.104	.041	.028	4000	.022
81-GCM188R71H102KA7D	GCM188R71H102KA7D	1,000	50	X7R	0603	10%	.11	.027	.016	.012	4000	.01
81-GCM188R72A102KA7D	GCM188R72A102KA7D	1,000	100	X7R	0603	10%	.11	.038	.023	.017	4000	.013
81-GCM188R71H222KA37D	GCM188R71H222KA37D	2,200	50	X7R	0603	10%	.10	.027	.021	.012	4000	.01
81-GCM188R72A222KA37D	GCM188R72A222KA37D	2,200	100	X7R	0603	10%	.11	.039	.023	.018	4000	.013
81-GCM188R71H472KA37D	GCM188R71H472KA37D	4,700	50	X7R	0603	10%	.11	.027	.016	.012	4000	.01
81-GCM188R72A472KA37D	GCM188R72A472KA37D	4,700	100	X7R	0603	10%	.13	.047	.027	.022	4000	.016
81-GCM188R71H103KA7D	GCM188R71H103KA7D	0.01uF	50	X7R	0603	10%	.10	.027	.022	.013	4000	.01
81-GCM188R72A103KA7D	GCM188R72A103KA7D	0.01uF	100	X7R	0603	10%	.11	.04	.024	.018	4000	.013
81-GCM188R71H223KA37D	GCM188R71H223KA37D	0.022uF	50	X7R	0603	10%	.12	.042	.026	.019	4000	.014
81-GCM188R72A223KA37D	GCM188R72A223KA37D	0.022uF	100	X7R	0603	10%	.15	.055	.032	.026	4000	.019