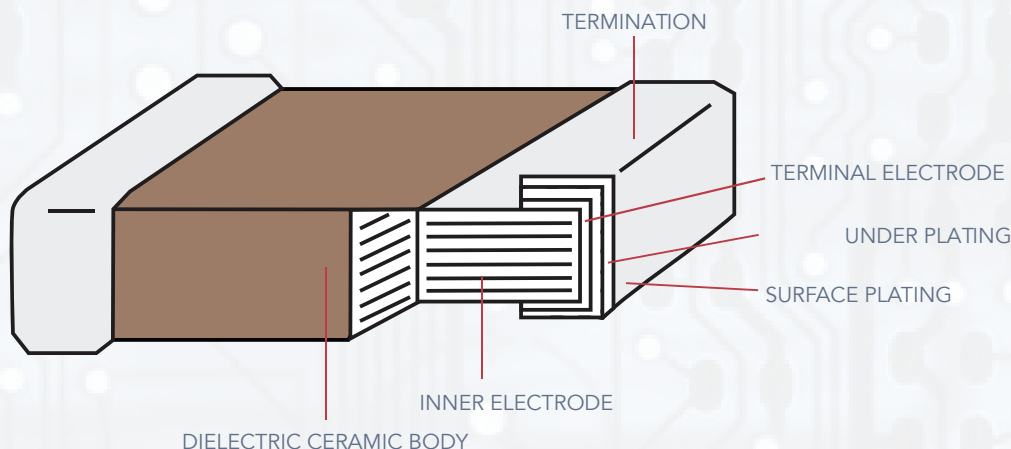


PRODUCT IDENTIFICATION

- PRODUCT NAME: Capacitor (MLCC)
- SERIES: GMG02
- SIZE: 0201
- DIELECTRIC: COG
- WEIGHT: 0.236mg
- MANUFACTURE NAME: Cal-Chip Electronics Inc.
- ADDRESS: 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Strontium Oxide	13	SrO	11.7780	1314-11-0	Ceramic		0.0278	0.2137	0.236
		Calcium Oxide	15	CaO	13.5900	1305-78-8			0.0321		
		Zirconium Dioxide	50	ZrO ₂	45.3000	1314-23-4			0.1067		
		Titanium Dioxide	2	TiO ₂	1.8120	13463-67-7			0.0043		
		Silica	15	SiO ₂	13.5900	14808-60-7			0.0321		
		Manganese Tetroxide	5	Mn ₃ O ₄	4.5300	1317-35-7			0.0107		
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste		0.0057	0.0071	
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7			0.0014		
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste		0.0125	0.0142	
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4			0.0017		
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating		0.0005	0.0005	
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating		0.0005	0.0005	

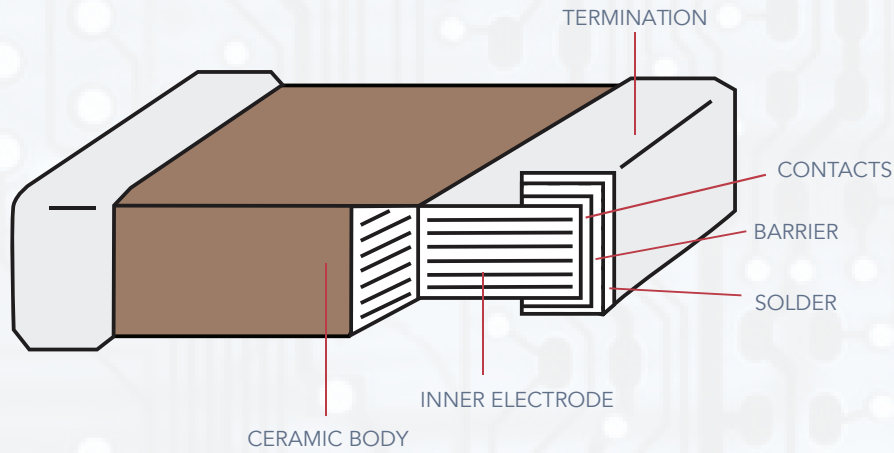
MATERIAL DECLARATION

GMG02-X7R

PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG02
- SIZE 0201
- DIALECTRIC X7R
- WEIGHT 0.31mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



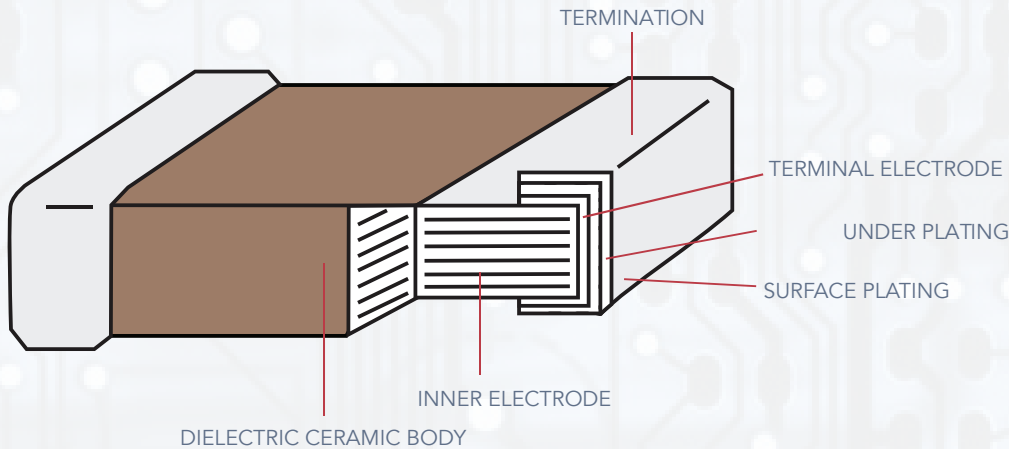
COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Barium Titanate	98	BaTiO ₃	88.7880	12047-27-7	Ceramic		0.2753	0.2809	0.31
		Yttrium Oxide	2	Y ₂ O ₃	1.8120	1314-36-9			0.0056		
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste		0.0074	0.0093	
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7			0.0019		
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste		0.0164	0.0186	
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4			0.0022		
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating		0.0006	0.0006	
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating		0.0006	0.0006	



PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG04
- SIZE 0402
- DIELECTRIC COG
- WEIGHT 1.216mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Strontium Oxide	13	SrO	11.7780	1314-11-0	Ceramic		0.1432	1.1017	1.216
		Calcium Oxide	15	CaO	13.5900	1305-78-8			0.1653		
		Zirconium Dioxide	50	ZrO ₂	45.3000	1314-23-4			0.5508		
		Titanium Dioxide	2	TiO ₂	1.8120	13463-67-7			0.022		
		Silica	15	SiO ₂	13.5900	14808-60-7			0.1653		
		Manganese Tetroxide	5	Mn ₃ O ₄	4.5300	1317-35-7			0.0551		
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste		0.0292	0.0365	
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7			0.0073		
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste		0.0642	0.073	
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4			0.0088		
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating		0.0024	0.0024	
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating		0.0024	0.0024	

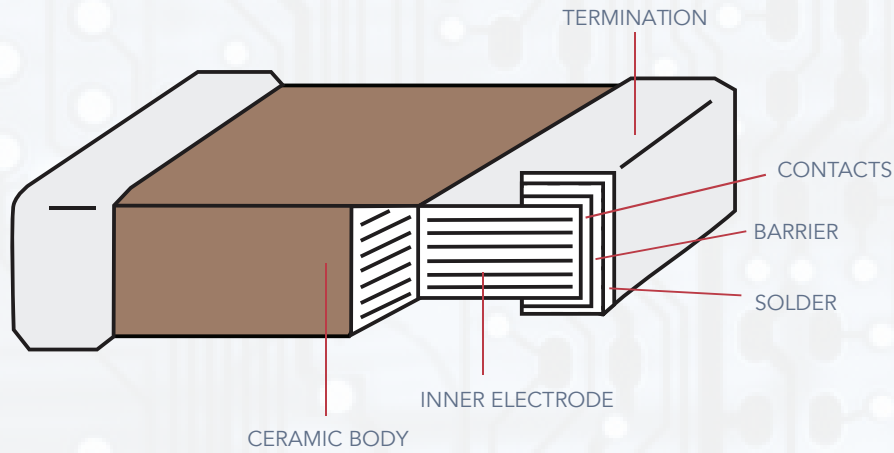
MATERIAL DECLARATION

GMG04-X7R

PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG04
- SIZE 0402
- DIALECTRIC X7R
- WEIGHT 1.34mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



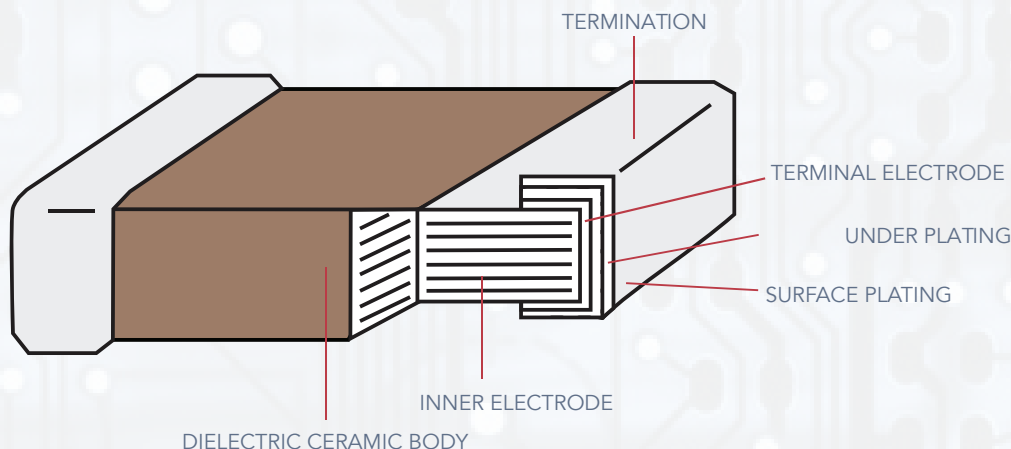
COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Barium Titanate	98	BaTiO ₃	88.7880	12047-27-7	Ceramic		1.1897	1.214	1.34
		Yttrium Oxide	2	Y ₂ O ₃	1.8120	1314-36-9		0.0243			
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste		0.0322	0.0402	
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7		0.008			
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste		0.0708	0.0804	
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4		0.0096			
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating		0.0027	0.0027	
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating		0.0027	0.0027	



PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG04
- SIZE 0402
- DIELECTRIC X5R
- WEIGHT 1.34mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Barium Titanate	100	BaTiO ₃	90.600	12047-27-7	Ceramic		1.214	1.214	1.34
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste		0.0322	0.0402	
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7			0.008		
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste		0.0708	0.0804	
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4			0.0096		
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating		0.0027	0.0027	
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating		0.0027	0.0027	

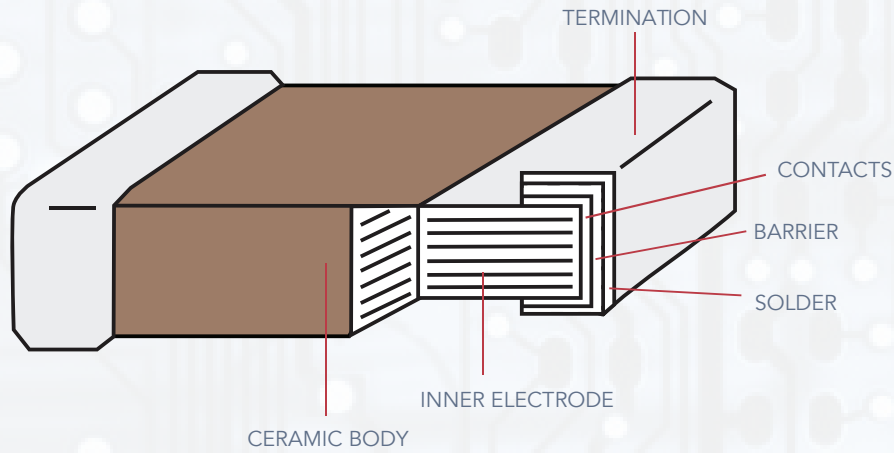
MATERIAL DECLARATION

GMG10-COG

PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG10
- SIZE 0603
- DIALECTRIC COG
- WEIGHT 4.754mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



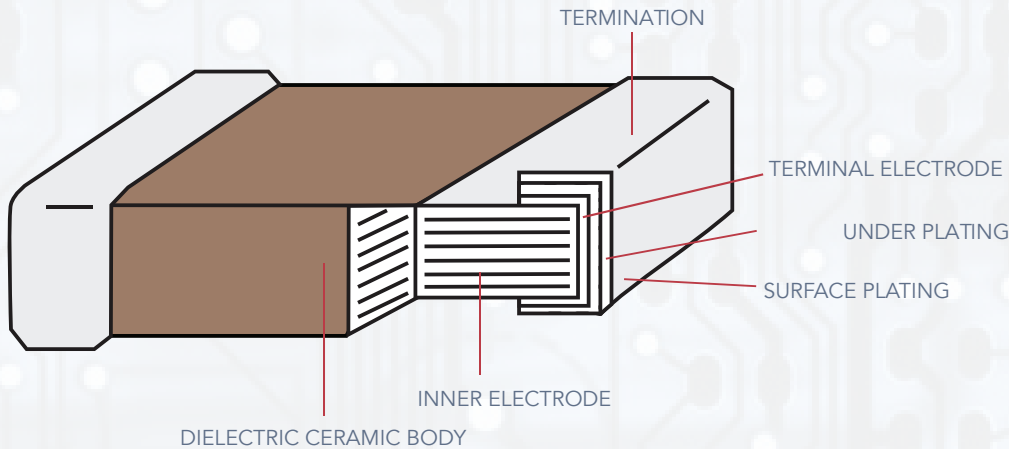
COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Strontium Oxide	13	SrO	11.7780	1314-11-0	Ceramic		0.5599	4.3072	4.754
		Calcium Oxide	15	CaO	13.5900	1305-78-8			0.6461		
		Zirconium Dioxide	50	ZrO ₂	45.3000	1314-23-4			2.1536		
		Titanium Dioxide	2	TiO ₂	1.8120	13463-67-7			0.0861		
		Silica	15	SiO ₂	13.5900	14808-60-7			0.6461		
		Manganese Tetroxide	5	Mn ₃ O ₄	4.5300	1317-35-7			0.2154		
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste		0.1141	0.1426	
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7			0.0285		
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste		0.251	0.2852	
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4			0.0342		
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating		0.0095	0.0095	
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating		0.0095	0.0095	



PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG10
- SIZE 0603
- DIELECTRIC X7R
- WEIGHT 5.5mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Barium Titanate	98	BaTiO ₃	88.7880	12047-27-7	Ceramic		4.883	4.983	5.5
		Yttrium Oxide	2	Y ₂ O ₃	1.8120	1314-36-9			0.1		
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste		0.132		
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7			0.033	0.165	
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste		0.29		
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4			0.04	0.33	
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating		0.011	0.011	
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating		0.011	0.011	

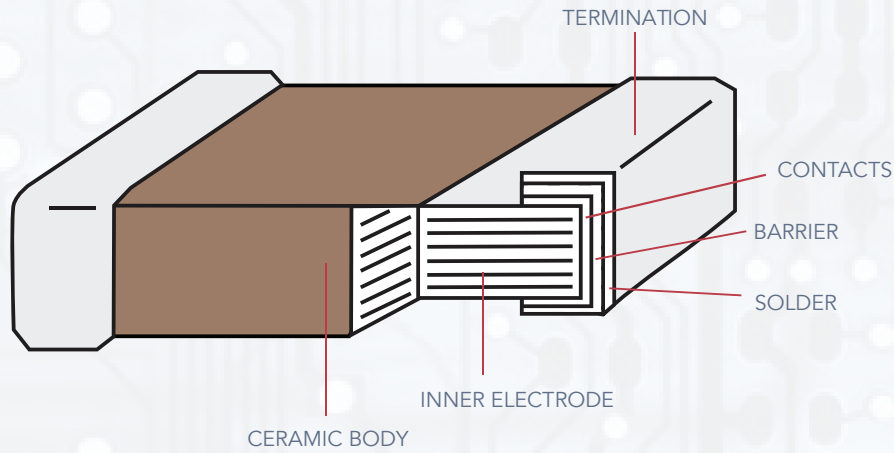
MATERIAL DECLARATION

GMG10-X5R

PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG10
- SIZE 0603
- DIALECTRIC X5R
- WEIGHT 5.5mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



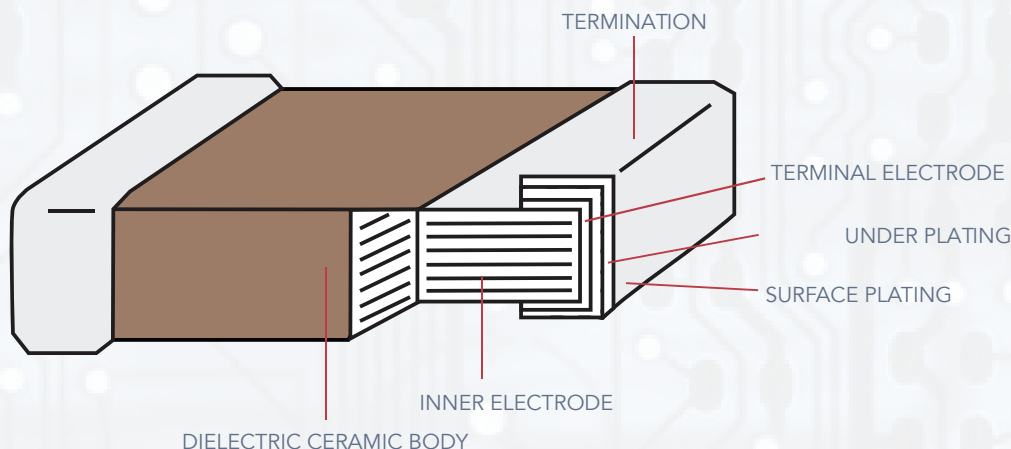
COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Barium Titanate	100	BaTiO ₃	90.600	12047-27-7	Ceramic		4.983	4.983	5.5
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste		0.132	0.165	
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7			0.033		
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste		0.29	0.33	
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4			0.04		
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating		0.011	0.011	
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating		0.011	0.011	



PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG21
- SIZE 0805
- DIELECTRIC COG
- WEIGHT 7.608mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Strontium Oxide	13	SrO	11.7780	1314-11-0	Ceramic		0.8961	6.8929	7.608
		Calcium Oxide	15	CaO	13.5900	1305-78-8			1.0339		
		Zirconium Dioxide	50	ZrO ₂	45.3000	1314-23-4			3.4465		
		Titanium Dioxide	2	TiO ₂	1.8120	13463-67-7			0.1379		
		Silica	15	SiO ₂	13.5900	14808-60-7			1.0339		
		Manganese Tetroxide	5	Mn ₃ O ₄	4.5300	1317-35-7			0.3446		
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste		0.1826	0.2282	
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7			0.0456		
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste		0.4017	0.4565	
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4			0.0548		
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating		0.0152	0.0152	
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating		0.0152	0.0152	

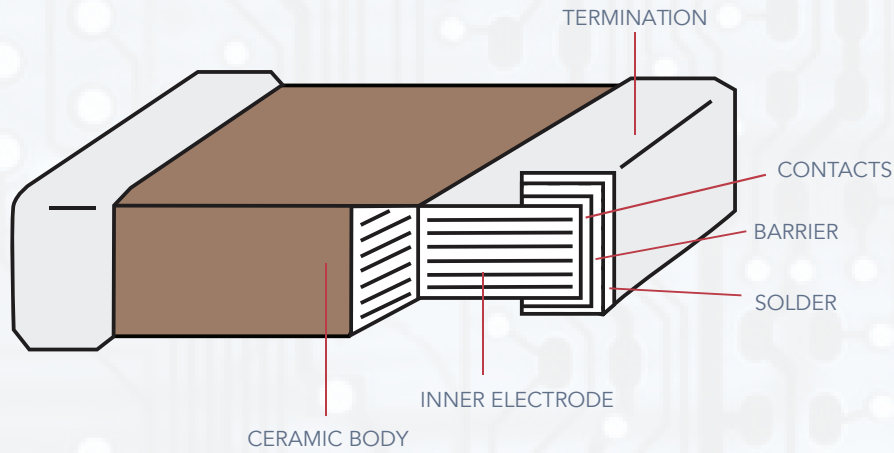
MATERIAL DECLARATION

GMG21-X7R

PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG21
- SIZE 0805
- DIALECTRIC X7R
- WEIGHT 11.27mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



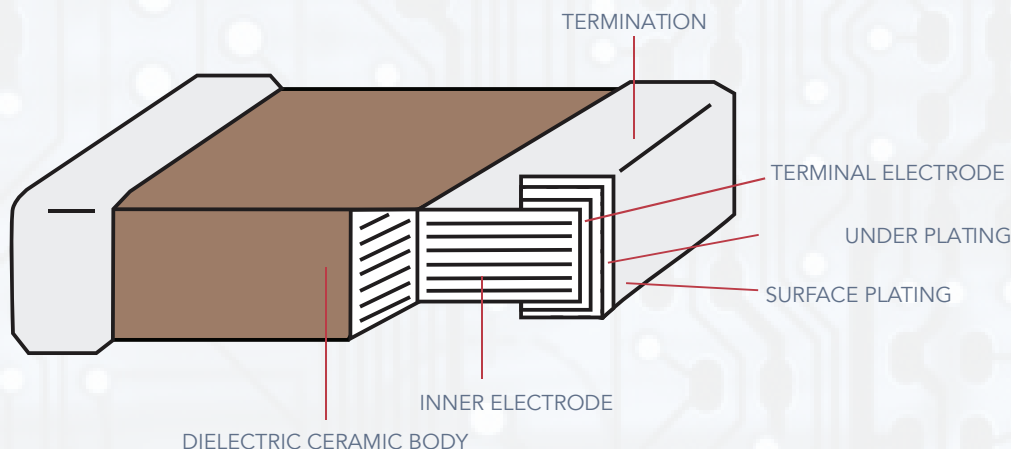
COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Barium Titanate	98	BaTiO ₃	88.7880	12047-27-7	Ceramic	10.006	10.21	11.27	
		Yttrium Oxide	2	Y ₂ O ₃	1.8120	1314-36-9		0.204			
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste	0.27	0.338		
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7		0.068			
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste	0.595	0.676		
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4		0.081			
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating	0.023	0.023		
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating	0.023	0.023		



PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG21
- SIZE 0805
- DIELECTRIC X5R
- WEIGHT 11.27mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Barium Titanate	100	BaTiO ₃	90.6000	12047-27-7	Ceramic		10.2107	10.2107	11.27
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste		0.2705	0.3381	
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7			0.0676		
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste		0.5951	0.6762	
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4			0.0811		
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating		0.0225	0.0225	
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating		0.0225	0.0225	

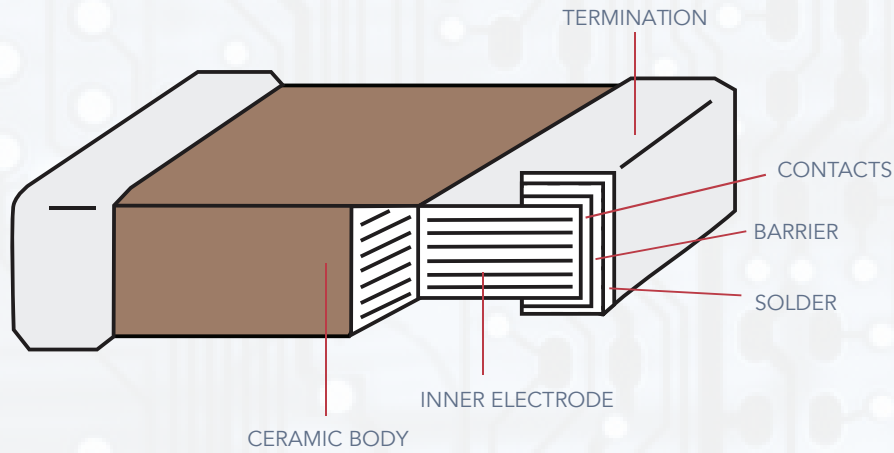
MATERIAL DECLARATION

GMG31-COG

PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG31
- SIZE 1206
- DIALECTRIC COG
- WEIGHT 30mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



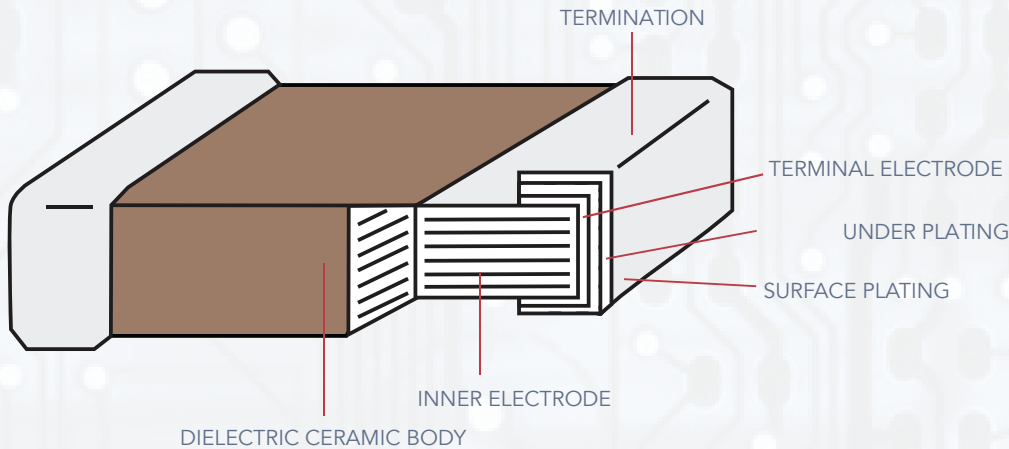
COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Strontium Oxide	13	SrO	11.7780	1314-11-0	Ceramic		3.533	27.18	30
		Calcium Oxide	15	CaO	13.5900	1305-78-8			4.077		
		Zirconium Dioxide	50	ZrO ₂	45.3000	1314-23-4			13.59		
		Titanium Dioxide	2	TiO ₂	1.8120	13463-67-7			0.544		
		Silica	15	SiO ₂	13.5900	14808-60-7			4.077		
		Manganese Tetroxide	5	Mn ₃ O ₄	4.5300	1317-35-7			1.359		
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste		0.72	0.9	
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7			0.18		
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste		1.584	1.8	
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4			0.216		
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating		0.06	0.006	
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating		0.06	0.06	



PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG31
- SIZE 1206
- DIELECTRIC X7R
- WEIGHT 21.71mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Barium Titanate	98	BaTiO ₃	88.7880	12047-27-7	Ceramic	19.2759	19.6693	21.71	
		Yttrium Oxide	2	Y ₂ O ₃	1.8120	1314-36-9		0.3934			
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste	0.521	0.6513		
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7		0.1303			
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste	1.1463	1.3026		
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4		0.1563			
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating	0.0434	0.0434		
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating	0.0434	0.0434		

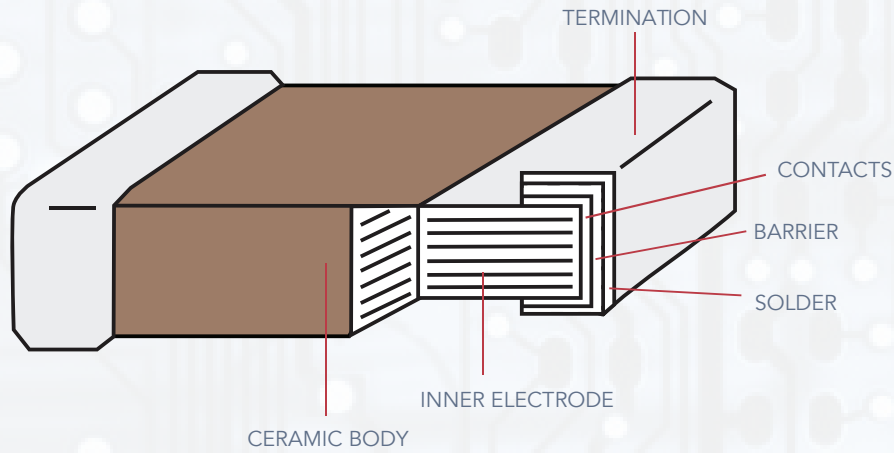
MATERIAL DECLARATION

GMG31-X5R

PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG31
- SIZE 1206
- DIALECTRIC X5R
- WEIGHT 21.71mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



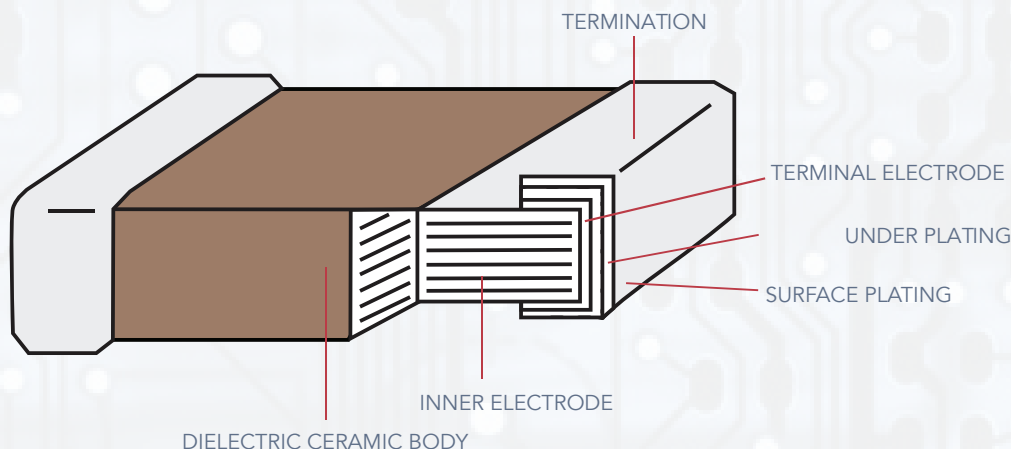
COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Barium Titanate	100	BaTiO ₃	90.6000	12047-27-7	Ceramic		19.6693	19.6693	21.71
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste		0.521	0.6513	
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7			0.1303		
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste		1.1463	1.3026	
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4			0.1563		
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating		0.0434	0.0434	
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating		0.0434	0.0434	



PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG32
- SIZE 1210
- DIELECTRIC COG
- WEIGHT 48.62mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Strontium Oxide	13	SrO	11.7780	1314-11-0	Ceramic		5.7265	44.0498	48.62
		Calcium Oxide	15	CaO	13.5900	1305-78-8			6.6075		
		Zirconium Dioxide	50	ZrO ₂	45.3000	1314-23-4			22.0248		
		Titanium Dioxide	2	TiO ₂	1.8120	13463-67-7			0.881		
		Silica	15	SiO ₂	13.5900	14808-60-7			6.6075		
		Manganese Tetroxide	5	Mn ₃ O ₄	4.5300	1317-35-7			2.2025		
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste		1.1669	1.4586	
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7			0.2917		
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste		2.5671	2.9172	
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4			0.3501		
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating		0.0972	0.0972	
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating		0.0972	0.0972	

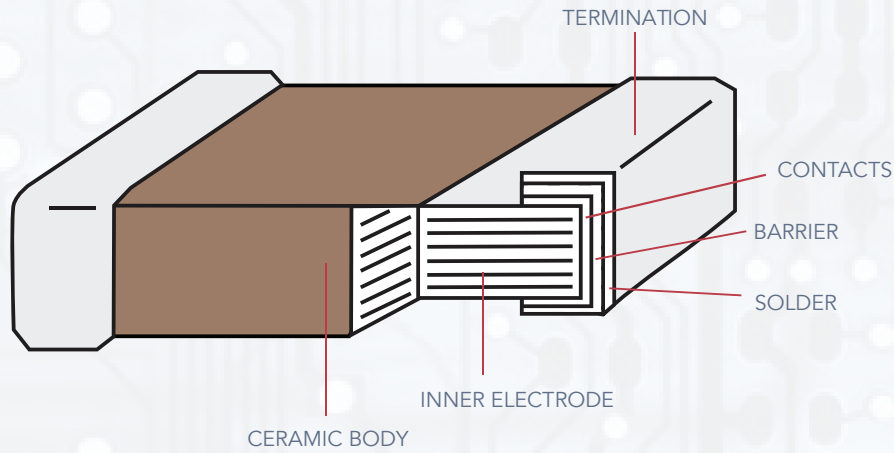
MATERIAL DECLARATION

GMG32-X7R

PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG32
- SIZE 1210
- DIALECTRIC X7R
- WEIGHT 43mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



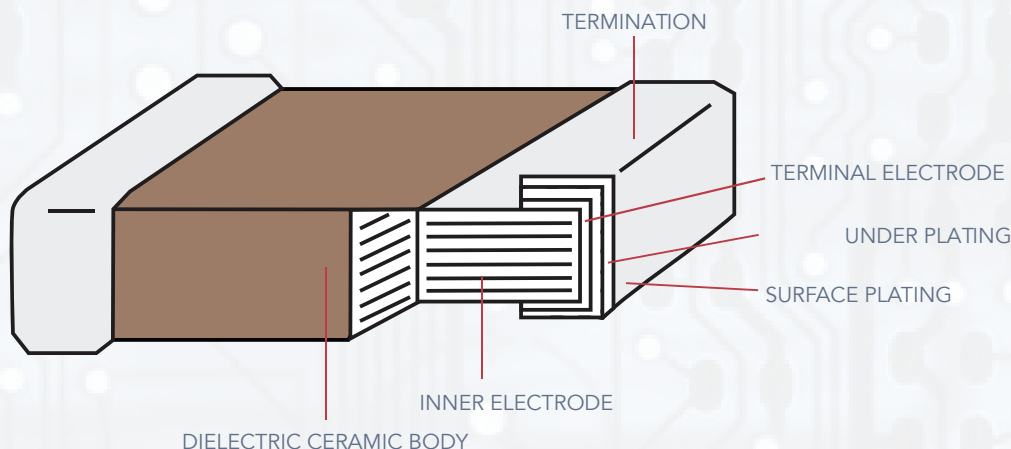
COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Barium Titanate	98	BaTiO ₃	88.7880	12047-27-7	Ceramic	38.179	38.958	43	
		Yttrium Oxide	2	Y ₂ O ₃	1.8120	1314-36-9		0.779			
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste	1.032	1.29		
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7		0.258			
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste	2.27	2.58		
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4		0.31			
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating	0.086	0.086		
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating	0.086	0.086		



PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG32
- SIZE 1210
- DIELECTRIC X5R
- WEIGHT 43mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Barium Titanate	100	BaTiO ₃	90.6000	12047-27-7	Ceramic		38.958	38.958	43
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste		1.032	1.29	
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7			0.258		
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste		2.27	2.58	
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4			0.31		
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating		0.086	0.086	
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating		0.086	0.086	

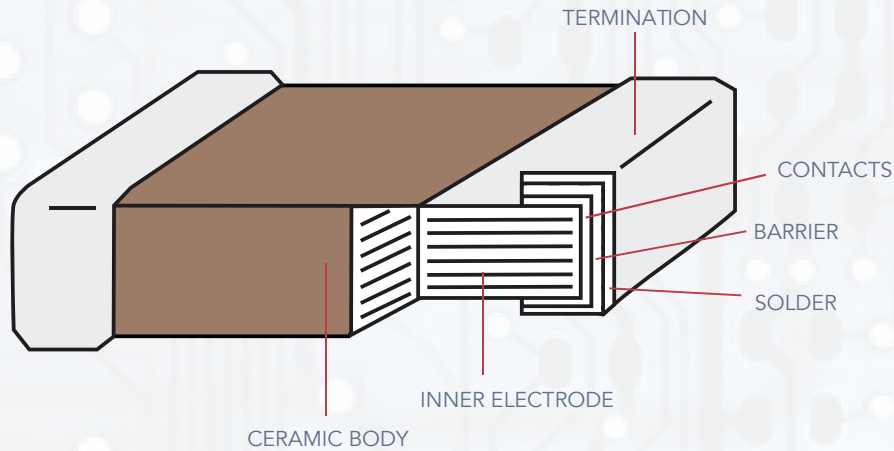
MATERIAL DECLARATION

GMG43-COG

PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG43
- SIZE 1812
- DIALECTRIC COG
- WEIGHT 83.4mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



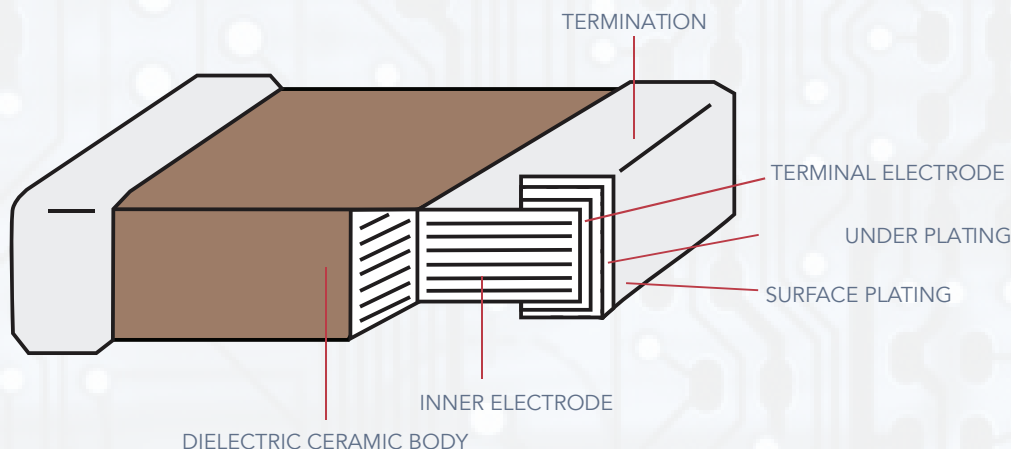
COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Strontium Oxide	13	SrO	11.7780	1314-11-0	Ceramic		9.8229	75.5604	83.4
		Calcium Oxide	15	CaO	13.5900	1305-78-8			11.3341		
		Zirconium Dioxide	50	ZrO ₂	45.3000	1314-23-4			37.7801		
		Titanium Dioxide	2	TiO ₂	1.8120	13463-67-7			1.5112		
		Silica	15	SiO ₂	13.5900	14808-60-7			11.3341		
		Manganese Tetroxide	5	Mn ₃ O ₄	4.5300	1317-35-7			3.778		
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste		2.0016	2.502	
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7			0.5004		
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste		4.4035	5.004	
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4			0.6005		
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating		0.1668	0.1668	
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating		0.1668	0.1668	



PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMG43
- SIZE 1812
- DIELECTRIC X7R
- WEIGHT 91mg
- MANUFACTURE NAME Cal-Chip Electronics Inc.
- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

GENERAL COMPOSITION



COMPOSITION OF PARTS		MATERIAL					CLASSIFICATION	EXEMPTION	TYPICAL WEIGHT		
MATERIAL NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	SUBSTANCE NAME	TYPICAL WT% IN PRODUCT	CAS NO.	USE/PURPOSE OF MATERIAL		SUBSTANCE WEIGHT (mg)	MATERIAL WEIGHT (mg)	PRODUCT WEIGHT (mg)
Dielectric Ceramic Body	90.6	Barium Titanate	98	BaTiO ₃	88.7880	12047-27-7	Ceramic	80.797	82.446	91	
		Yttrium Oxide	2	Y ₂ O ₃	1.8120	1314-36-9		1.649			
Inner Electrode	3	Nickel	80	Ni	2.4000	7440-02-0	Ni Paste	2.184	2.73		
		Barium Titanate	20	BaTiO ₃	0.6000	12047-27-7		0.546			
Terminal Electrode	6	Copper	88	Cu	5.2800	7440-50-8	Cu Paste	4.805	5.46		
		Lead Free Glass	12	Lead Free Glass Frit	0.7200	65997-18-4		0.655			
Under Plating	0.2	Nickel	100	Ni	0.2000	7440-02-0	Ni Plating	0.182	0.182		
Surface Plating	0.2	Tin	100	Sn	0.2000	7440-31-5	Sn Plating	0.182	0.182		