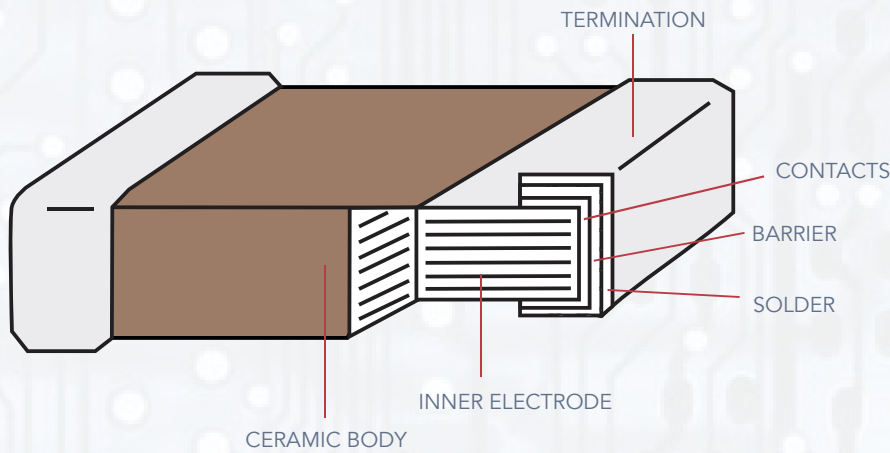


## PRODUCTION IDENTIFICATION

- PRODUCT NAME	Capacitor (MLCC)
- TYPE	GMC32
- SIZE	C0G
- SERIES	1210
- WEIGHT	43.80 (max)
- MANUFACTURE NAME	Cal-Chip Electronics Inc.
- ADDRESS	59 Steamwhistle Drive Ivyland, PA 18974
- RESPONSIBLE PERSON NAME	Frank Salamone
- TELEPHONE	215.942.8900

## GENERAL COMPOSITION

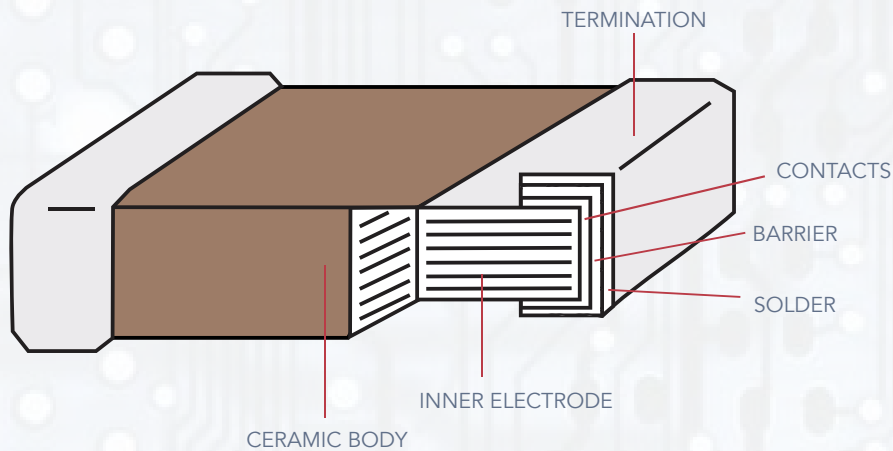


PART	MATERIAL		WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
Body	Inner electrode	Ni	3.60	8.41	8.22	7440-02-0
	Dielectric	Calcium Magnesium Titanate	39.19	91.59	89.47	12032-30-3 7439-95-4 12049-50-2
SUBTOTAL			42.79	100	97.69	
Termination	Contact with Ceramic	Cu	0.810	79.897	1.849	7440-50-8
	Barrier Layer	Ni	0.048	4.759	0.110	7440-02-0
	Solder Plating	Sn	0.156	15.344	0.355	7440-31-5
SUBTOTAL			1.01	100	2.31	
ALL PARTS TOTAL			43.8		100.00	

## PRODUCTION IDENTIFICATION

- PRODUCT NAME                      Capacitor (MLCC)
- TYPE                                    GMC32
- SIZE                                    X7R
- SERIES                                1210
- WEIGHT                                118.5 (max)
- MANUFACTURE NAME              Cal-Chip Electronics Inc.
- ADDRESS                              59 Steamwhistle Drive Ivyland, PA 18974
- RESPONSIBLE PERSON NAME      Frank Salamone
- TELEPHONE                            215.942.8900

## GENERAL COMPOSITION



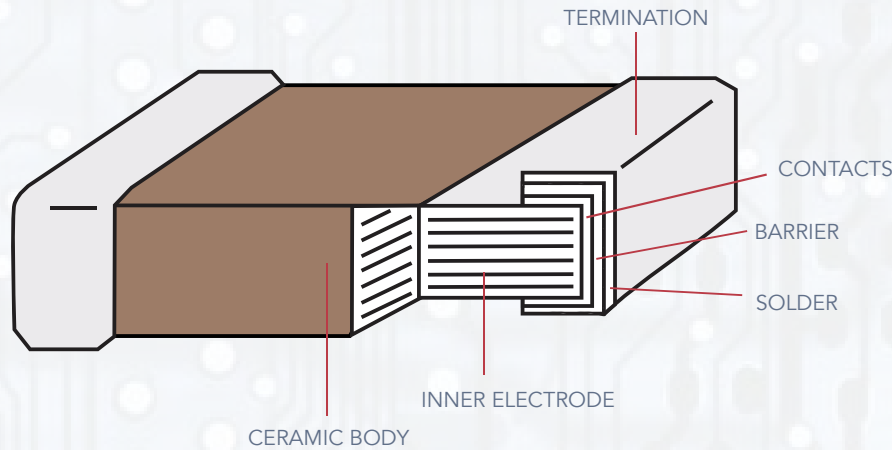
PART	MATERIAL		WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
Body	Inner Electrode	Ni	5.88	5.00	4.96	7440-02-0
	Dielectric	BaTiO <sub>3</sub>	111.60	95.00	94.18	12047-27-7
SUBTOTAL			117.48	100	99.14	
Termination	Contact with Ceramic	Cu	0.810	79.90	0.68	7440-50-8
	Barrier Layer	Ni	0.048	4.76	0.04	7440-02-0
	Solder Plating	Sn	0.156	15.34	0.13	7440-31-5
SUBTOTAL			1.01	100	0.86	
ALL PARTS TOTAL			118.5		100	



## PRODUCTION IDENTIFICATION

- PRODUCT NAME                   Capacitor (MLCC)
- TYPE                               GMC32
- SIZE                               X5R
- SERIES                            1210
- WEIGHT                           118.5 (max)
- MANUFACTURE NAME        Cal-Chip Electronics Inc.
- ADDRESS                         59 Steamwhistle Drive Ivyland, PA 18974
- RESPONSIBLE PERSON NAME   Frank Salamone
- TELEPHONE                     215.942.8900

## GENERAL COMPOSITION



PART	MATERIAL		WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
Body	Inner Electrode	Ni	5.88	5.00	4.96	7440-02-0
	Dielectric	BaTiO <sub>3</sub>	111.6	95.00	94.18	12047-27-7
SUBTOTAL			117.48	100	1.01	
Termination	Contact with Ceramic	Cu	0.810	79.90	0.68	7440-50-8
	Barrier Layer	Ni	0.048	4.76	0.04	7440-02-0
	Solder Plating	Sn	0.156	15.34	0.13	7440-31-5
SUBTOTAL			1.01	100	0.86	
ALL PARTS TOTAL			118.5		100	

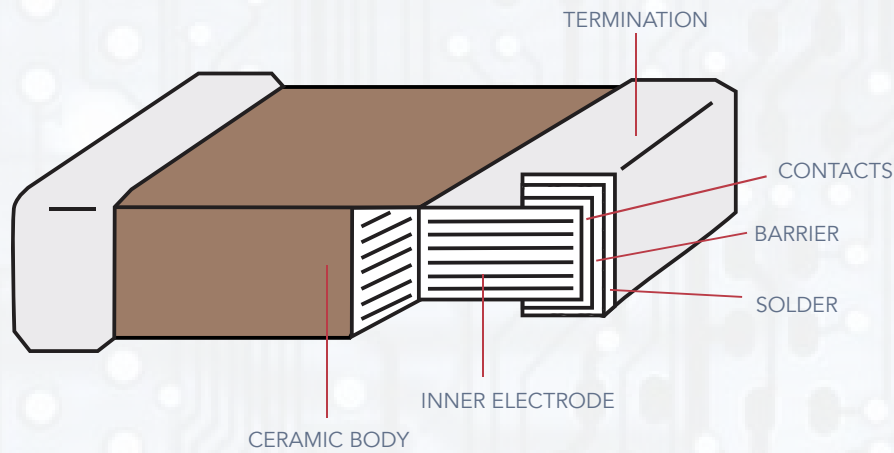
Several additives are included in ceramic body. Any environmentally prohibited material is not included in additives. It is difficult to reveal the precise chemical composition and content of each additive due to each MLCC maker's know-how.

Date: March 15th, 2005

## PRODUCTION IDENTIFICATION

- PRODUCT NAME                      Capacitor (MLCC)
- TYPE                                    GMC32
- SIZE                                    Y5V
- SERIES                                1210
- WEIGHT                                118.4 (max)
- MANUFACTURE NAME              Cal-Chip Electronics Inc.
- ADDRESS                              59 Steamwhistle Drive Ivyland, PA 18974
- RESPONSIBLE PERSON NAME      Frank Salamone
- TELEPHONE                            215.942.8900

## GENERAL COMPOSITION



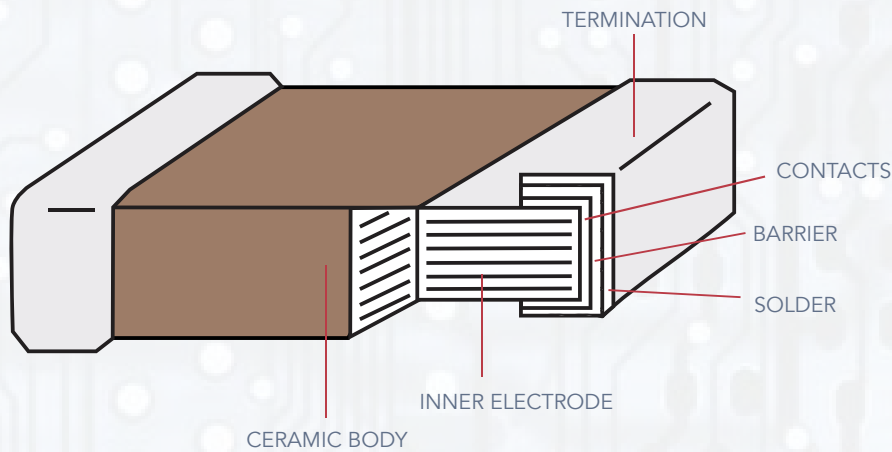
PART	MATERIAL		WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
Body	Inner Electrode	Ni	27.60	23.66	23.31	7440-02-0
	Dielectric	BaTiO <sub>3</sub>	89.05	76.34	75.21	12047-27-7
SUBTOTAL			116.65	100	98.52	
Termination	Contact with Ceramic	Cu	1.546	88.35	1.31	7440-50-8
	Barrier Layer	Ni	0.048	2.76	0.04	7440-02-0
	Solder Plating	Sn	0.156	8.89	0.13	7440-31-5
SUBTOTAL			1.75	100	1.48	
ALL PARTS TOTAL			118.4		100	



## PRODUCTION IDENTIFICATION

- PRODUCT NAME                   Capacitor (MLCC)
- TYPE                               GMC32
- SIZE                               Z5U
- SERIES                            1210
- WEIGHT                           118.4 (max)
- MANUFACTURE NAME        Cal-Chip Electronics Inc.
- ADDRESS                         59 Steamwhistle Drive Ivyland, PA 18974
- RESPONSIBLE PERSON NAME   Frank Salamone
- TELEPHONE                     215.942.8900

## GENERAL COMPOSITION



PART	MATERIAL		WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
Body	Inner Electrode	Ni	27.60	23.66	23.31	7440-02-0
	Dielectric	BaTiO <sub>3</sub>	89.05	76.34	75.21	12047-27-7
SUBTOTAL			116.65	100	98.52	
Termination	Contact with Ceramic	Cu	1.546	88.35	1.31	7440-50-8
	Barrier Layer	Ni	0.048	2.76	0.04	7440-02-0
	Solder Plating	Sn	0.156	8.89	0.13	7440-31-5
SUBTOTAL			1.75	100	1.48	
ALL PARTS TOTAL			118.4		100	