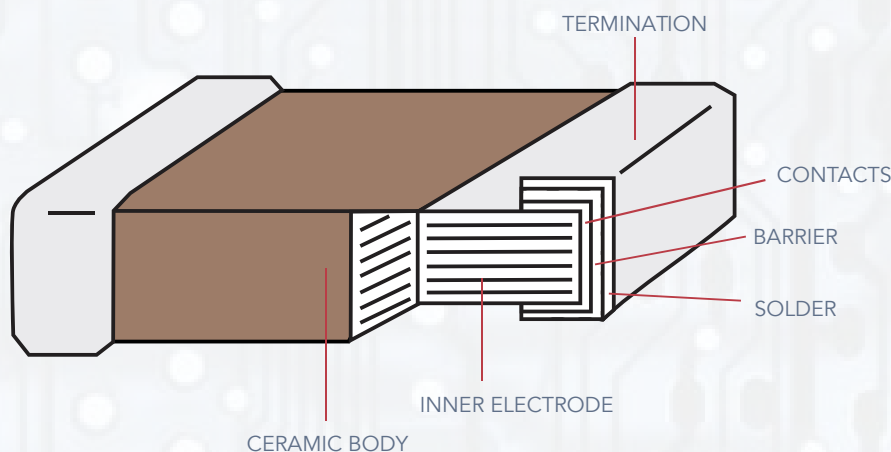


PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMC32
- SIZE 1210
- DIALECTRIC C0G
- 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 Platin	Sn	0.156	15.344	0.355	7440-31-5
SUBTOTAL			1.01	100	2.31	
ALL PARTS TOTAL			43.8		100.00	

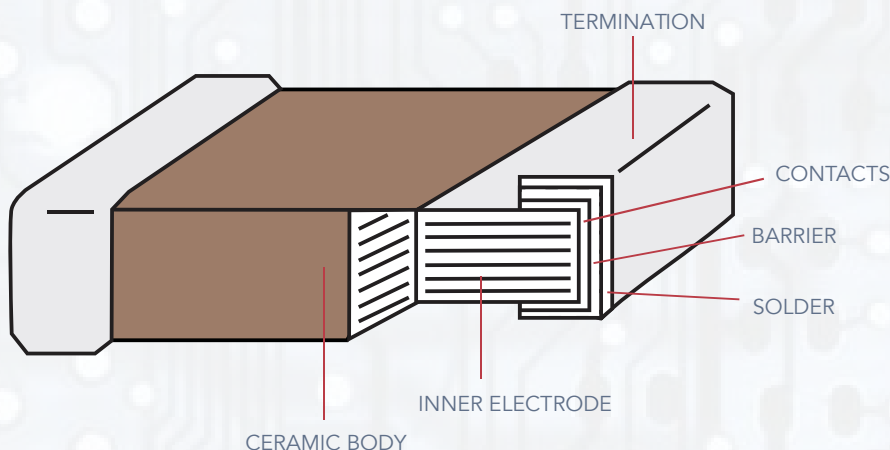
MATERIAL DECLARATION

GMC32-X7R

PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMC32
- SIZE 1210
- DIALECTRIC X7R
- 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



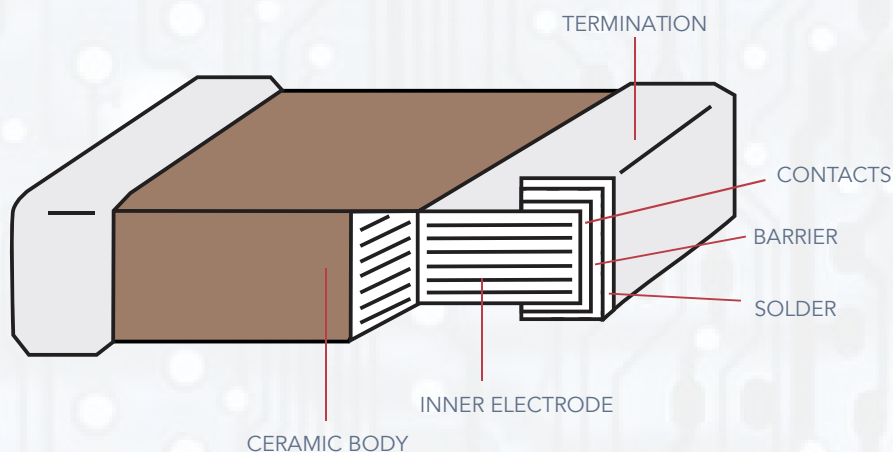
PART	MATERIAL		WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
Body	Inner Electrode	Ni	5.88	5.00	4.96	7440-02-0
	Dielectric	BaTiO ₃	111.60	95.00	04.18	12047-27-7
SUBTOTAL			117.48	100	99.14	
Termination	Contact with Ceramic	Cu	0.810	79.90	0.68	7440-50-8
	Barrier Layer	Ni	0.048	4.76	0.04	7440-02-0
	Solder Platin	Sn	0.156	15.34	0.13	7440-31-5
SUBTOTAL			1.01	100	0.86	
ALL PARTS TOTAL			118.5		100	



PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMC32
- SIZE 1210
- DIALECTRIC X7S
- 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 ₃	111.60	95.00	04.18	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 Platin	Sn	0.156	15.34	0.13	7440-31-5
SUBTOTAL			1.01	100	0.86	
ALL PARTS TOTAL			118.5		100	

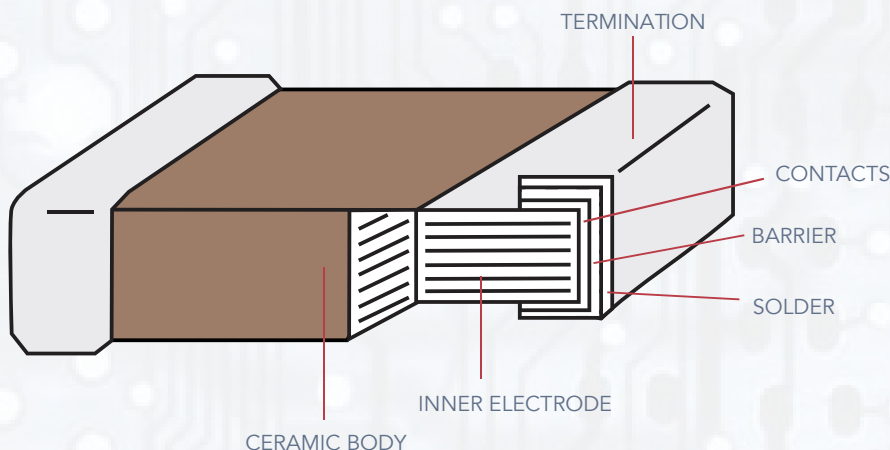
MATERIAL DECLARATION

GMC31-X6S

PRODUCT IDENTIFICATION

- PRODUCT NAME	Capacitor (MLCC)
- SERIES	GMC32
- SIZE	1210
- DIALECTRIC	X6S
- 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



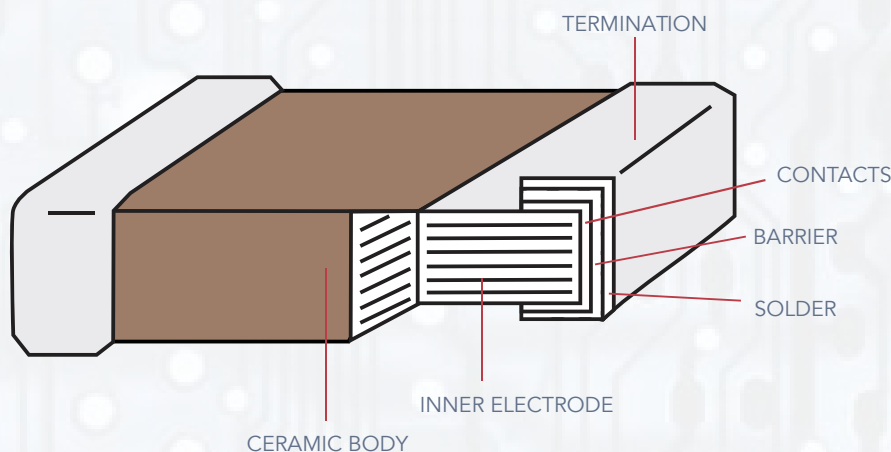
PART	MATERIAL		WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
Body	Inner Electrode	Ni	5.88	5.00	4.96	7440-02-0
	Dielectric	BaTiO ₃	111.60	95.00	04.18	12047-27-7
SUBTOTAL			117.48	100	99.14	
Termination	Contact with Ceramic	Cu	0.810	79.90	0.68	7440-50-8
	Barrier Layer	Ni	0.048	4.76	0.04	7440-02-0
	Solder Platin	Sn	0.156	15.34	0.13	7440-31-5
SUBTOTAL			1.01	100	0.86	
ALL PARTS TOTAL			118.5		100	



PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMC32
- SIZE 1210
- DIALECTRIC X5R
- 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 ₃	111.60	95.00	04.18	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 Platin	Sn	0.156	15.34	0.13	7440-31-5
SUBTOTAL			1.01	100	0.86	
ALL PARTS TOTAL			118.5		100	

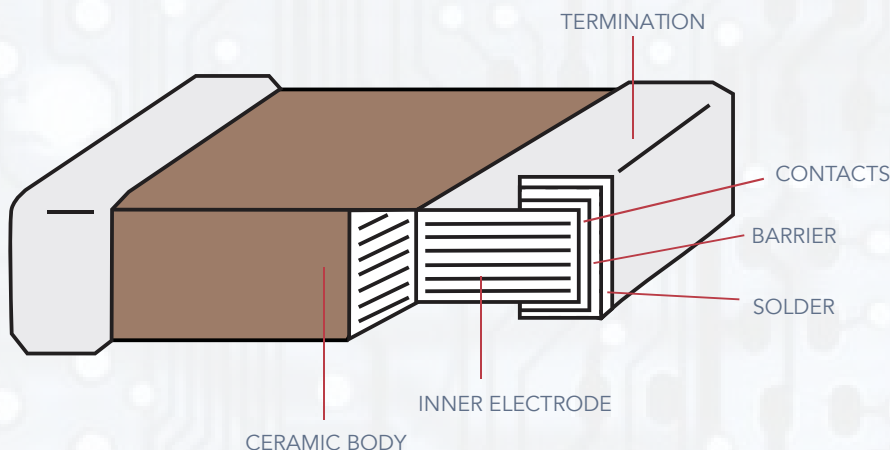
MATERIAL DECLARATION

GMC32-Y5V

PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMC32
- SIZE 1210
- DIALECTRIC Y5V
- 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



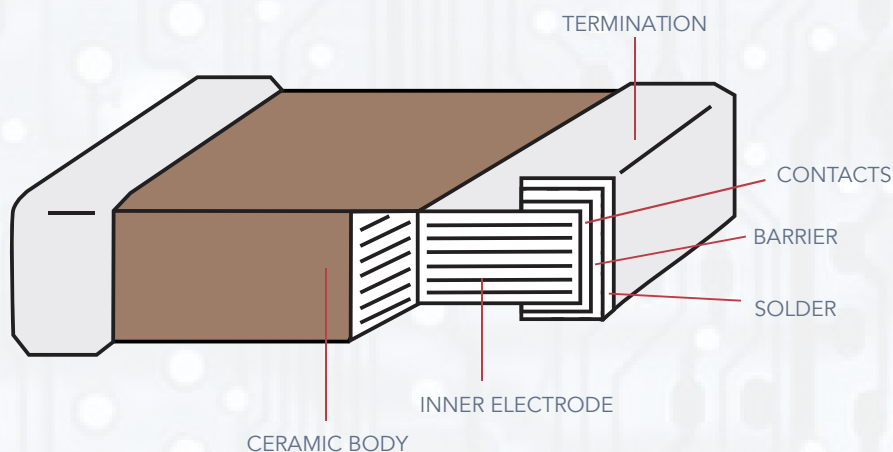
PART	MATERIAL		WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
Body	Inner Electrode	Ni	27.60	23.66	23.31	7440-02-0
	Dielectric	BaTiO ₃	89.05	76.34	75.21	12047-27-7
SUBTOTAL			116.65	100	98.52	
Termination	Contact with Ceramic	Cu	1.546	88.35	1.31	7440-50-8
	Barrier Layer	Ni	0.048	2.76	0.04	7440-02-0
	Solder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



PRODUCT IDENTIFICATION

- PRODUCT NAME Capacitor (MLCC)
- SERIES GMC32
- SIZE 1210
- DIALECTRIC Z5U
- 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 ₃	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 Platin	Sn	0.156	8.89	0.13	7440-31-5
SUBTOTAL			1.75	100	1.48	
ALL PARTS TOTAL			118.4		100	