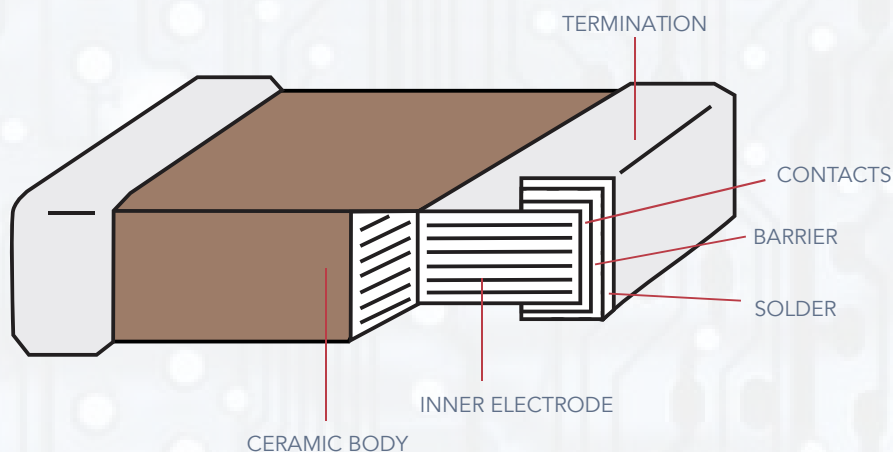


## PRODUCT IDENTIFICATION

- PRODUCT NAME                      Capacitor (MLCC)
- SERIES                                GMC43
- SIZE                                    1812
- DIALECTRIC                         C0G
- WEIGHT                                78.7 (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	4.33	5.56	5.50	7440-02-0
	Dielectric	Calcium Magnesium Titanate	73.44	94.44	93.32	12032-30-3 7439-95-4 12049-50-2
SUBTOTAL			77.77	100.00	98.82	
Termination	Contact with Ceramic	Cu	0.718	77.265	0.912	7440-50-8
	Barrier Layer	Ni	0.069	7.393	0.087	7440-02-0
	Solder Platin	Sn	0.143	15.343	0.181	7440-31-5
SUBTOTAL			0.93	100.00	1.18	
ALL PARTS TOTAL			78.7		100.00	

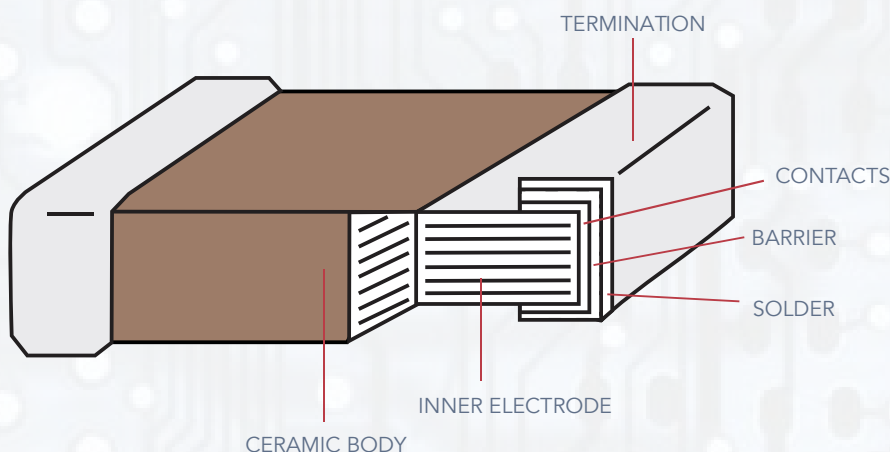
# MATERIAL DECLARATION

GMC43-X7R

## PRODUCT IDENTIFICATION

- PRODUCT NAME                      Capacitor (MLCC)
- SERIES                                GMC43
- SIZE                                    1812
- DIALECTRIC                         X7R
- WEIGHT                                195.2 (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



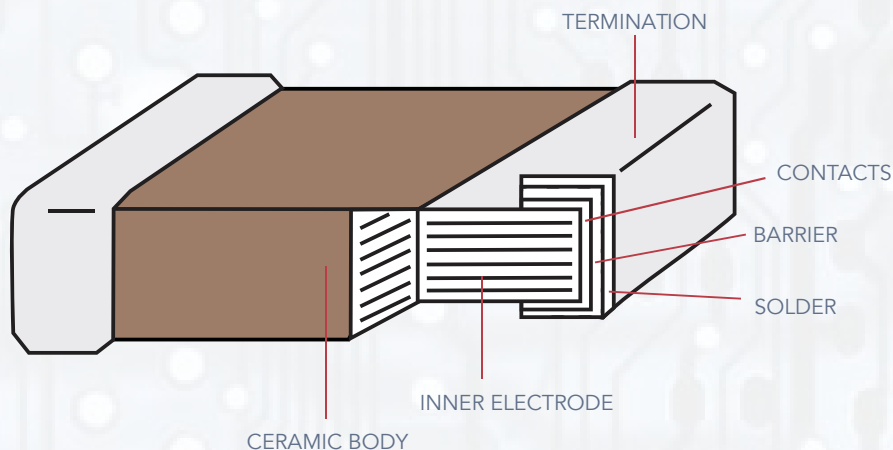
PART	MATERIAL		WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
Body	Inner Electrode	Ni	68.02	34.97	34.84	7440-02-0
	Dielectric	BaTiO <sub>3</sub>	126.49	65.03	64.80	12047-27-7
SUBTOTAL			194.51	100	99.65	
Termination	Contact with Ceramic	Cu	0.477	69.20	0.24	7440-50-8
	Barrier Layer	Ni	0.070	10.11	0.04	7440-02-0
	Solder Platin	Sn	0.143	20.69	0.07	7440-31-5
SUBTOTAL			0.69	100	0.35	
ALL PARTS TOTAL			195.2		100	



## PRODUCT IDENTIFICATION

- PRODUCT NAME                      Capacitor (MLCC)
- SERIES                                GMC43
- SIZE                                    1812
- DIALECTRIC                         X6S
- WEIGHT                                195.2 (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	68.02	34.97	34.84	7440-02-0
	Dielectric	BaTiO <sub>3</sub>	126.49	65.03	64.80	12047-27-7
SUBTOTAL			194.51	100	99.65	
Termination	Contact with Ceramic	Cu	0.477	69.20	0.24	7440-50-8
	Barrier Layer	Ni	0.070	10.11	0.04	7440-02-0
	Solder Platin	Sn	0.143	20.69	0.07	7440-31-5
SUBTOTAL			0.69	100	0.35	
ALL PARTS TOTAL			195.2		100	

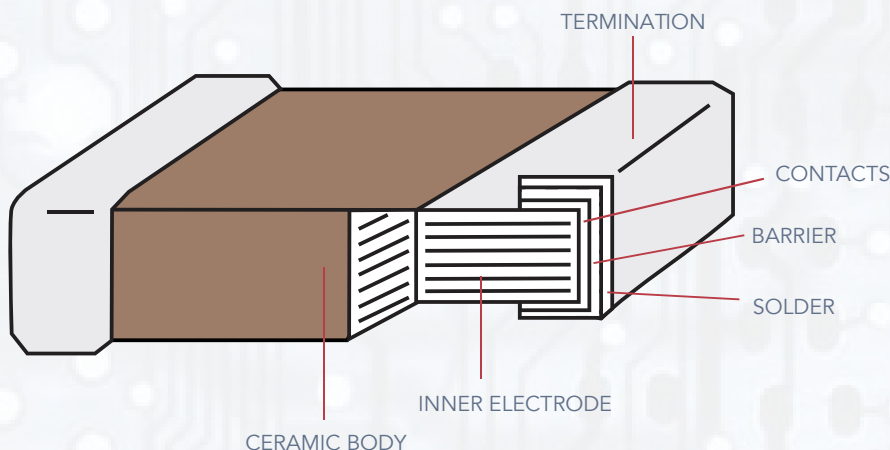
# MATERIAL DECLARATION

GMC43-X5R

## PRODUCT IDENTIFICATION

- PRODUCT NAME                      Capacitor (MLCC)
- SERIES                                GMC43
- SIZE                                    1812
- DIALECTRIC                         X5R
- WEIGHT                                195.2 (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



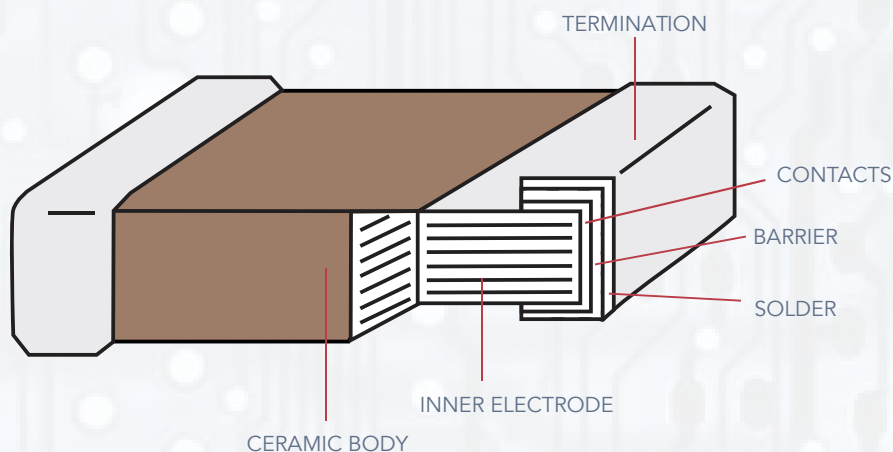
PART	MATERIAL		WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
Body	Inner Electrode	Ni	68.02	34.97	34.84	7440-02-0
	Dielectric	BaTiO <sub>3</sub>	126.49	65.03	64.80	12047-27-7
SUBTOTAL			194.51	100	99.65	
Termination	Contact with Ceramic	Cu	0.477	69.20	0.24	7440-50-8
	Barrier Layer	Ni	0.070	10.11	0.04	7440-02-0
	Solder Platin	Sn	0.143	20.69	0.07	7440-31-5
SUBTOTAL			0.69	100	0.35	
ALL PARTS TOTAL			195.2		100	



## PRODUCT IDENTIFICATION

- PRODUCT NAME                      Capacitor (MLCC)
- SERIES                                GMC43
- SIZE                                    1812
- DIALECTRIC                         Y5V
- WEIGHT                                193.9 (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	14.82	7.67	7.64	7440-02-0
	Dielectric	BaTiO <sub>3</sub>	178.38	92.33	92.00	12047-27-7
SUBTOTAL			193.20	100	99.64	
Termination	Contact with Ceramic	Cu	0.477	68.21	0.25	7440-50-8
	Barrier Layer	Ni	0.070	9.97	0.04	7440-02-0
	Solder Platin	Sn	0.153	21.82	0.08	7440-31-5
SUBTOTAL			0.70	100	0.36	
ALL PARTS TOTAL			193.900		100	

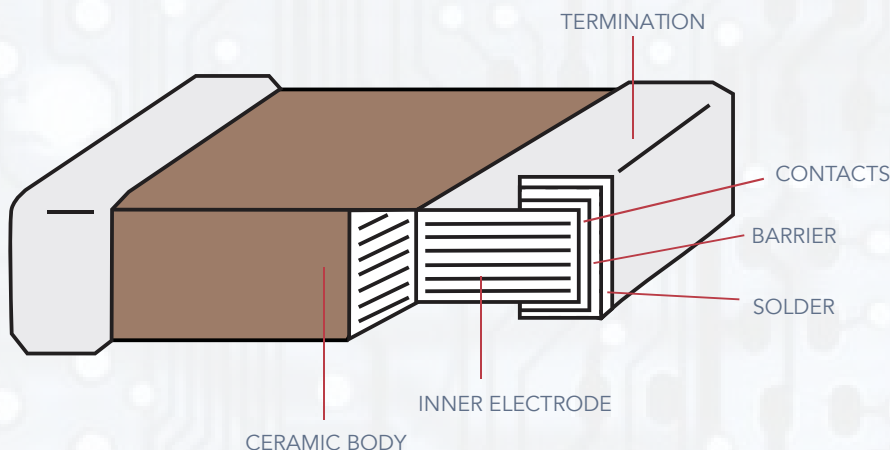
# MATERIAL DECLARATION

GMC43-Z5U

## PRODUCT IDENTIFICATION

- PRODUCT NAME	Capacitor (MLCC)
- SERIES	GMC43
- SIZE	1812
- DIALECTRIC	Z5U
- WEIGHT	193.9 (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	14.82	7.67	7.64	7440-02-0
	Dielectric	BaTiO <sub>3</sub>	178.38	92.33	92.00	12047-27-7
SUBTOTAL			193.20	100	99.64	
Termination	Contact with Ceramic	Cu	0.477	68.21	0.25	7440-50-8
	Barrier Layer	Ni	0.070	9.97	0.04	7440-02-0
	Solder Platin	Sn	0.153	21.82	0.08	7440-31-5
SUBTOTAL			0.70	100	0.36	
ALL PARTS TOTAL			193.900		100	

