

- PRODUCT NAME Capacitor (MLCC)

- TYPE GMC10 - SIZE C0G - SERIES 0603 - WEIGHT 4.7 (max)

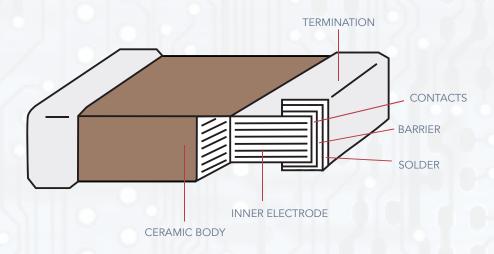
- MANUFACTURE NAME Cal-Chip Electronics Inc.

- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

- RESPONSIBLE PERSON NAME Frank Salamone - TELEPHONE 215.942.8900



### **GENERAL COMPOSITION**



PART	MATERIA	\L	WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
	Inner Electrode	Ni	0.38	8.44	8.17	7440-02-0
Body	Dielectric	CaTiO₃	4.16	91.56	88.61	12047-27-7
2 21		SUBTOTAL	4.55	100	96.78	
-	Contact with Ceramic	Cu	0.109	72.03	2.32	7440-50-8
Termination	Barrier Layer	Ni	0.021	14.21	0.46	7440-02-0
	Solder Plating	Sn	0.021	13.76	0.44	7440-31-5
SUBTOTAL		0.15	100	3.22		
ALL PARTS TOTAL		4.70		100		

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









# MATERIAL DECLARATION

GMC10-X7R



# PRODUCTION INENTIFICATION

- PRODUCT NAME Capacitor (MLCC)

- TYPE GMC10 - SIZE X7R - SERIES 0603 - WEIGHT 6.1 (max)

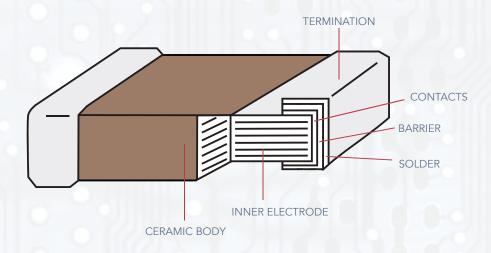
- MANUFACTURE NAME Cal-Chip Electronics Inc.

- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

- RESPONSIBLE PERSON NAME Frank Salamone - TELEPHONE 215.942.8900



# **GENERAL COMPOSITION**



PART	MATERIA	AL .	WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
	Inner Electrode	Ni	1.51	25.34	24.71	7440-02-0
Body	Dielectric	BaTiO₃	4.44	74.66	72.81	12047-27-7
		SUBTOTAL	5.95	100	97.52	
	Contact with Ceramic	Cu	0.109	72.03	1.78	7440-50-8
Termination	Barrier Layer	Ni	0.021	14.21	0.35	7440-02-0
	Solder Plating	Sn	0.021	13.76	0.34	7440-31-5
SUBTOTAL		0.15	100	2.48		
ALL PARTS TOTAL		6.10		100	11/10	

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.









- PRODUCT NAME Capacitor (MLCC)

- TYPE GMC10
- SIZE X5R
- SERIES 0603
- WEIGHT 6.6 (max)

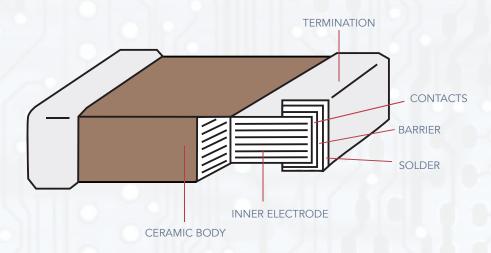
- MANUFACTURE NAME Cal-Chip Electronics Inc.

- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

- RESPONSIBLE PERSON NAME Frank Salamone - TELEPHONE 215.942.8900



# **GENERAL COMPOSITION**



PART	PART MATERIAL		WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
	Inner Electrode	Ni	1.30	20.10	19.64	7440-02-0
Body	Dielectric	BaTiO₃	5.15	79.90	78.07	12047-27-7
- 21		SUBTOTAL	6.45	100	97.71	
-	Contact with Ceramic	Cu	0.109	72.03	1.65	7440-50-8
Termination	Barrier Layer	Ni	0.021	14.21	0.33	7440-02-0
	Solder Plating	Sn	0.021	13.76	0.32	7440-31-5
SUBTOTAL		0.15	100	2.29		
ALL PARTS TOTAL		6.6		100		

Several additives are included in ceramic body. Any environmentally prohibited material is not included in additiives. 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









- PRODUCT NAME Capacitor (MLCC)

- TYPE GMC10
- SIZE X5R
- SERIES 0603
- WEIGHT 6.6 (max)

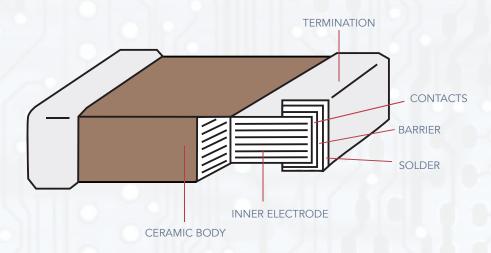
- MANUFACTURE NAME Cal-Chip Electronics Inc.

- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

- RESPONSIBLE PERSON NAME Frank Salamone - TELEPHONE 215.942.8900



# **GENERAL COMPOSITION**



PART	PART MATERIAL		WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
	Inner Electrode	Ni	1.30	20.10	19.64	7440-02-0
Body	Dielectric	BaTiO₃	5.15	79.90	78.07	12047-27-7
- 21		SUBTOTAL	6.45	100	97.71	
-	Contact with Ceramic	Cu	0.109	72.03	1.65	7440-50-8
Termination	Barrier Layer	Ni	0.021	14.21	0.33	7440-02-0
	Solder Plating	Sn	0.021	13.76	0.32	7440-31-5
SUBTOTAL		0.15	100	2.29		
ALL PARTS TOTAL		6.6		100		

Several additives are included in ceramic body. Any environmentally prohibited material is not included in additiives. 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











- PRODUCT NAME Capacitor (MLCC)

- TYPE GMC10 - SIZE Y5V - SERIES 0402 - WEIGHT 5.6 (max)

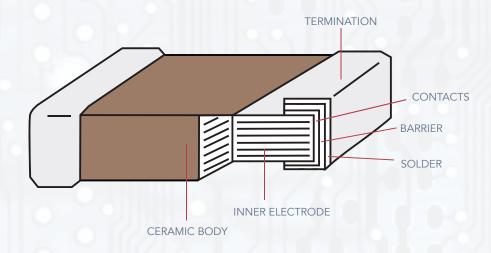
- MANUFACTURE NAME Cal-Chip Electronics Inc.

- ADDRESS 59 Steamwhistle Drive Ivyland, PA 18974

- RESPONSIBLE PERSON NAME -TELEPHONE Frank Salamone 215.942.8900



# **GENERAL COMPOSITION**



PART	MATERIA	AL .	WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
	Inner Electrode	Ni	0.10	17.43	16.96	7440-02-0
Body	Dielectric	BaTiO₃	4.50	82.57	80.34	12047-27-7
		SUBTOTAL	5.45	100	97.30	T Y II
	Contact with Ceramic	Cu	0.109	72.03	1.94	7440-50-8
Termination	Barrier Layer	Ni	0.021	14.21	0.38	7440-02-0
	Solder Plating	Sn	0.021	13.76	0.37	7440-31-5
	SUBTOTAL		0.15	100	2.70	
6//11	ALL PARTS TOTAL		5.60		100	11/10/

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











- PRODUCT NAME Capacitor (MLCC)

- TYPE GMC10
- SIZE Z5U
- SERIES 0603
- WEIGHT 5.6 (max)

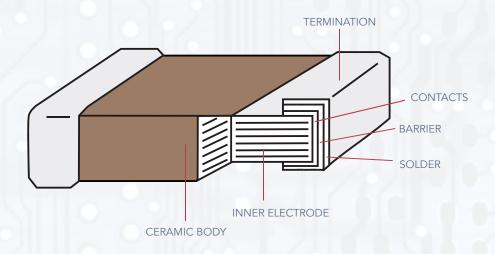
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- RESPONSIBLE PERSON NAME Frank Salamone - TELEPHONE 215.942.8900



# GENERAL COMPOSITION



PART	MATERIA	L	WEIGHT (mg)	% OF PART	% OF COMPONENT	CAS NO.
	Inner Electrode	Ni	0.10	17.43	16.96	7440-02-0
Body	Dielectric	BaTiO₃	4.50	82.57	80.43	12047-27-7
		SUBTOTAL	5.45	100	97.30	
Termination	Contact with Ceramic	Cu	0.109	72.03	1.94	7440-50-8
	Barrier Layer	Ni	0.021	14.21	0.38	7440-02-0
	Solder Plating	Sn	0.021	13.76	0.37	7440-31-5
SUBTOTAL		0.15	100	2.70		
ALL PARTS TOTAL		5.60		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.







