

## PRODUCTION IDENTIFICATION

- PRODUCT NAME	Ferrite Bead
- TYPE	Multi Layer Surface Mount
- SIZE	1005 (0402)
- SERIES	FBH Series
- WEIGHT	2.6 mg
- 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	SUBSTANCE MASS	PERCENTAGE	CASE NO.	
Ferrite Core	Ferrite Powder	Fe2O3	65	2.35	1.52556	90.27	1309-37-1
		NiO	9		0.21123		1313-99-1
		ZnO	22		0.51634		1314-13-2
		CuO	4		0.09388		1317-38-0
Internal Electrode	Silver	Ag	85~95	0.10	0.08354	3.78	7440-22-4
		Resins	<5		0.00491		trade secret
		Additives	<5		0.00098		trade secret
		Diethylene Glycol Monobutyl Ether	<5		0.00246		112-34-5
		Terpineol	<5		0.00491		8000-41-7
		Ester Alcohol	<5		0.00098		trade secret
		Diethy Phthalate	<1		0.00049		84-66-2
Terminal Electrode	Silver	Ag	50~60	0.06	0.03175	2.22	7440-22-4
		Glass Frit	5~10		0.00404		trade secret
		Resins	5~10		0.00404		trade secret
		Additives	<5		0.00231		trade secret
		Diethylene Glycol Monobutyl Ether	10~20		0.00577		112-34-5
		Terpineol	5~10		0.00462		8000-41-7
		Diethylene Glycol Monobutyl Ether Acetate	5~10		0.00289		124-17-4
		Benzy Alcohol	<5		0.00231		100-51-6
Terminal Plating	Nickel Anode #18	Ni	100	0.02	0.02470	0.95	7440-02-0
	Pure Tin Solder	Sn	100	0.07	0.07228	2.78	7440-31-5

# MATERIAL DECLARATION

FBH SERIES

## PRODUCTION IDENTIFICATION

- PRODUCT NAME Ferrite Bead  
 - TYPE Multi Layer Surface Mount  
 - SIZE 1608 (0603)  
 - SERIES FBH Series  
 - WEIGHT 6.2 mg  
 - 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	SUBSTANCE MASS	PERCENTAGE	CASE NO.
Ferrite Core	Ferrite Powder	Fe2O3	65	5.45	3.54358	87.93	1309-37-1
		NiO	9		0.49065		1313-99-1
		ZnO	22		1.19937		1314-13-2
		CuO	4		0.21807		1317-38-0
Internal Electrode	Silver	Ag	85~95	0.24	0.20448	3.88	7440-22-4
		Resins	<5		0.01203		trade secret
		Additives	<5		0.00241		trade secret
		Diethylene Glycol Monobutyl Ether	<5		0.00601		112-34-5
		Terpineol	<5		0.01203		8000-41-7
		Ester Alcohol	<5		0.00241		trade secret
		Diethy Phthalate	<1		0.00120		84-66-2
Terminal Electrode	Silver	Ag	50~60	0.23	0.12651	3.71	7440-22-4
		Glass Frit	5~10		0.01610		trade secret
		Resins	5~10		0.01610		trade secret
		Additives	<5		0.00920		trade secret
		Diethylene Glycol Monobutyl Ether	10~20		0.02300		112-34-5
		Terpineol	5~10		0.01840		8000-41-7
		Diethylene Glycol Monobutyl Ether Acetate	5~10		0.01150		124-17-4
		Benzy Alcohol	<5		0.00920		100-51-6
Terminal Plating	Nickel Anode #18	Ni	100	0.09	0.08556	1.38	7440-02-0
	Pure Tin Solder	Sn	100	0.19	0.19220	3.10	7440-31-5



## PRODUCTION IDENTIFICATION

- PRODUCT NAME	Ferrite Bead
- TYPE	Multi Layer Surface Mount
- SIZE	2012 (0805)
- SERIES	FBH Series
- WEIGHT	10.01 mg
- 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	SUBSTANCE MASS	PERCENTAGE	CASE NO.	
Ferrite Core	Ferrite Powder	Fe2O3	65	8.23	5.34625	82.25	1309-37-1
		NiO	9		0.74025		1313-99-1
		ZnO	22		1.80950		1314-13-2
		CuO	4		0.32900		1317-38-0
Internal Electrode	Silver	Ag	85~95	0.78	0.66215	7.79	7440-22-4
		Resins	<5		0.03895		trade secret
		Additives	<5		0.00779		trade secret
		Diethylene Glycol Monobutyl Ether	<5		0.01948		112-34-5
		Terpineol	<5		0.03895		8000-41-7
		Ester Alcohol	<5		0.00779		trade secret
		Diethy Phthalate	<1		0.00390		84-66-2
Terminal Electrode	Silver	Ag	50~60	0.47	0.25905	4.71	7440-22-4
		Glass Frit	5~10		0.03297		trade secret
		Resins	5~10		0.03297		trade secret
		Additives	<5		0.01884		trade secret
		Diethylene Glycol Monobutyl Ether	10~20		0.04710		112-34-5
		Terpineol	5~10		0.03768		8000-41-7
		Diethylene Glycol Monobutyl Ether Acetate	5~10		0.02355		124-17-4
		Benzy Alcohol	<5		0.01884		100-51-6
Terminal Plating	Nickel Anode #18	Ni	100	0.17	0.16700	1.67	7440-02-0
	Pure Tin Solder	Sn	100	0.36	0.35800	3.58	7440-31-5

# MATERIAL DECLARATION

## PRODUCTION IDENTIFICATION

- PRODUCT NAME Ferrite Bead
- TYPE Multi Layer Surface Mount
- SIZE 3216 (1206)
- SERIES FBH Series
- WEIGHT 30.0 mg
- 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	SUBSTANCE MASS	PERCENTAGE	CASE NO.
Ferrite Core	Ferrite Powder	Fe2O3	65	26.31	17.100	87.69	1309-37-1
		NiO	9		2.368		1313-99-1
		ZnO	22		5.788		1314-13-2
		CuO	4		1.052		1317-38-0
Internal Electrode	Silver	Ag	85~95	1.80	1.5320	6.01	7440-22-4
		Resins	<5		0.0901		trade secret
		Additives	<5		0.0180		trade secret
		Diethylene Glycol Monobutyl Ether	<5		0.0451		112-34-5
		Terpineol	<5		0.0901		8000-41-7
		Ester Alcohol	<5		0.0180		trade secret
		Diethy Phthalate	<1		0.0090		84-66-2
Terminal Electrode	Silver	Ag	50~60	0.98	0.5416	3.28	7440-22-4
		Glass Frit	5~10		0.0689		trade secret
		Resins	5~10		0.0689		trade secret
		Additives	<5		0.0394		trade secret
		Diethylene Glycol Monobutyl Ether	10~20		0.0985		112-34-5
		Terpineol	5~10		0.0788		8000-41-7
		Diethylene Glycol Monobutyl Ether Acetate	5~10		0.0492		124-17-4
		Benzy Alcohol	<5		0.0394		100-51-6
Terminal Plating	Nickel Anode #18	Ni	100	0.19	0.189	0.63	7440-02-0
	Pure Tin Solder	Sn	100	0.72	0.717	2.39	7440-31-5



## PRODUCTION IDENTIFICATION

- PRODUCT NAME	Ferrite Bead
- TYPE	Multi Layer Surface Mount
- SIZE	3225 (1210)
- SERIES	FBH Series
- WEIGHT	53.99 mg
- 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	SUBSTANCE MASS	PERCENTAGE	CASE NO.	
Ferrite Core	Ferrite Powder	Fe2O3	65	45.20	29.382	83.71	1309-37-1
		NiO	9		4.068		1313-99-1
		ZnO	22		9.945		1314-13-2
		CuO	4		1.808		1317-38-0
Internal Electrode	Silver	Ag	85~95	2.18	1.8544	4.04	7440-22-4
		Resins	<5		0.1091		trade secret
		Additives	<5		0.0218		trade secret
		Diethylene Glycol Monobutyl Ether	<5		0.0545		112-34-5
		Terpineol	<5		0.1091		8000-41-7
		Ester Alcohol	<5		0.0218		trade secret
		Diethy Phthalate	<1		0.0109		84-66-2
Terminal Electrode	Silver	Ag	50~60	1.14	0.6267	2.11	7440-22-4
		Glass Frit	5~10		0.0798		trade secret
		Resins	5~10		0.0798		trade secret
		Additives	<5		0.0456		trade secret
		Diethylene Glycol Monobutyl Ether	10~20		0.1139		112-34-5
		Terpineol	5~10		0.0912		8000-41-7
		Diethylene Glycol Monobutyl Ether Acetate	5~10		0.0570		124-17-4
		Benzy Alcohol	<5		0.0456		100-51-6
Terminal Plating	Nickel Anode #18	Ni	100	0.28	0.281	0.52	7440-02-0
	Pure Tin Solder	Sn	100	5.19	5.195	9.62	7440-31-5

# MATERIAL DECLARATION

## PRODUCTION IDENTIFICATION

- PRODUCT NAME Ferrite Bead  
 - TYPE Multi Layer Surface Mount  
 - SIZE 4516 (1806)  
 - SERIES FBH Series  
 - WEIGHT 60.0 mg  
 - 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	SUBSTANCE MASS	PERCENTAGE	CASE NO.
Ferrite Core	Ferrite Powder	Fe2O3	65	57.33	37.264	95.55	1309-37-1
		NiO	9		5.160		1313-99-1
		ZnO	22		12.612		1314-13-2
		CuO	4		2.293		1317-38-0
Internal Electrode	Silver	Ag	85~95	0.78	0.6630	1.3	7440-22-4
		Resins	<5		0.0390		trade secret
		Additives	<5		0.0078		trade secret
		Diethylene Glycol Monobutyl Ether	<5		0.0195		112-34-5
		Terpineol	<5		0.0390		8000-41-7
		Ester Alcohol	<5		0.0078		trade secret
		Diethy Phthalate	<1		0.0039		84-66-2
Terminal Electrode	Silver	Ag	50~60	0.40	0.2178	0.66	7440-22-4
		Glass Frit	5~10		0.0277		trade secret
		Resins	5~10		0.0277		trade secret
		Additives	<5		0.0158		trade secret
		Diethylene Glycol Monobutyl Ether	10~20		0.0396		112-34-5
		Terpineol	5~10		0.0317		8000-41-7
		Diethylene Glycol Monobutyl Ether Acetate	5~10		0.0198		124-17-4
		Benzy Alcohol	<5		0.0158		100-51-6
Terminal Plating	Nickel Anode #18	Ni	100	0.33	0.330	0.55	7440-02-0
	Pure Tin Solder	Sn	100	1.16	1.164	1.94	7440-31-5



## PRODUCTION IDENTIFICATION

- PRODUCT NAME	Ferrite Bead
- TYPE	Multi Layer Surface Mount
- SIZE	4532 (1812)
- SERIES	FBH Series
- WEIGHT	62.0 mg
- 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	SUBSTANCE MASS	PERCENTAGE	CASE NO.	
Ferrite Core	Ferrite Powder	Fe2O3	65	60.59	39.385	97.73	1309-37-1
		NiO	9		5.453		1313-99-1
		ZnO	22		13.330		1314-13-2
		CuO	4		2.424		1317-38-0
Internal Electrode	Silver	Ag	85~95	0.81	0.6904	1.31	7440-22-4
		Resins	<5		0.0406		trade secret
		Additives	<5		0.0081		trade secret
		Diethylene Glycol Monobutyl Ether	<5		0.0203		112-34-5
		Terpineol	<5		0.0406		8000-41-7
		Ester Alcohol	<5		0.0081		trade secret
		Diethy Phthalate	<1		0.0041		84-66-2
Terminal Electrode	Silver	Ag	50~60	0.43	0.2353	0.69	7440-22-4
		Glass Frit	5~10		0.0299		trade secret
		Resins	5~10		0.0299		trade secret
		Additives	<5		0.0171		trade secret
		Diethylene Glycol Monobutyl Ether	10~20		0.0428		112-34-5
		Terpineol	5~10		0.0342		8000-41-7
		Diethylene Glycol Monobutyl Ether Acetate	5~10		0.0214		124-17-4
		Benzy Alcohol	<5		0.0171		100-51-6
Terminal Plating	Nickel Anode #18	Ni	100	0.03	0.031	0.05	7440-02-0
	Pure Tin Solder	Sn	100	0.14	0.136	0.22	7440-31-5