

# MATERIAL DECLARATION

## PRODUCT IDENTIFICATION

- PRODUCT NAME Ferrite Bead  
 - SERIES FBU  
 - SIZE 160808 - 0603  
 - WEIGHT 0.005 mg  
 - MANUFACTURE NAME Cal-Chip Electronics Inc.  
 - ADDRESS 59 Steamwhistle Drive, Ivyland, PA 18974

## GENERAL COMPOSITION

COMPOSITION OF PARTS		COMPOSITION OF MATERIALS					CHEMICAL SUBSTANCE CONTENT
MATERIAL NAME	TYPICAL WT % IN PRODUCT	COMPOSITION NAME	MATERIAL WEIGHT	SUBSTANCE NAME	CAS NO.	EC. NO. (ELINCS)	
Main Body	85	Ferrite Powder	0.00425	Ferric Oxide	1309-37-1	215-168-2	65
				Nickel Monoxide	1313-99-1	215-215-7	6
				Copper Oxide	1317-38-0	215-269-1	7
				Zinc Oxide	1314-13-2	215-222-5	22
Inner Electrode	5	Silver Paste	0.00025	Silver	7440-22-4	231-131-3	91
				Resin	201058-08-4	203-961-6	4
				Solvent	10482-56-1	232-268-1	5
Terminal Electrode	6	Silver Paste	0.0003	Silver	7440-22-4	231-131-3	69
				Resin	201058-08-4	204-685-9	10
				Solvent	10482-56-1	203-961-6	12
				Glass	65997-17-3	232-268-1	9
Plate Layer	4	Tin Metal	0.0002	Tin	7440-31-5	231-141-8	100

# MATERIAL DECLARATION

## PRODUCT IDENTIFICATION

- PRODUCT NAME Ferrite Bead  
 - SERIES FBU  
 - SIZE 201209-0805  
 - WEIGHT 0.01 mg  
 - MANUFACTURE NAME Cal-Chip Electronics Inc.  
 - ADDRESS 59 Steamwhistle Drive, Ivyland, PA 18974

## GENERAL COMPOSITION

COMPOSITION OF PARTS		COMPOSITION OF MATERIALS					CHEMICAL SUBSTANCE CONTENT
MATERIAL NAME	TYPICAL WT % IN PRODUCT	COMPOSITION NAME	MATERIAL WEIGHT	SUBSTANCE NAME	CAS NO.	EC. NO. (ELINCS)	
Main Body	85	Ferrite Powder	0.0085	Ferric Oxide	1309-37-1	215-168-2	65
				Nickel Monoxide	1313-99-1	215-215-7	6
				Copper Oxide	1317-38-0	215-269-1	7
				Zinc Oxide	1314-13-2	215-222-5	22
Inner Electrode	5	Silver Paste	0.0005	Silver	7440-22-4	231-131-3	91
				Resin	201058-08-4	203-961-6	4
				Solvent	10482-56-1	232-268-1	5
Terminal Electrode	6	Silver Paste	0.0006	Silver	7440-22-4	231-131-3	69
				Resin	201058-08-4	204-685-9	10
				Solvent	10482-56-1	203-961-6	12
				Glass	65997-17-3	232-268-1	9
Plate Layer	4	Tin Metal	0.0004	Tin	7440-31-5	231-141-8	100



# MATERIAL DECLARATION

## PRODUCT IDENTIFICATION

- PRODUCT NAME Ferrite Bead  
 - SERIES FBU  
 - SIZE 321611-1206  
 - WEIGHT 0.022 mg  
 - MANUFACTURE NAME Cal-Chip Electronics Inc.  
 - ADDRESS 59 Steamwhistle Drive, Ivyland, PA 18974

## GENERAL COMPOSITION

COMPOSITION OF PARTS		COMPOSITION OF MATERIALS					CHEMICAL SUBSTANCE CONTENT
MATERIAL NAME	TYPICAL WT % IN PRODUCT	COMPOSITION NAME	MATERIAL WEIGHT	SUBSTANCE NAME	CAS NO.	EC. NO. (ELINCS)	
Main Body	85	Ferrite Powder	0.0187	Ferric Oxide	1309-37-1	215-168-2	65
				Nickel Monoxide	1313-99-1	215-215-7	6
				Copper Oxide	1317-38-0	215-269-1	7
				Zinc Oxide	1314-13-2	215-222-5	22
Inner Electrode	5	Silver Paste	0.0011	Silver	7440-22-4	231-131-3	91
				Epoxy Resin	201058-08-4	203-961-6	4
				Solvent	10482-56-1	232-268-1	5
Terminal Electrode	6	Silver Paste	0.00132	Silver	7440-22-4	231-131-3	69
				Epoxy Resin	201058-08-4	204-685-9	10
				Solvent	10482-56-1	203-961-6	12
				Glass	65997-17-3	232-268-1	9
Plate Layer	4	Tin Metal	0.00088	Tin	7440-31-5	231-141-8	100

# MATERIAL DECLARATION

## PRODUCT IDENTIFICATION

- PRODUCT NAME Ferrite Bead  
 - SERIES FBU  
 - SIZE 322513-1210  
 - WEIGHT 0.053 mg  
 - MANUFACTURE NAME Cal-Chip Electronics Inc.  
 - ADDRESS 59 Steamwhistle Drive, Ivyland, PA 18974

## GENERAL COMPOSITION

COMPOSITION OF PARTS		COMPOSITION OF MATERIALS					CHEMICAL SUBSTANCE CONTENT
MATERIAL NAME	TYPICAL WT % IN PRODUCT	COMPOSITION NAME	MATERIAL WEIGHT	SUBSTANCE NAME	CAS NO.	EC. NO. (ELINCS)	
Main Body	85	Ferrite Powder	0.04505	Ferric Oxide	1309-37-1	215-168-2	65
				Nickel Monoxide	1313-99-1	215-215-7	6
				Copper Oxide	1317-38-0	215-269-1	7
				Zinc Oxide	1314-13-2	215-222-5	22
Inner Electrode	5	Silver Paste	0.00265	Silver	7440-22-4	231-131-3	91
				Epoxy Resin	201058-08-4	203-961-6	4
				Solvent	10482-56-1	232-268-1	5
Terminal Electrode	6	Silver Paste	0.00318	Silver	7440-22-4	231-131-3	69
				Epoxy Resin	201058-08-4	204-685-9	10
				Solvent	10482-56-1	203-961-6	12
				Glass	65997-17-3	232-268-1	9
Plate Layer	4	Tin Metal	0.00212	Tin	7440-31-5	231-141-8	100



# MATERIAL DECLARATION

## PRODUCT IDENTIFICATION

- PRODUCT NAME	Ferrite Bead
- SERIES	FBU
- SIZE	451616 - 1806 (1808)
- WEIGHT	0.06 mg
- MANUFACTURE NAME	Cal-Chip Electronics Inc.
- ADDRESS	59 Steamwhistle Drive, Ivyland, PA 18974

## GENERAL COMPOSITION

MATERIAL NAME	COMPOSITION NAME	SUBSTANCE NAME	CAS NO.	TYPICAL WT % IN PRODUCT	WEIGHT (mg)	SUBSTANCE MASS (mg)	PERCENTAGE	SUBSTANCE PERCENTAGE
Main Body	Ferrite Powder	Fe2O3	1309-37-1	65	57.33	37.264	95.55	62.108
		NiO	1313-99-1	9		5.160		8.60
		ZnO	1314-13-2	22		12.612		21.021
		CuO	1317-38-0	4		2.293		3.822
Inner Electrode	Silver Paste	Ag	7440-22-4	85~96	0.78	0.6630	1.3	1.1050
		Resins	trade secret	<5		0.0390		0.0650
		Additives	trade secret	<5		0.0078		0.0130
		Diethylene Glycol Monobutyl Ether	112-34-5	<5		0.0195		0.0325
		Terpineol	8000-41-7	<5		0.0390		0.0650
		Ester Alcohol	trade secret	<5		0.0078		0.0130
		Diethy Phthalate	84-66-2	<1		0.0039		0.0065
Terminal Electrode	Silver Paste	Ag	7440-22-4	50~60	0.40	0.2178	0.66	0.3630
		Glass Frit	trade secret	5~10		0.0277		0.0462
		Resins	trade secret	5~10		0.0277		0.0462
		Additives	trade secret	<5		0.0158		0.0264
		Diethylene Glycol Monobutyl Ether	112-34-5	10~20		0.0396		0.0660
		Terpineol	8000-41-7	5~10		0.0317		0.0528
		Diethylene Glycol Monobutyl Ether Acetate	124-17-4	5~10		0.0198		0.0330
		Benzy Alcohol	100-51-6	≤5		0.0158		0.0264
Plate Layer	Nickel Anode #18	Ni	7440-02-02	100	0.33	0.330	0.55	0.550
	Pure Tin Solder	Sn	7440-31-5	100	1.16	1.164	1.94	1.940

# MATERIAL DECLARATION

## PRODUCT IDENTIFICATION

- PRODUCT NAME Ferrite Bead  
 - SERIES FBU  
 - SIZE 453215-1812  
 - MANUFACTURE NAME Cal-Chip Electronics Inc.  
 - ADDRESS 59 Steamwhistle Drive, Ivyland, PA 18974

## GENERAL COMPOSITION

COMPOSITION OF PARTS		COMPOSITION OF MATERIALS				ELEMENT % BY WEIGHT
MATERIAL NAME	TYPICAL WT % IN PRODUCT	COMPOSITION NAME	MATERIAL TYPE	SUBSTANCE NAME	CAS NO.	
Main Body	85%	Ferrite Powder	Ni-Zn T001	Ferric Oxide (Fe <sub>2</sub> O <sub>3</sub> )	1309-37-1	62%
				Nickel Monoxide (NiO)	1313-99-1	11%
				Copper Oxide (CuO)	1317-38-0	7%
				Zinc Oxide (ZnO)	1314-13-2	20%
Inner Electrode	10%	Silver Paste	7454B	Silver (Ag)	7440-22-4	87%
				Resins	9004-57-3	5%
				C8H18O3	112-34-5	8%
Terminal Electrode	3%	Silver Paste	DP4303W	Silver (Ag)	7440-22-4	70%
				Glass Frit	60676-86-0	15%
				Resins	9004-57-3	10%
				C8H18O3	112-34-5	5%
Solder Base	1%	Nickel	Nickel Plating	Nickel (Ni)	7440-02-0	100%
Solder	1%	Tin	Tin Plating	Tin (Sn)	7440-31-5	100%



# MATERIAL DECLARATION

## PRODUCT IDENTIFICATION

- PRODUCT NAME Ferrite Bead  
- SERIES FBU  
- SIZE 565015-2220  
- WEIGHT 0.23081 mg  
- MANUFACTURE NAME Cal-Chip Electronics Inc.  
- ADDRESS 59 Steamwhistle Drive, Ivyland, PA 18974

## GENERAL COMPOSITION

MATERIAL NAME	COMPOSITION NAME	SUBSTANCE NAME	CAS NO.	TYPICAL WT % IN PRODUCT	WEIGHT (mg)
Conductor	Silver	Ag	7440-22-4	1.70	0.00392
Ferrite	Ferric Oxide	Fe2O3	1309-37-1	92.57	0.21366
Plate Layer Ni	Nickel	Ni	7440-02-0	0.65	0.00150
Plate Layer Sn	Tin	Sn	7440-31-5	5.08	0.01173

# MATERIAL DECLARATION

## PRODUCT IDENTIFICATION

- PRODUCT NAME Ferrite Bead  
 - SERIES FBU  
 - SIZE 565018-2220  
 - WEIGHT 0.27099 mg  
 - MANUFACTURE NAME Cal-Chip Electronics Inc.  
 - ADDRESS 59 Steamwhistle Drive, Ivyland, PA 18974

## GENERAL COMPOSITION

MATERIAL NAME	COMPOSITION NAME	SUBSTANCE NAME	CAS NO.	TYPICAL WT % IN PRODUCT	WEIGHT (mg)
Conductor	Silver	Ag	7440-22-4	1.99	0.00538
Ferrite	Ferric Oxide	Fe2O3	1309-37-1	94.19	0.25524
Plate Layer Ni	Nickel	Ni	7440-02-0	0.65	0.00176
Plate Layer Sn	Tin	Sn	7440-31-5	3.18	0.00861



# MATERIAL DECLARATION

## PRODUCT IDENTIFICATION

- PRODUCT NAME Ferrite Bead  
- SERIES FBU  
- SIZE 565036-2220  
- WEIGHT 0.5584 mg  
- MANUFACTURE NAME Cal-Chip Electronics Inc.  
- ADDRESS 59 Steamwhistle Drive, Ivyland, PA 18974

## GENERAL COMPOSITION

MATERIAL NAME	COMPOSITION NAME	SUBSTANCE NAME	CAS NO.	TYPICAL WT % IN PRODUCT	WEIGHT (mg)
Conductor	Silver	Ag	7440-22-4	5.46	0.03050
Ferrite	Ferric Oxide	Fe2O3	1309-37-1	89.49	0.49970
Plate Layer Ni	Nickel	Ni	7440-02-0	0.64	0.00360
Plate Layer Sn	Tin	Sn	7440-31-5	4.41	0.02460