

承认书

SPECIFICATION FOR APPROVAL

客户名称:

Customer Name: _____

(请填写贵司全名)

客户品名:

Customer Part No.: _____

(请填写客户物料编码)

大立品名:

DALI Part No.: _____

(请填写大立品名)

大立规格书编号:

Specification No.: _____

Spec-CMBF Series Rev.02


变更履历/Revised record:

Rev.	Effective Date	Changed Contents	Change Reasons	Approved By
01	2012-09-01	New released		Paul
02	2019-01-01	Format update		Paul

客户承认栏(请签名盖章并签署日期后回传)

Customer's Approval Chop: 客户承认盖章:
Approved By: 承认人:
Approved Date: 承认日期:

广州大立电子有限公司

Confirmed	Checked	Prepared
 Paul	Amy	Steven
Date: 2019-01-01		

Add:广州市南沙区进港大道

Tel: 020-39075998 Fax: 020-39075978

Type: CMBF0402,0603,1005,1608,2012,3216 Operation Temperature : -40~+125°C(Includes temperature when the coil is heated)

Feature/特长

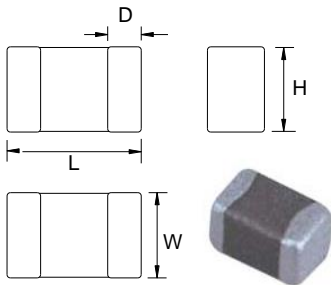
- Monolithic inorganic material construction.
- Excellent solderability and heat resistance.
- Used in a wide range of frequency to suppress EMI
- RoHS compliant.
- 无机材料构造。
- 良好的可焊性、耐焊性。
- 能在较宽的频率范围内抑制EMI。
- RoHS指定对应。

Application/用途

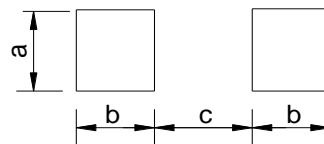
For noise suppression applications such as mobile phones, Personal computers, communication equipment, PDAs, Printers and other computer peripheral products.

适用于移动电话、电脑及通信设备、PDA、打印机及周边设备噪音抑制用。

Dimensions/外形图 (Unit: mm)



Recommended Land Pattern/推荐贴装尺寸



Type	L	W	H	D	a(Ref.)	b(Ref.)	c(Ref.)	Packaging (pcs/reel)
CMBF0402 [016008]	0.4 ±0.05	0.2 ±0.05	0.2 ±0.05	0.1 ±0.05	0.3	0.3	0.2	20000
CMBF0603 [0201]	0.6 ±0.05	0.3 ±0.05	0.3 ±0.05	0.15 ±0.05	0.4	0.5	0.3	15000
CMBF1005 [0402]	1.0 ±0.15	0.5 ±0.15	0.5 ±0.15	0.25 ±0.15	0.6	0.8	0.5	10000
CMBF1608 [0603]	1.6 ±0.2	0.8 ±0.2	0.8 ±0.2	0.3 ±0.2	0.8	1.0	0.6	4000
CMBF2012 [0805]	2.0 ±0.2	1.25 ±0.2	0.85 ±0.2/1.25 ±0.2	0.5 ±0.3	1.2	1.0	1.0	4000/2000
CMBF3216 [1206]	3.2 ±0.2	1.6 ±0.2	1.1 ±0.2	0.5 ±0.3	1.6	1.1	2.2	4000

Product Identification/品名注释

C M B F 1608 - 300 P C W

(1) (2) (3) (4) (5) (6) (7) (8) (9)

(1) SMD/表面安装制品

(2) Multilayer chip/叠层片式

(3) Beads/磁珠

(4) Ferrite/铁氧体

(5) Dimension symbol/尺寸表示:

1608=1.6 x 0.8 mm (L x W)

(6) Impedance value/阻抗值:

300=30Ω, 301=300Ω, 102=1000Ω

(7) Tolerance/公差: P=±25%

(8) Packing Style/包装形态: C=Carrier taping/编带包装

(9) Characteristic identification/特性标识

CMBF0402 Electrical Characteristics

Part Number	Impedance (Ω) ①	Test Frequency (MHz)	Rated current (mA) ②	DCR max. (Ω)
CMBF0402-100PCW	10 ± 5Ω	100	540	0.10
CMBF0402-700PCW	70 ± 25%	100	280	0.37
CMBF0402-121PCW	120 ± 25%	100	240	0.53
CMBF0402-750PCH	75 ± 25%	100	260	0.45
CMBF0402-121PCH	120 ± 25%	100	220	0.60

① Test equipment: E4991A or equivalent; Test Fixture: 16192A or equivalents; Test temperature: 25 °C.

② Rated current: The DC current at which the temperature rise is $\Delta t=40^{\circ}\text{C}$ max.($T_a=25^{\circ}\text{C}$)

Note: All test data is referenced to 25°C ambient.

CMBF0603 Electrical Characteristics

Part Number	Impedance (Ω) ①	Test Frequency (MHz)	Rated current (mA) ②	DCR max. (Ω)
CMBF0603-220PCW	22 ± 25%	100	500	0.065
CMBF0603-330PCW	33 ± 25%	100	500	0.07
CMBF0603-800PCW	80 ± 25%	100	200	0.40
CMBF0603-121PCW	120 ± 25%	100	200	0.45
CMBF0603-241PCW	240 ± 25%	100	200	0.65
CMBF0603-601PCW	600 ± 25%	100	150	1.20
CMBF0603-102PCK	1000 ± 25%	100	220	1.15
CMBF0603-600PCH	60 ± 25%	100	200	0.25
CMBF0603-121PCH	120 ± 25%	100	200	0.40
CMBF0603-241PCH	240 ± 25%	100	200	0.80
CMBF0603-471PCH	470 ± 25%	100	100	1.05
CMBF0603-601PCH	600 ± 25%	100	100	1.20
CMBF0603-100PCB	10 ± 25%	100	200	0.25
CMBF0603-220PCB	22 ± 25%	100	200	0.45
CMBF0603-330PCB	33 ± 25%	100	150	0.55
CMBF0603-470PCB	47 ± 25%	100	150	0.70
CMBF0603-560PCB	56 ± 25%	100	100	1.00
CMBF0603-800PCB	80 ± 25%	100	100	1.30
CMBF0603-121PCB	120 ± 25%	100	100	1.50

① Test equipment: E4991A or equivalent; Test Fixture: 16192A or equivalents; Test temperature: 25 °C.

② Rated current: The DC current at which the temperature rise is $\Delta t=40^{\circ}\text{C}$ max.($T_a=25^{\circ}\text{C}$)

Note: All test data is referenced to 25°C ambient.

CMBF1005 Electrical Characteristics

Part Number	Impedance (Ω) ①	Test Frequency (MHz)	Rated current (mA) ②	DCR max. (Ω)
CMBF1005-300PCK	30 \pm 25%	100	300	0.20
CMBF1005-400PCK	40 \pm 25%	100	600	0.25
CMBF1005-600PCK	60 \pm 25%	100	300	0.25
CMBF1005-800PCK	80 \pm 25%	100	300	0.25
CMBF1005-121PCK	120 \pm 25%	100	100	0.30
CMBF1005-151PCK	150 \pm 25%	100	100	0.30
CMBF1005-221PCK	220 \pm 25%	100	100	0.40
CMBF1005-301PCK	300 \pm 25%	100	100	0.50
CMBF1005-471PCK	470 \pm 25%	100	100	0.65
CMBF1005-601PCK	600 \pm 25%	100	80	0.80
CMBF1005-102PCK	1000 \pm 25%	100	50	1.20
CMBF1005-600PCM	60 \pm 25%	100	100	0.30
CMBF1005-750PCM	75 \pm 25%	100	80	0.40
CMBF1005-121PCM	120 \pm 25%	100	80	0.45
CMBF1005-221PCM	220 \pm 25%	100	50	0.60
CMBF1005-301PCM	300 \pm 25%	100	50	0.75

① Test equipment: E4991A or equivalent; Test Fixture: 16192A or equivalents; Test temperature: 25 °C.

② Rated current: The DC current at which the temperature rise is $\Delta t=40^{\circ}\text{C}$ max.($T_a=25^{\circ}\text{C}$)

Note: All test data is referenced to 25°C ambient.

CMBF1608 Electrical Characteristics

Part Number	Impedance (Ω) ①	Test Frequency (MHz)	Rated current (mA) ②	DCR max. (Ω)
CMBF1608-300PCK	30 \pm 25%	100	700	0.20
CMBF1608-470PCK	47 \pm 25%	100	500	0.20
CMBF1608-600PCK	60 \pm 25%	100	700	0.20
CMBF1608-700PCK	70 \pm 25%	100	700	0.20
CMBF1608-800PCK	80 \pm 25%	100	700	0.20
CMBF1608-121PCK	120 \pm 25%	100	600	0.25
CMBF1608-151PCK	150 \pm 25%	100	600	0.25
CMBF1608-181PCK	180 \pm 25%	100	200	0.30
CMBF1608-221PCK	220 \pm 25%	100	550	0.30
CMBF1608-301PCK	300 \pm 25%	100	500	0.35
CMBF1608-471PCK	470 \pm 25%	100	350	0.45
CMBF1608-601PCK	600 \pm 25%	100	350	0.50
CMBF1608-102PCK	1000 \pm 25%	100	200	0.70
CMBF1608-100PCC	10 \pm 25%	100	700	0.20
CMBF1608-300PCC	30 \pm 25%	100	600	0.25
CMBF1608-600PCC	60 \pm 25%	100	600	0.30
CMBF1608-121PCC	120 \pm 25%	100	300	0.40
CMBF1608-151PCC	150 \pm 25%	100	300	0.40
CMBF1608-221PCC	220 \pm 25%	100	250	0.60
CMBF1608-301PCC	300 \pm 25%	100	200	0.80
CMBF1608-471PCC	470 \pm 25%	100	200	0.85
CMBF1608-601PCC	600 \pm 25%	100	150	1.2
CMBF1608-102PCC	1000 \pm 25%	100	80	1.5
CMBF1608-152PCH	1500 \pm 25%	100	200	1.0
CMBF1608-182PCH	1800 \pm 25%	100	200	1.0
CMBF1608-202PCH	2000 \pm 25%	100	150	1.2
CMBF1608-222PCH	2200 \pm 25%	100	100	1.5
CMBF1608-252PCH	2500 \pm 25%	100	100	1.5
CMBF1608-121PCW	120 \pm 25%	100	300	0.25
CMBF1608-151PCW	150 \pm 25%	100	250	0.30
CMBF1608-221PCW	220 \pm 25%	100	200	0.35
CMBF1608-301PCW	300 \pm 25%	100	250	0.45
CMBF1608-471PCW	470 \pm 25%	100	200	0.55
CMBF1608-601PCW	600 \pm 25%	100	200	0.70
CMBF1608-801PCW	800 \pm 25%	100	100	0.80
CMBF1608-102PCW	1000 \pm 25%	100	100	0.90

① Test equipment: E4991A or equivalent; Test Fixture: 16192A or equivalents; Test temperature: 25 °C.

② Rated current: The DC current at which the temperature rise is $\Delta t=40^{\circ}\text{C}$ max.($T_a=25^{\circ}\text{C}$)

Note: All test data is referenced to 25°C ambient.

CMBF2012 Electrical Characteristics

Part Number	Impedance (Ω)①	Test Frequency (MHz)	Rated current (mA) ②	DCR max. (Ω)	Thickness (mm)
CMBF2012-070PCN	7 ±25%	100	600	0.10	0.85 ±0.2
CMBF2012-110PCK	11 ±25%	100	900	0.10	0.85 ±0.2
CMBF2012-170PCK	17 ±25%	100	600	0.10	0.85 ±0.2
CMBF2012-260PCK	26 ±25%	100	600	0.10	0.85 ±0.2
CMBF2012-300PCK	30 ±25%	100	600	0.10	0.85 ±0.2
CMBF2012-400PCK	40 ±25%	100	600	0.10	0.85 ±0.2
CMBF2012-600PCK	60 ±25%	100	900	0.10	0.85 ±0.2
CMBF2012-800PCK	80 ±25%	100	900	0.20	0.85 ±0.2
CMBF2012-101PCK	100 ±25%	100	800	0.20	0.85 ±0.2
CMBF2012-121PCK	120 ±25%	100	800	0.20	0.85 ±0.2
CMBF2012-151PCK	150 ±25%	100	800	0.20	0.85 ±0.2
CMBF2012-221PCK	220 ±25%	100	750	0.30	0.85 ±0.2
CMBF2012-301PCK	300 ±25%	100	700	0.30	0.85 ±0.2
CMBF2012-471PCK	470 ±25%	100	700	0.35	0.85 ±0.2
CMBF2012-601PCK	600 ±25%	100	500	0.40	0.85 ±0.2
CMBF2012-801PCK	800 ±25%	100	450	0.40	0.85 ±0.2
CMBF2012-102PCK	1000 ±25%	100	400	0.45	0.85 ±0.2
CMBF2012-300PCC	30 ±25%	100	700	0.20	0.85 ±0.2
CMBF2012-600PCC	60 ±25%	100	700	0.20	0.85 ±0.2
CMBF2012-121PCC	120 ±25%	100	600	0.25	0.85 ±0.2
CMBF2012-151PCC	150 ±25%	100	600	0.25	0.85 ±0.2
CMBF2012-221PCC	220 ±25%	100	400	0.30	0.85 ±0.2
CMBF2012-301PCC	300 ±25%	100	400	0.35	0.85 ±0.2
CMBF2012-471PCC	470 ±25%	100	400	0.40	1.25 ±0.2
CMBF2012-601PCC	600 ±25%	100	300	0.45	1.25 ±0.2
CMBF2012-102PCC	1000 ±25%	100	200	0.50	1.25 ±0.2
CMBF2012-102PCH	1000 ±25%	100	400	0.45	0.85 ±0.2
CMBF2012-152PCH	1500 ±25%	100	350	0.50	0.85 ±0.2
CMBF2012-202PCH	2000 ±25%	100	250	0.60	0.85 ±0.2
CMBF2012-232PCH	2300 ±25%	100	200	0.80	1.25 ±0.2
CMBF2012-272PCH	2700 ±25%	100	150	1.10	1.25 ±0.2
CMBF2012-121PCW	120 ±25%	100	300	0.15	0.85 ±0.2
CMBF2012-151PCW	150 ±25%	100	300	0.20	0.85 ±0.2
CMBF2012-221PCW	220 ±25%	100	250	0.30	0.85 ±0.2
CMBF2012-301PCW	300 ±25%	100	200	0.35	0.85 ±0.2
CMBF2012-471PCW	470 ±25%	100	200	0.40	0.85 ±0.2
CMBF2012-601PCW	600 ±25%	100	200	0.45	0.85 ±0.2
CMBF2012-801PCW	800 ±25%	100	150	0.55	0.85 ±0.2
CMBF2012-102PCW	1000 ±25%	100	100	0.65	0.85 ±0.2

① Test equipment: E4991A or equivalent; Test Fixture: 16192A or equivalents; Test temperature: 25 °C.

② Rated current: The DC current at which the temperature rise is Δ t=40°C max.(Ta=25°C)

Note: All test data is referenced to 25°C ambient.

CMBF3216 Electrical Characteristics

Part Number	Impedance (Ω) ①	Test Frequency (MHz)	Rated current(mA) ②	DCR max. (Ω)
CMBF3216-260PCK	26 \pm 25%	100	500	0.20
CMBF3216-310PCK	31 \pm 25%	100	500	0.20
CMBF3216-420PCK	42 \pm 25%	100	500	0.20
CMBF3216-500PCK	50 \pm 25%	100	500	0.20
CMBF3216-700PCK	70 \pm 25%	100	500	0.20
CMBF3216-900PCK	90 \pm 25%	100	500	0.20
CMBF3216-121PCK	120 \pm 25%	100	900	0.15
CMBF3216-151PCK	150 \pm 25%	100	900	0.15
CMBF3216-201PCK	200 \pm 25%	100	600	0.35
CMBF3216-221PCK	220 \pm 25%	100	700	0.35
CMBF3216-301PCK	300 \pm 25%	100	700	0.35
CMBF3216-471PCK	470 \pm 25%	100	400	0.35
CMBF3216-601PCK	600 \pm 25%	100	400	0.40
CMBF3216-801PCK	800 \pm 25%	100	300	0.60
CMBF3216-102PCK	1000 \pm 25%	100	300	0.60
CMBF3216-121PCC	120 \pm 25%	100	700	0.25
CMBF3216-151PCC	150 \pm 25%	100	700	0.25
CMBF3216-221PCC	220 \pm 25%	100	600	0.30
CMBF3216-301PCC	300 \pm 25%	100	600	0.35
CMBF3216-471PCC	470 \pm 25%	100	550	0.40
CMBF3216-601PCC	600 \pm 25%	100	500	0.50
CMBF3216-801PCC	800 \pm 25%	100	400	0.50
CMBF3216-102PCC	1000 \pm 25%	100	300	0.55
CMBF3216-102PCH	1000 \pm 25%	100	300	0.60
CMBF3216-152PCV	1500 \pm 25%	50	300	0.70
CMBF3216-202PCV	2000 \pm 25%	30	300	0.70
CMBF3216-121PCW	120 \pm 25%	100	300	0.15
CMBF3216-151PCW	150 \pm 25%	100	300	0.20
CMBF3216-221PCW	220 \pm 25%	100	250	0.30
CMBF3216-301PCW	300 \pm 25%	100	200	0.35
CMBF3216-471PCW	470 \pm 25%	100	200	0.40
CMBF3216-601PCW	600 \pm 25%	100	200	0.45

① Test equipment: E4991A or equivalent; Test Fixture: 16192A or equivalents; Test temperature: 25 °C.

② Rated current: The DC current at which the temperature rise is $\Delta t=40^{\circ}\text{C}$ max.($T_a=25^{\circ}\text{C}$)

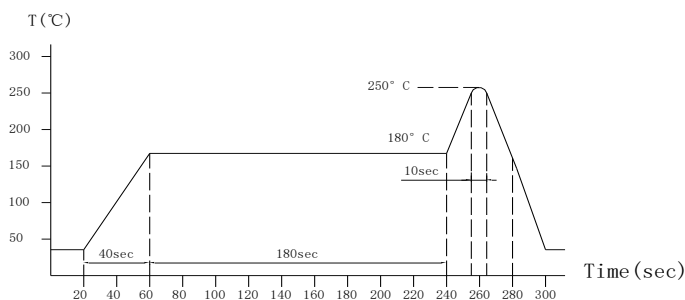
Note: All test data is referenced to 25°C ambient.

General Characteristics/一般特性

Operation Temperature Range /使用温度范围	-40~+125°C(Includes temperature when the coil is heated) / -40~+125°C(包含线圈自身发热)
Storage Conditions /保存条件(产品安装基板前)	To maintain the solderability of terminal electrodes: / 为了保持电极的可焊性, 请按以下保存条件存储: 1. Temperature and humidity conditions: 5~40°C and 30~70% RH; / 温度、湿度条件: 5~40°C、相对湿度 30~70%; 2. Recommended products should be used within 6 months form the time of delivery; / 产品应在交货后 6 个月内使用; 3. The products Should be stored in the complete package provided by the supplier; The packaging material should be kept where no chlorine or sulfur exists in the air; The packaging should be placed on the shelf. / 产品须存储在供方提供的完整的包装内; 产品包装应存放在空气中不含氯或硫的地方; 产品包装应放在货架上。
Transport Attentions /搬运注意事项	1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils; / 1. 产品搬运时应小心处理, 避免因出汗和皮肤油渍而造成损坏或污染; 2. The use of tweezers or vacuum pick up is strongly recommended for individual components; / 2. 强烈建议对单个部件使用镊子或真空吸嘴; 3. Bulk handling should ensure that abrasion and mechanical shock are minimized. / 3. 散货搬运应确保磨损和机械冲击最小化。
External Appearance/外观	On visual inspection, the coil has no external defects. / 目视检查时, 外观没有明显的缺陷。
Solderability Test/可焊性测试	The terminal shall be at least 90% covered with solder. Test condition: after fluxing, inductor shall be dipped in a melted solder bath at 245 ±5°C for 5 Sec. / 电极应至少覆盖 90% 的焊料。测试条件: 电极涂上助焊剂后在 245 ±5°C 的熔化焊槽中浸泡 5 秒。
Humidity Characteristics /耐湿度特性	Impedance deviation within ±30%, after 96 hours in 90~95% relative humidity at 40±2°C and 1 hour drying under normal condition. / 温度在 40±2°C, 相对湿度在 90~95% 条件下存放 96 小时后取出, 用布擦干, 然后在常温常湿中放置 1 小时, 阻抗值变化率 ±30% 以内。
Thermal shock test /冷热冲击特性	Impedance deviation within ±30%, after 20 cycles of -40°C for 30 minutes, +125°C for 30 minutes. Characteristics are measured after the ambient air exposure of 1 hour. / -40°C 放置 30 分钟后转换为 +125°C 放置 30 分钟, 20 次循环, 然后在常温常湿中放置 1 小时, 阻抗值变化率 ±30% 以内。
High temperature storage test /高温保存测试	Impedance deviation within ±30%, after 96 hours in +125°C±2°C characteristics are measured after ambient are exposure of 1 hour. / +125°C±2°C 放置 96 小时, 然后在常温常湿中放置 1 小时, 阻抗值变化率 ±30% 以内。
Low temperature storage test /低温保存测试	Impedance deviation within ±30%, after 96 hours in -40°C±2°C characteristics are measured after ambient are exposure of 1 hour. / -40°C±2°C 放置 96 小时, 然后在常温常湿中放置 1 小时, 阻抗值变化率 ±30% 以内。

Recommended Reflow Conditions (Lead-free)

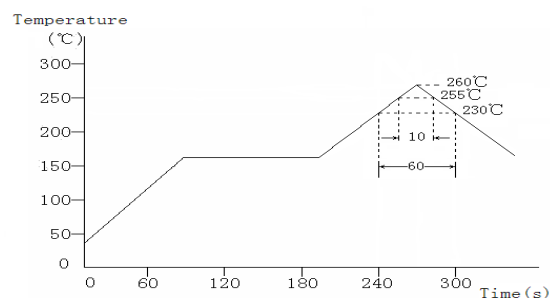
/推荐回流焊条件(无铅)



The reflow condition recommended above is according to the machine used by our company. Big differences will arise as a result of the type of machine, reflow conditions, method, used etc. Hence, before setting up your reflow conditions, please confirm with the above. / 上面推荐的回流焊试验条件是根据本公司的回流焊设备测试结果得到。不同的试验设备、试验条件和试验方法及试

Reflow Soldering Heat Endurance

/回流焊耐热



No mechanical and electrical defects are found after testing based on the above profile and keeping under the conditions of room temperature and humidity for 2 hours. / 在该条件下进行回流焊, 常温常湿条件下放置 2 个小时后, 无机械、电气特性缺陷发生。

Twice reflow test is acceptable with the test interval remaining 1 hour under the normal conditions. / 在常温常湿条件下, 间隔 1 个小时可进行两次回流焊。The reflow test profile may vary with the testing