## **BEBE Series**



The BEBE Series is designed specifically to enhance the performance of both PFM and PWM applications. The Rac value at light load and the DCR value at heavy load are both exceptional. Furthermore, the saturated current performance is also optimal, helping to reduce the ripple current and enhance the efficiency.

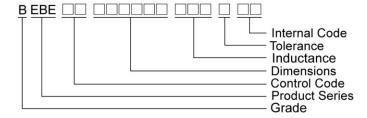
#### **Features**

- RoHS, Halogen Free and REACH Compliance
- High performance (Isat) realized by metal dust core.
- Low coil resistance with large currents.

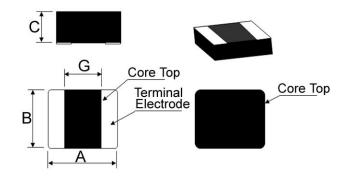
## **Applications**

Smartphones, wearable devices, Pad, Notebook

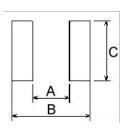
### **Product Identification**



## **Shape and Dimensions**



## **Recommended Pattern**



Dimensions in mm					Dimensions in mm					
TYPE	E A B C G		G	TYPE	Α	В	С			
BEBE001412F5	1.4±0.2	1.2±0.2	0.65Max	0.53	BEBE001412F5	0.5	1.6	1.4		
BEBE00141208	1.4±0.2	1.2±0.2	0.8Max	0.53	BEBE00141208	0.5	1.6	1.4		
BEBE00201208	2.0±0.2	1.2±0.2	0.8Max	0.6	BEBE00201208	0.5	2.2	1.4		
BEBE00201210	2.0±0.2	1.2±0.2	1.0Max	0.6	BEBE00201210	0.5	2.2	1.4		
BEBE00201212	2.0±0.2	1.2±0.2	1.2Max	0.6	BEBE00201212	0.5	2.2	1.4		
BEBE00252010	2.5±0.2	2.0±0.2	1.0Max	0.7	BEBE00252010	0.6	2.7	2.2		
BEBE00252012	2.5±0.2	2.0±0.2	1.2Max	0.7	BEBE00252012	0.6	2.7	2.2		
BEBE00322508	3.2±0.2	2.5±0.2	0.8Max	0.9	BEBE00322508	0.8	3.7	2.8		
BEBE00322510	3.2±0.2	2.5±0.2	1.2Max	0.9	BEBE00322510	0.8	3.7	2.8		
BEBE00303010	3.1±0.2	2.9±0.2	1.0Max	1.1	BEBE00303010	1.2	3.4	3.2		





## **Electrical Characteristics**

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(mΩ) Max(Typ)	Isat(A) Max(Typ)	Irms(A) Max(Typ)
BEBE001412F5R24MMA	0.24	20	1MHz,1V	28.0(25.0)	5.5(6.0)	4.0(4.5)
BEBE001412F5R33MMA	0.33	20	1MHz,1V	32.0(26.0)	5.0(5.5)	3.0(3.3)
BEBE001412F5R47MMA	0.47	20	1MHz,1V	42.0(35.0)	3.0(3.3)	2.6(2.9)

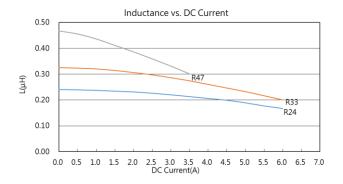
#### Note: When ordering, please specify tolerance code. Tolerance: M=±20%

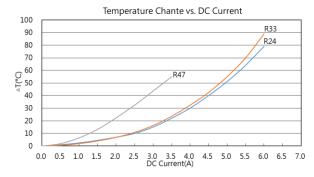
- Operating temperature range 40°C ~125°C (Including self temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Rated current: Isat or Irms, whichever is smaller
- Absolute maximum voltage 15VDC( Based on test method, it may not the same under different application, it is recommended to verify first.)

#### **Test Instruments:**

L: Agilent E4991/HP4286A+16197A/WP6500P (or equivalent), 1MHz 1V

DCR: CHEN HWA502BC/HP4338B (or equivalent)
Isat: Agilent E4980A+HP42841A (or equivalent)









## **Electrical Characteristics**

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(m $\Omega$ ) Max(Typ)	Isat(A) Max(Typ)	Irms(A) Max(Typ)
BEBE00141208R24MMA	0.24	20	1MHz,1V	21.5(18.5)	6.5(7.1)	5.3(5.8)
BEBE00141208R33MMA	0.33	20	1MHz,1V	25.0(23.0)	4.5(5.0)	3.6(4.0)
BEBE00141208R47MMA	0.47	20	1MHz,1V	30.0(28.0)	4.0(4.5)	3.0(3.3)
BEBE001412081R0MMA	1.00	20	1MHz,1V	77.0(70.0)	2.5(2.8)	2.0(2.3)
BEBE00141208R33MMS	0.33	20	1MHz,1V	25.0(23.0)	5.5(5.7)	3.6(4.0)
BEBE00141208R47MMS	0.47	20	1MHz,1V	30.0(28.0)	4.8(5.0)	3.0(3.3)

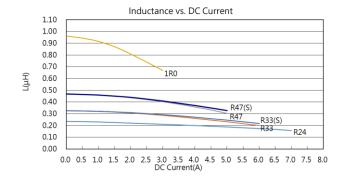
#### Note: When ordering, please specify tolerance code. Tolerance: M=±20%

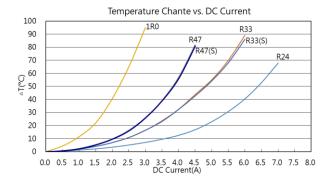
- Operating temperature range −40°C ~125°C (Including self temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Rated current: Isat or Irms, whichever is smaller
- Absolute maximum voltage 15VDC( Based on test method, it may not the same under different application, it is recommended to verify first.)

#### **Test Instruments:**

L: Agilent E4991/HP4286A+16197A/WP6500P (or equivalent), 1MHz 1V

DCR: CHEN HWA502BC/HP4338B (or equivalent)
Isat: Agilent E4980A+HP42841A (or equivalent)









## **Electrical Characteristics**

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(mΩ) Max(Typ)	Isat(A) Max(Typ)	Irms(A) Max(Typ)
BEBE00201208R11MMA	0.11	20	1MHz,1V	12.0(10.0)	8.6(9.1)	6.5(7.0)
BEBE00201208R24MMA	0.24	20	1MHz,1V	20.0(17.0)	7.9(8.3)	6.0(6.5)
BEBE00201208R33MMA	0.33	20	1MHz,1V	23.0(19.0)	6.0(6.5)	4.7(5.3)
BEBE00201208R47MMA	0.47	20	1MHz,1V	25.0(23.0)	4.3(4.8)	3.7(4.2)

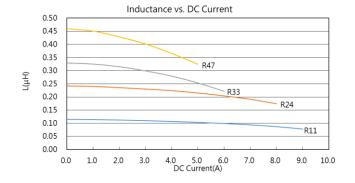
#### Note: When ordering, please specify tolerance code. Tolerance: M=±20%

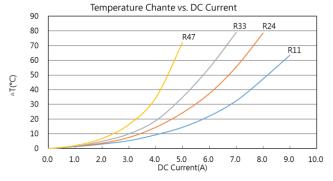
- Operating temperature range 40°C ~125°C (Including self temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40<sup>o</sup> temperature rise from 25<sup>o</sup> ambient with current
- Rated current: Isat or Irms, whichever is smaller
- Absolute maximum voltage 15VDC( Based on test method, it may not the same under different application, it is recommended to verify first.)

#### **Test Instruments:**

L: Agilent E4991/HP4286A+16197A/WP6500P (or equivalent), 1MHz 1V

DCR: CHEN HWA502BC/HP4338B (or equivalent)
Isat: Agilent E4980A+HP42841A (or equivalent)









## **Electrical Characteristics**

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(m $\Omega$ ) Max(Typ)	Isat(A) Max(Typ)	Irms(A) Max(Typ)
BEBE00201210R33MMA	0.33	20	1MHz,1V	20.0(18.0)	6.0(6.5)	4.7(5.3)
BEBE00201210R47MMA	0.47	20	1MHz,1V	24.0(21.0)	5.0(5.5)	4.2(4.7)

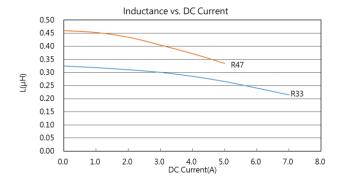
#### Note: When ordering, please specify tolerance code. Tolerance: M=±20%

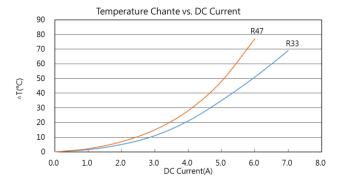
- Operating temperature range 40°C ~125°C (Including self temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Rated current : Isat or Irms, whichever is smaller
- Absolute maximum voltage 15VDC( Based on test method, it may not the same under different application, it is recommended to verify first.)

#### **Test Instruments:**

L: Agilent E4991/HP4286A+16197A/WP6500P (or equivalent), 1MHz 1V

DCR: CHEN HWA502BC/HP4338B (or equivalent)
Isat: Agilent E4980A+HP42841A (or equivalent)







## **Electrical Characteristics**

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(m $\Omega$ ) Max(Typ)	Isat(A) Max(Typ)	D Irms(A) Max(Typ)
BEBE00201212R11MMS	0.11	20	1MHz,1V	5.8(5.0)	11.0(11.5)	9.5(10.0)
BEBE00201212R24MMA	0.24	20	1MHz,1V	19.0(17.0)	8.5(9.0)	7.0(7.5)
BEBE00201212R47MMA	0.47	20	1MHz,1V	23.5(22.0)	5.0(5.5)	4.5(5.0)

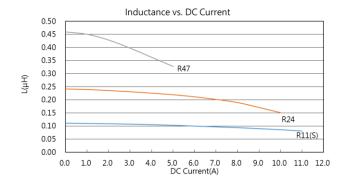
#### Note: When ordering, please specify tolerance code. Tolerance: M=±20%

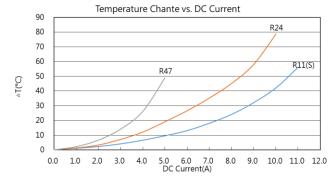
- Operating temperature range 40°C ~125°C (Including self temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Rated current: Isat or Irms, whichever is smaller
- Absolute maximum voltage 15VDC( Based on test method, it may not the same under different application, it is recommended to verify first.)

#### **Test Instruments:**

L: Agilent E4991/HP4286A+16197A/WP6500P (or equivalent), 1MHz 1V

DCR: CHEN HWA502BC/HP4338B (or equivalent)
Isat: Agilent E4980A+HP42841A (or equivalent)









#### **Electrical Characteristics**

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(m $\Omega$ ) Max(Typ)	Isat(A) Max(Typ)	Irms(A) Max(Typ)
BEBE00252010R47MMB	0.47	20	1MHz,1V	25.0(19.0)	5.0(5.6)	3.7(4.3)
BEBE00252010R68MMA	0.68	20	1MHz,1V	18.5(16.0)	5.5(6.0)	5.0(5.5)
BEBE002520101R0MMA	1.00	20	1MHz,1V	25.0(18.0)	5.0(5.5)	5.2(5.7)
BEBE002520102R2MMA	2.20	20	1MHz,1V	77.0(70.0)	2.5(3.0)	2.6(2.9)

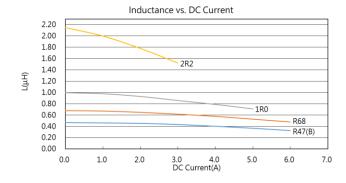
#### Note: When ordering, please specify tolerance code. Tolerance: M=±20%

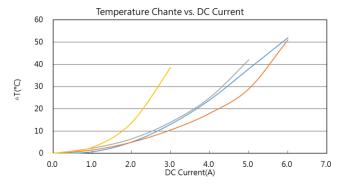
- Operating temperature range −40°C ~125°C (Including self temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40<sup>o</sup>C temperature rise from 25<sup>o</sup>C ambient with current
- Rated current : Isat or Irms, whichever is smaller
- Absolute maximum voltage 15VDC( Based on test method, it may not the same under different application, it is recommended to verify first.)

#### **Test Instruments:**

L: Agilent E4991/HP4286A+16197A/WP6500P (or equivalent), 1MHz 1V

DCR: CHEN HWA502BC/HP4338B (or equivalent)
Isat: Agilent E4980A+HP42841A (or equivalent)









#### **Electrical Characteristics**

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(mΩ) Max(Typ)	Isat(A) Max(Typ)	Irms(A) Max(Typ)
BEBE00252012R22MMB	0.22	20	1MHz,1V	13.0(10.0)	9.0(9.5)	8.0(8.5)
BEBE00252012R47MMB	0.47	20	1MHz,1V	23.0(18.0)	5.9(6.5)	6.0(6.3)
BEBE002520121R0MMB	1.00	20	1MHz,1V	32.0(27.0)	4.3(4.9)	4.2(5.0)

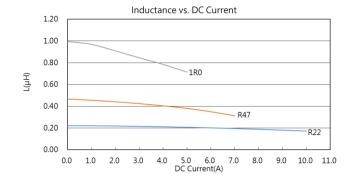
#### Note: When ordering, please specify tolerance code. Tolerance: M=±20%

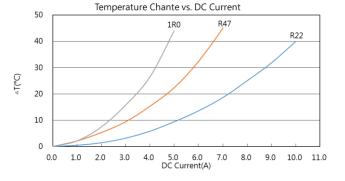
- Operating temperature range 40°C ~125°C (Including self temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Rated current : Isat or Irms, whichever is smaller
- Absolute maximum voltage 15VDC( Based on test method, it may not the same under different application, it is recommended to verify first.)

#### **Test Instruments:**

L: Agilent E4991/HP4286A+16197A/WP6500P (or equivalent), 1MHz 1V

DCR: CHEN HWA502BC/HP4338B (or equivalent)
Isat: Agilent E4980A+HP42841A (or equivalent)









## **Electrical Characteristics**

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(m $\Omega$ ) Max(Typ)	Isat(A) Max(Typ)	Irms(A) Max(Typ)
BEBE0032250880NMMA	0.08	20	1MHz,1V	4.2(3.9)	14.5(15.5)	8.0(9.0)
BEBE00322510R22MMA	0.22	20	1MHz,1V	12.5(10.5)	10.0(11.0)	7.0(7.5)

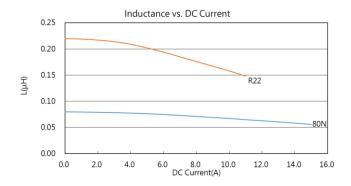
#### Note: When ordering, please specify tolerance code. Tolerance: M=±20%

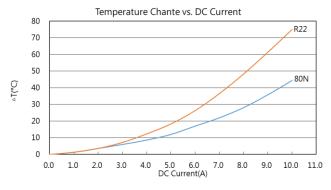
- Operating temperature range −40°C ~125°C (Including self temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Rated current : Isat or Irms, whichever is smaller
- Absolute maximum voltage 15VDC( Based on test method, it may not the same under different application, it is recommended to verify first.)

#### **Test Instruments:**

L: Agilent E4991/HP4286A+16197A/WP6500P (or equivalent), 1MHz 1V

DCR: CHEN HWA502BC/HP4338B (or equivalent)
Isat: Agilent E4980A+HP42841A (or equivalent)









#### **Electrical Characteristics**

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(m $\Omega$ ) Max(Typ)	Isat(A) Max(Typ)	Irms(A) Max(Typ)
BEBE003030101R0MMA	1.00	20	1MHz,1V	30.0(27.0)	6.3(6.8)	5.3(5.8)

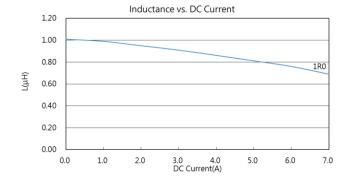
#### Note: When ordering, please specify tolerance code. Tolerance: M=±20%

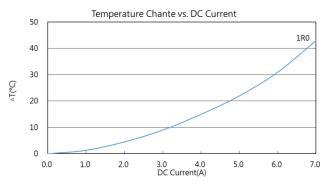
- Operating temperature range  $-40^{\circ}$ C  $\sim$  125 $^{\circ}$ C (Including self temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40<sup>o</sup>C temperature rise from 25<sup>o</sup>C ambient with current
- Rated current: Isat or Irms, whichever is smaller
- Absolute maximum voltage 15VDC( Based on test method, it may not the same under different application, it is recommended to verify first.)

#### **Test Instruments:**

L: Agilent E4991/HP4286A+16197A/WP6500P (or equivalent), 1MHz 1V

DCR: CHEN HWA502BC/HP4338B (or equivalent)
Isat: Agilent E4980A+HP42841A (or equivalent)



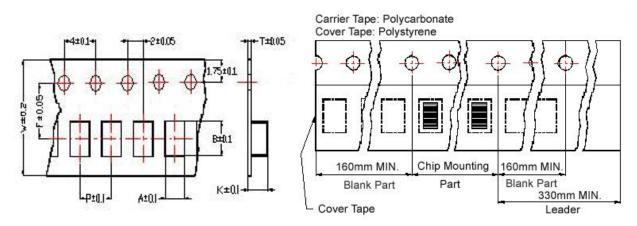




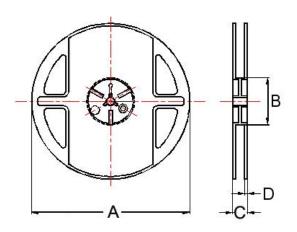
## **Packaging Specifications**

**Tape Dimensions** 

Tape Material



**Reel Dimensions** 



#### Dimensions in mm

TVDE			Таре	Dimens	ions			Reel Dimensions			•	Quantity
TYPE	Α	В	т	W	Р	F	K	Α	В	С	D	PCS / REEL
BEBE001412F5	1.50	1.70	0.22	8	4	3.5	0.80	178	60	12	1.5	3000
BEBE00141208	1.50	1.70	0.22	8	4	3.5	0.95	178	60	12	1.5	3000
BEBE00201208	1.50	2.30	0.22	8	4	3.5	0.95	178	60	12	1.5	3000
BEBE00201210	1.50	2.30	0.22	8	4	3.5	1.15	178	60	12	1.5	3000
BEBE00201212	1.50	2.30	0.22	8	4	3.5	1.35	178	60	12	1.5	3000
BEBE00252010	2.30	2.80	0.25	8	4	3.5	1.15	178	60	12	1.5	3000
BEBE00252012	2.30	2.80	0.25	8	4	3.5	1.35	178	60	12	1.5	3000
BEBE00322508	2.80	3.50	0.25	8	4	3.5	0.95	178	60	12	1.5	3000
BEBE00322510	2.80	3.50	0.25	8	4	3.5	1.35	178	60	12	1.5	2000
BEBE00303010	3.35	3.50	0.25	8	4	3.5	1.15	178	60	12	1.5	2000



