Molding Power Inductors

BDQQ Series

The BDQQ series is the special design to enhance the performance of PFM and PWM applications. It provides lower Rac value at light load and lower Rdc value at heavy load to improve efficiency performance. Furthermore, it provides excellent saturation current to reduce the ripple current and enhance efficiency.

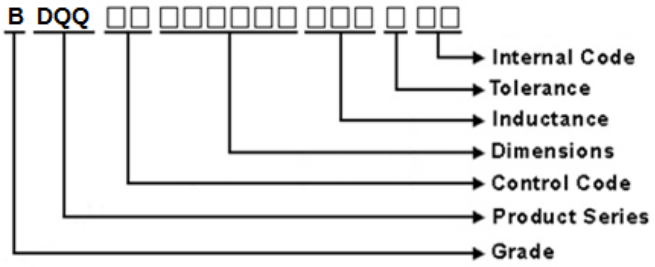
Features

- Chip Size: 1412 and 2012
- Low profile: 0.65mm and 0.8mm
- Inductance: 0.33uH, 0.47uH, and 1.0uH
- Low Rdc for better power efficiency management
- High saturation current
- Special patented design for bottom termination

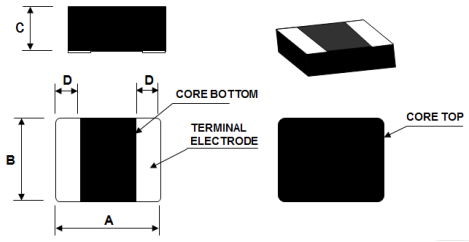
Applications

- DC-DC buck converter for power management
- 5G, Cell phone

Product Identification



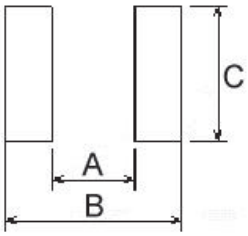
Chip Shape and Dimensions



Dimensions in mm

TYPE	A	B	C	D
BDQQ001412FE	1.4±0.2	1.2±0.2	0.65 Max.	0.5 Typ.
BDQQ00141208	1.4±0.2	1.2±0.2	0.80 Max.	0.5 Typ.
BDQQ002012FE	2.0±0.2	1.25±0.2	0.65 Max.	0.5 Typ.
BDQQ00201208	2.0±0.2	1.25±0.2	0.80 Max.	0.5 Typ.

Recommended Pad Pattern



Dimensions in mm

TYPE	A	B	C
BDQQ001412FE	0.5	1.5	1.3
BDQQ00141208	0.5	1.5	1.3
BDQQ002012FE	0.7	2.2	1.45
BDQQ00201208	0.7	2.2	1.45

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC (mΩ) Max.	Isat (A) Max.	Irms (A) Max.
BDQQ001412FER11NCA	0.11	30	2	20	6.8	4.5
BDQQ001412FER24MCA	0.24	20	2	27	5.5	4.0
BDQQ001412FER33MCA	0.33	20	2	32	5.0	3.0
BDQQ001412FER47MCA	0.47	20	2	42	3.0	2.6
BDQQ001412FE1R0MCA	1.00	20	2	88	2.0	1.5
BDQQ00141208R33MCA	0.33	20	2	25	5.0	4.0
BDQQ00141208R47MCA	0.47	20	2	29	4.5	3.3
BDQQ002012FER47MCA	0.47	20	2	34	4.5	3.4
BDQQ00201208R33MCA	0.33	20	2	23	5.3	4.5
BDQQ00201208R47MCB	0.47	20	2	27	4.8	3.9

Note: Please be noted that the tolerance of 0.11uH is ±30% and others are ±20%

- Operating temperature range: -40℃~125℃ (Including self-temperature rise)
- Isat for Inductance drop 30% from its initial inductance value without applying current
- Irms for a 40℃ temperature rise from 25℃ ambient with applying current
- Rated current: Isat or Irms, whichever is smaller
- Measure Equipment:

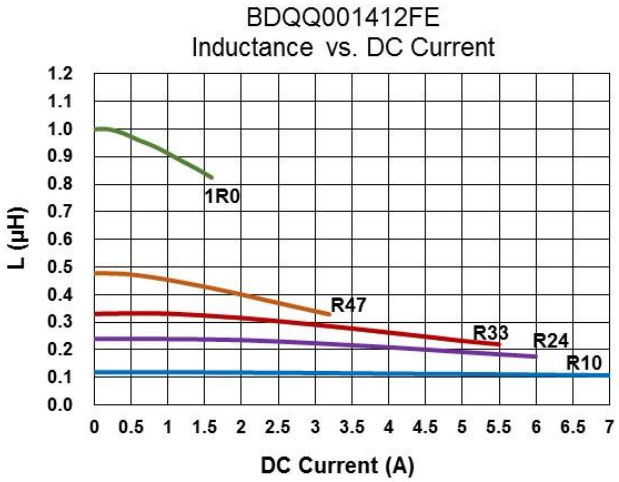
  L: WK 6500B/HP4285A (or equivalent), 2MHz 1V

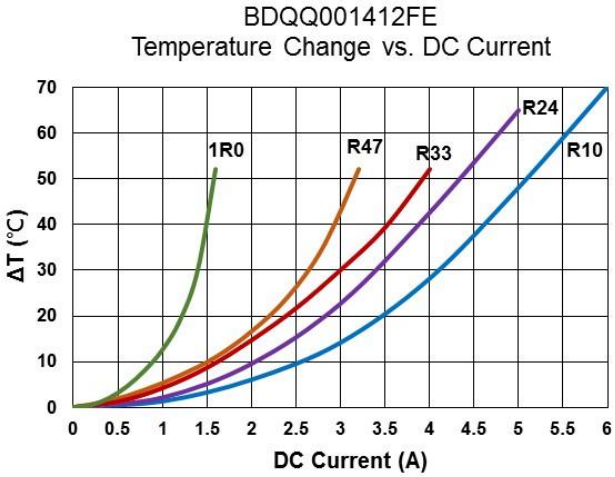
  RDC: Chen Hwa 502BC/HP4338B (or equivalent)

  Isat: Agilent E4980A+HP42841A (or equivalent)

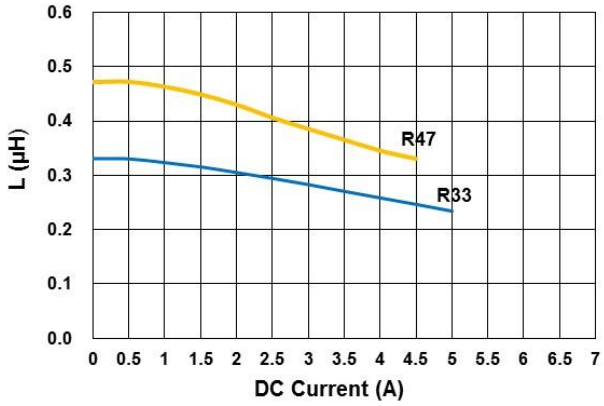
  Irms: Agilent 6641 system DC power supply (or equivalent)

Test Instruments：E4991A Impedance / Material Analyzer

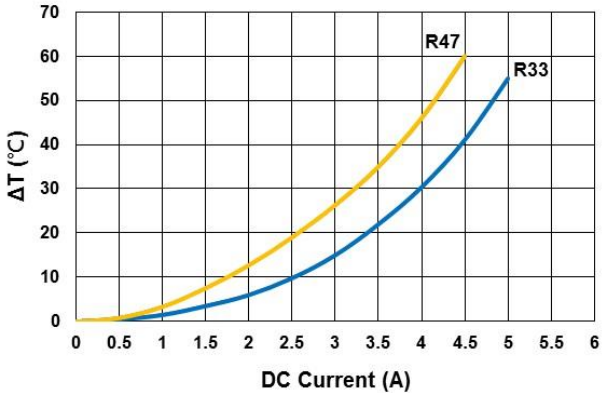




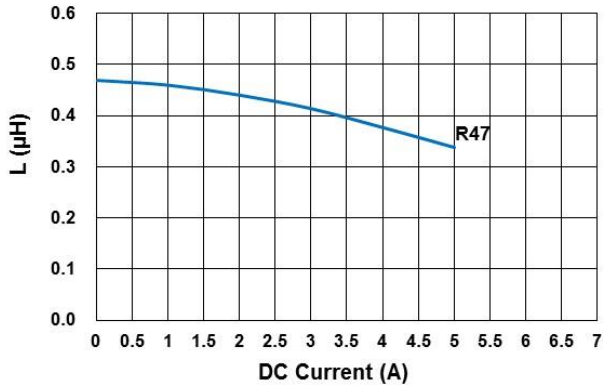
BDQQ00141208
Inductance vs. DC Current



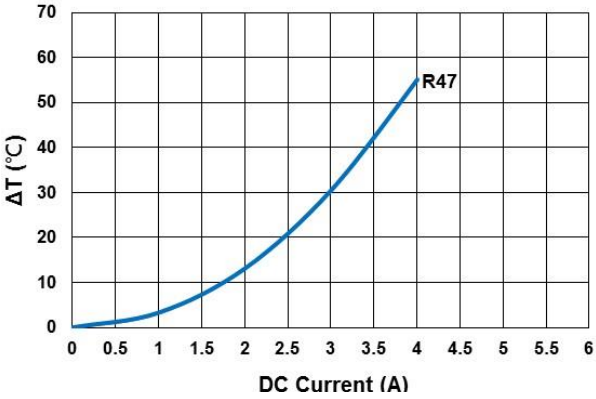
BDQQ00141208
Temperature Change vs. DC Current



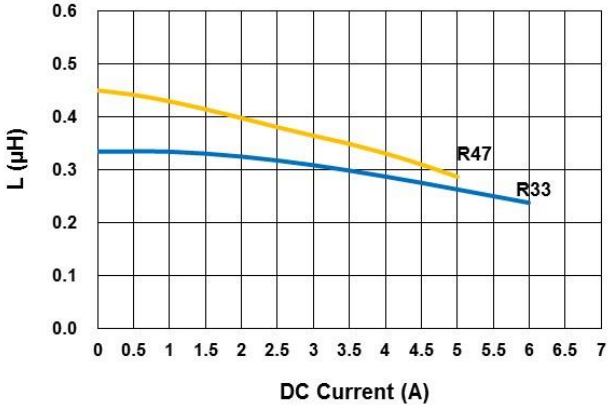
BDQQ002012FE
Inductance vs. DC Current



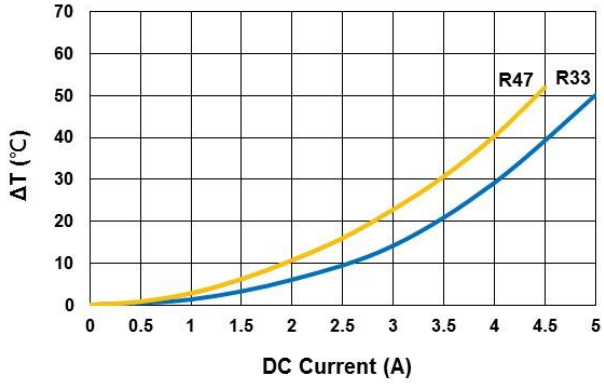
BDQQ002012FE
Temperature Change vs. DC Current



BDQQ00201208
Inductance vs. DC Current



BDQQ00201208
Temperature Change vs. DC Current



For More Information:
Americas - prodinfo_power_americas@yageo.com | **Europe -** prodinfo_power_emea@yageo.com | **Asia -** prodinfo_power_asia@yageo.com