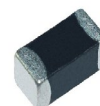


# Low Loss, High Power Ferrite Beads



**AFBC-SH1206P**

Request Samples



Check Inventory



3.2 x 1.6 x 1.1 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## Features

- Internal silver lithographic layers
- EMI suppression at High Frequencies
- Monolithic inorganic material construction
- DC resistance as low as 2.5mΩ
- Magnetically shielded

## Applications

- Electronic control Units (ECUs)
- RF transceiver modules
- Antennas
- Infotainment system
- ADAS
- Industrial connectivity (IIoT)

## Electrical Specifications

| Part Number      | Impedance<br>(Typical) | DC Resistance   | Rated Current  |
|------------------|------------------------|-----------------|----------------|
| Units            | $\Omega \pm 25\%$      | $\Omega$ Max.   | mA Max.        |
| Symbol           | Z                      | R <sub>DC</sub> | I <sub>R</sub> |
| AFBC-SH1206P-300 | 30                     | 0.0025          | 11000          |
| AFBC-SH1206P-500 | 50                     | 0.0025          | 12000          |
| AFBC-SH1206P-121 | 120                    | 0.0090          | 6000           |
| AFBC-SH1206P-271 | 270                    | 0.0160          | 4500           |
| AFBC-SH1206P-471 | 470                    | 0.0200          | 4000           |
| AFBC-SH1206P-601 | 600                    | 0.0380          | 2900           |
| AFBC-SH1206P-801 | 800                    | 0.0500          | 2500           |
| AFBC-SH1206P-102 | 1000                   | 0.0750          | 2000           |

## Test Conditions and Equipment

**Z** Test Frequency: 100MHz/60mV

**DCR:** High Accuracy LCR Meter – HP4263A

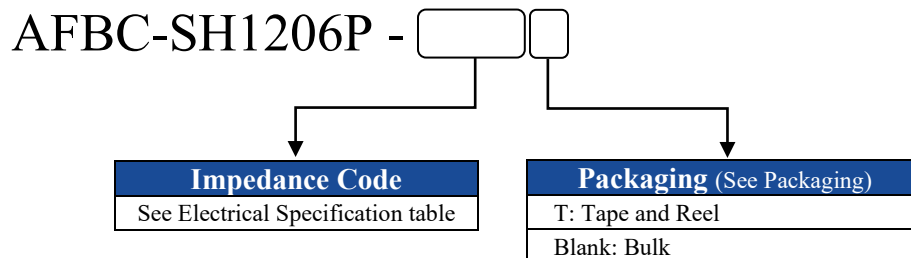
**IR:** Rated current applied when the chip surface temperature rise just 20°C against ambient temperature.

**Operating Temperature:** -55°C to +125°C (Including Self-Temperature rise)

**Storage Temperature:** -10°C to +40°C and RH 60% (Max).

AFBC-SH1206P is RoHS Compliant and Pb free

## Part Identification



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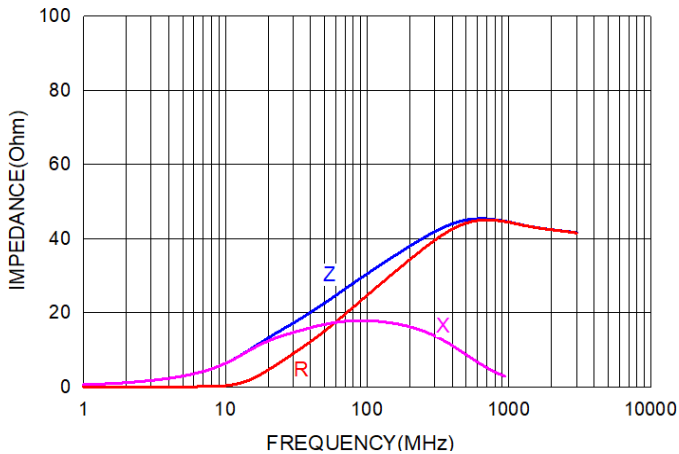
Check Inventory



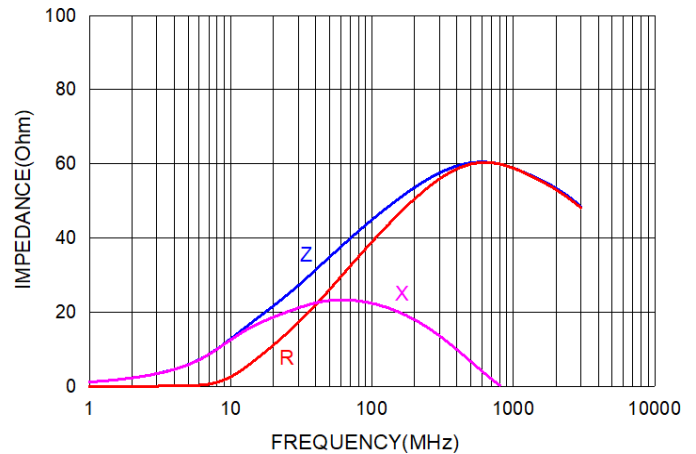
3.2 x 1.6 x 1.1 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## Performance Graphs

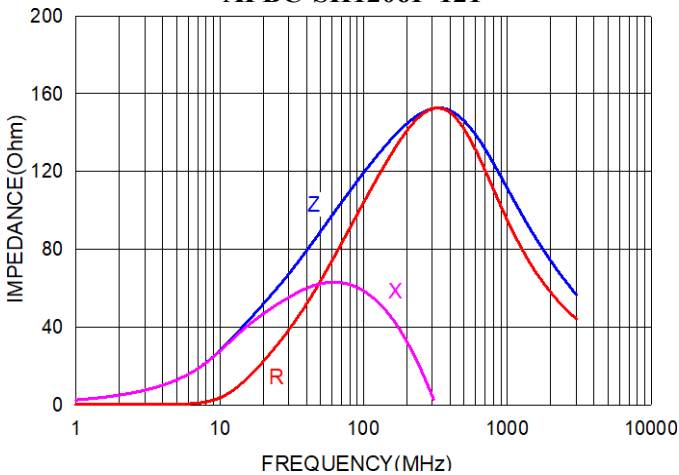
**AFBC-SH1206P-300**



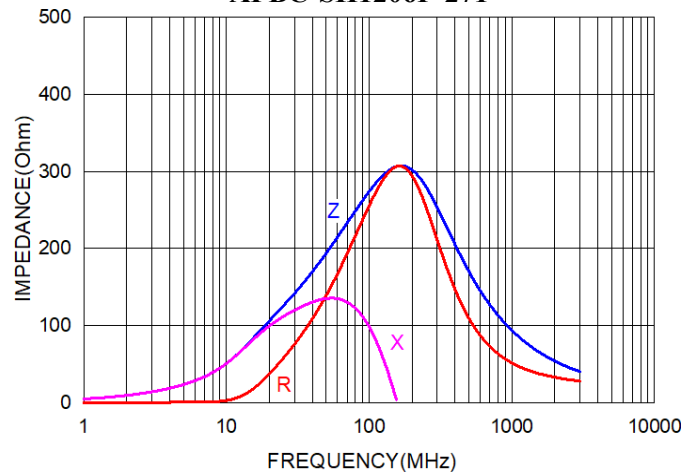
**AFBC-SH1206P-500**



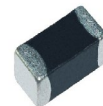
**AFBC-SH1206P-121**



**AFBC-SH1206P-271**



# Low Loss, High Power Ferrite Beads



**AFBC-SH1206P**

Request Samples

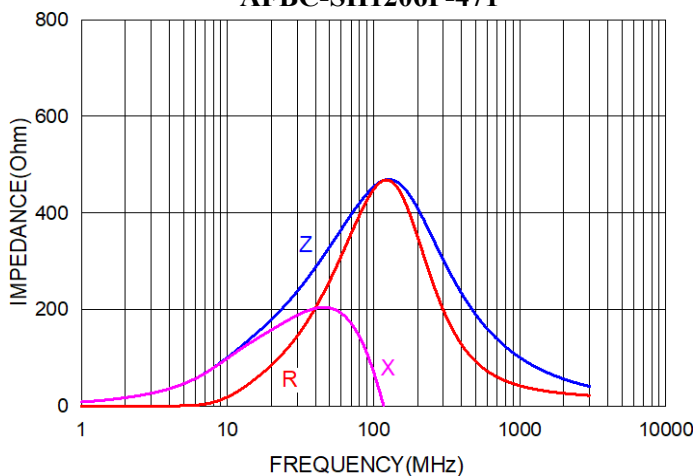


Check Inventory

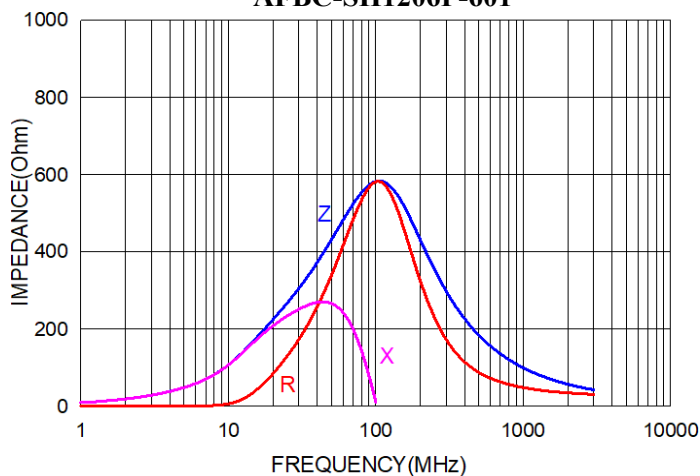


3.2 x 1.6 x 1.1 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

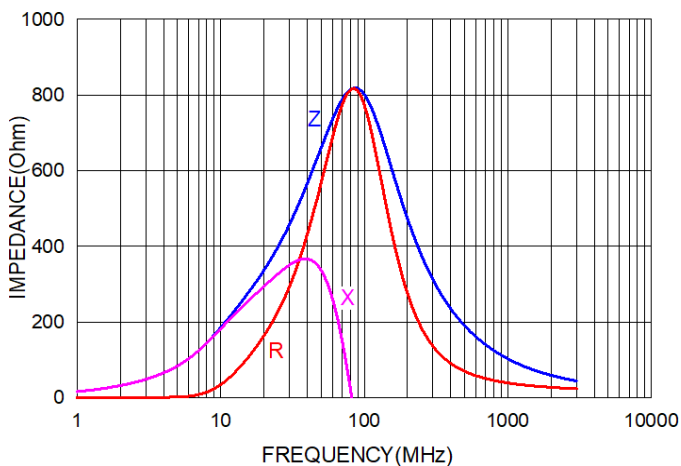
**AFBC-SH1206P-471**



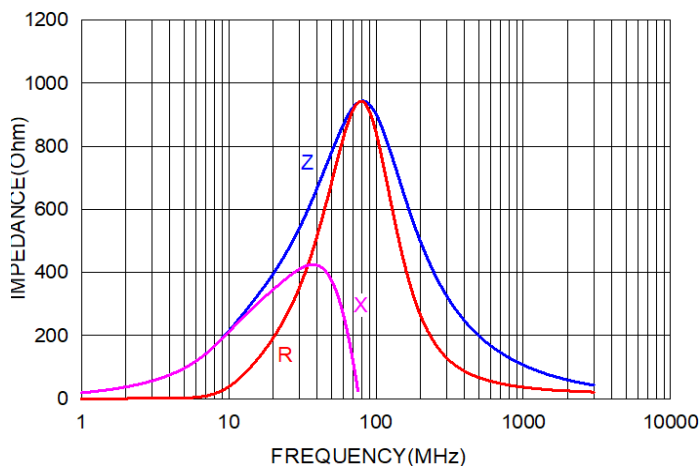
**AFBC-SH1206P-601**



**AFBC-SH1206P-801**



**AFBC-SH1206P-102**



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**AFBC-SH1206P**

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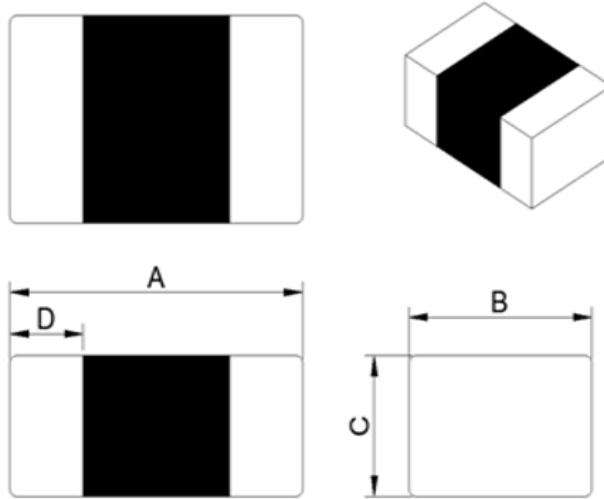


Check Inventory



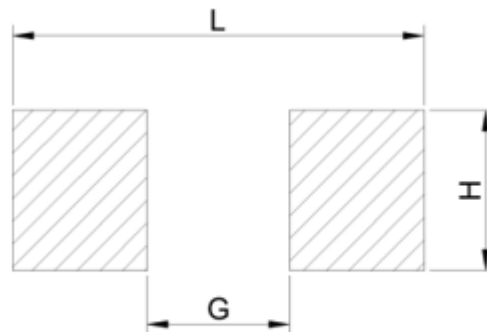
3.2 x 1.6 x 1.1 mm  
**RoHS/RoHS II Compliant**  
MSL Level = 1

## Mechanical Specifications



| A        | B        | C         | D        |
|----------|----------|-----------|----------|
| 3.20±0.2 | 1.60±0.2 | 1.10±0.20 | 0.50±0.3 |

Dimensions: mm

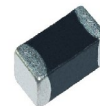


## Recommended PCB Layout

| L        | G        | H        |
|----------|----------|----------|
| 4.30 Ref | 2.20 Ref | 1.80 Ref |

Dimensions: mm

# Low Loss, High Power Ferrite Beads



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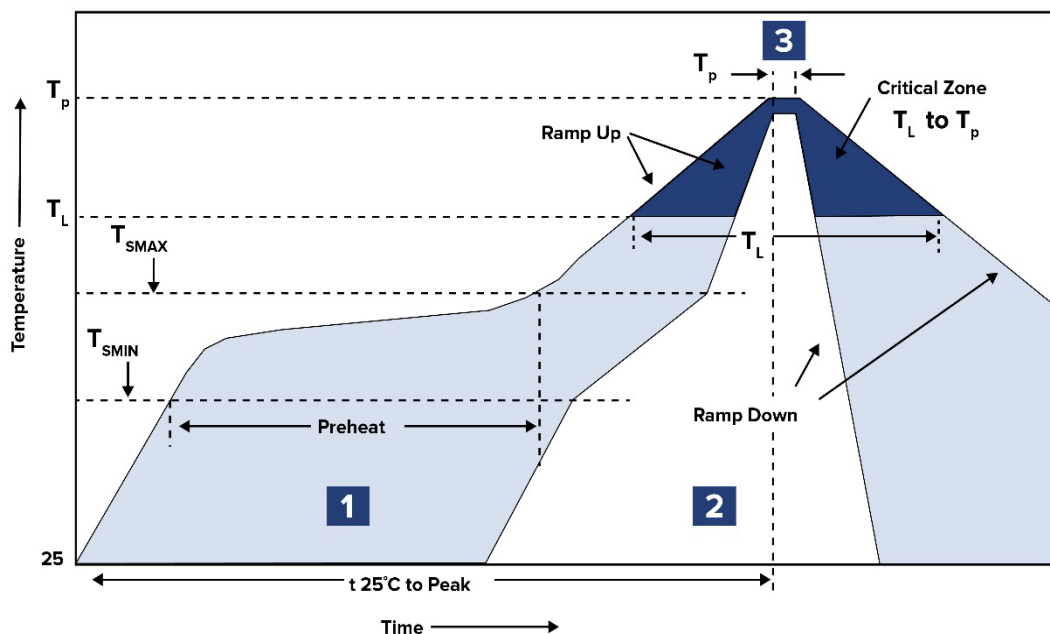


Check Inventory



3.2 x 1.6 x 1.1 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## Reflow Profile

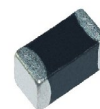


| Zone | Description | Temperature                               | Times         |
|------|-------------|-------------------------------------------|---------------|
| 1    | Preheat     | $T_{SMIN} \sim T_{SMAX}$<br>150°C ~ 200°C | 60 ~ 120 sec. |
| 2    | Reflow      | $T_L$<br>217°C                            | 60 ~ 150 sec. |
| 3    | Peak heat   | $T_P$<br>260°C ±5°C                       | 30 sec. MAX   |

Ramp up:  $T_L$  to  $T_P$  = 3°C/s Max.

Ramp down:  $T_P$  to  $T_L$  = 6°C/s Max.

# Low Loss, High Power Ferrite Beads



**AFBC-SH1206P**

Request Samples



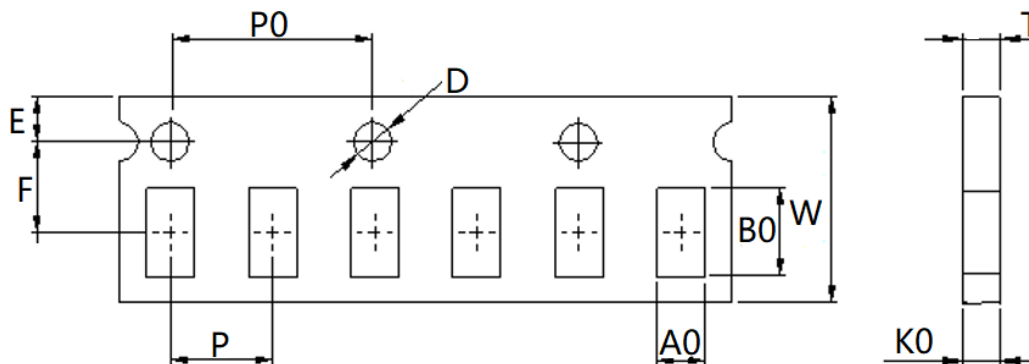
Check Inventory



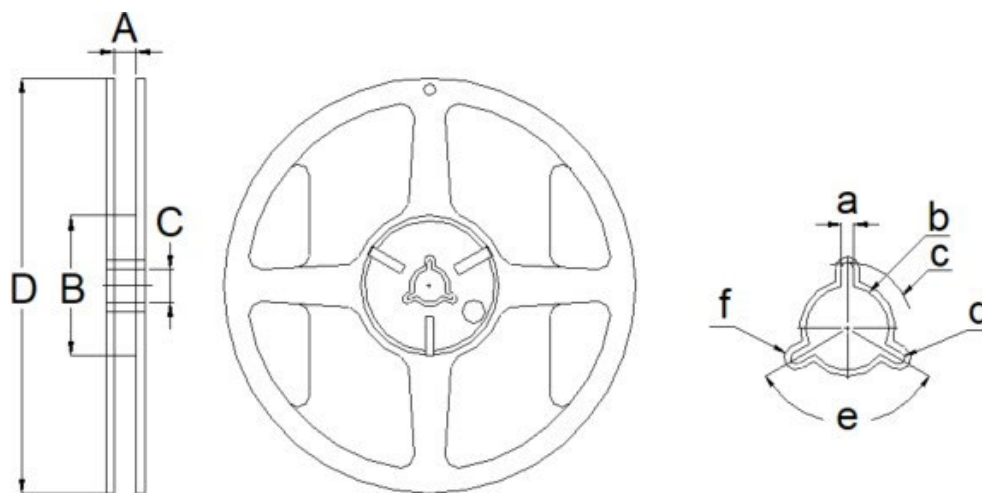
3.2 x 1.6 x 1.1 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## Packaging

Tape & Reel: 3K pcs/reel



| Series       | B0        | A0        | K0        | P               | T         |
|--------------|-----------|-----------|-----------|-----------------|-----------|
| AFBC-SH1206P | 3.35±0.10 | 1.75±0.10 | 1.25±0.10 | 4.00±0.10       | 0.23±0.05 |
|              | E         | F         | P0        | D               | W         |
|              | 1.75±0.10 | 3.50±0.05 | 4.00±0.10 | 1.50+0.10/-0.00 | 8.00±0.10 |



| A        | B        | C        | D         | a       |
|----------|----------|----------|-----------|---------|
| 9.0 Ref  | 60.0 Ref | 13.5 Ref | 178.0 Ref | 2.0 Ref |
| b        | c        | d        | e         | f       |
| 13.5 Ref | R10.5    | R0.5     | 120°      | R1.9    |

Dimensions: mm

**ATTENTION:** Abracon LLC's products are Commercial-Off-The-Shelf (COTS), which are designed, intended and validated for use in commercial, industrial and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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