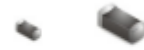


# Multilayer GHz High Frequency Ferrite Chip Bead

## 積層式高頻鐵氧體晶片磁珠



### INTRODUCTION 產品介紹

The ZCAS series has a modified internal electrode structure, which minimizes stray capacitance and increases the effective frequency range. This ferrite bead generates high impedance at high frequencies.

ZCAS 系列使用新設計的內電極結構可降低寄生電容及增加使用頻寬，這類型的磁珠在高頻率時可產生較高的阻值。

### FEATURE 特色

1. The ZCAS series is similar to ZCGS series at frequency below 100MHz. However at 1GHz, the impedance is 3 times larger.

ZCAS 系列晶片於頻率低於 100MHz 時，其特性與 ZCGS 系列類似，然而在 1GHz 時，阻值則比 EBMS 系列高 3 倍。

2. The ZCAS is intended for high speed signal lines as this series provides significant impedance across a broad frequency range. Therefore, this series is ideal for high speed signal lines.

ZCAS 系列適用於高速訊號線，可於相當寬的頻率範圍提供高阻抗。因此，此系列適用於高速訊號線。

3. The complete magnetic shielded structure minimizes crosstalk.

其完整之磁性遮蔽結構使串音降到最小。

### APPLICATION 適用產品

1. This ZCAS series realize high impedance at 1GHz and is suitable for noise suppression of digital interface from 500MHz to GHz range.

ZCAS 晶片在1GHz時具有高阻值，適用於500MHz到GHz範圍之數位介面的雜訊抑制。

2. Mother board, tablet, notebook, desktop computers and peripheral equipment.

主機板、平板電腦、筆記型電腦、桌上型電腦及其週邊設備。

3. DSC, DVC, LCD Television, Set Top Box.

數位相機、數位攝影機、液晶電視機、數位機上盒。

4. Mobile phone, smart phone, PND.

行動電話、智慧手機、個人導航設備。

5. Digital communication equipment.

數位通訊設備。

6. Various electronic equipment.

各式電子設備。

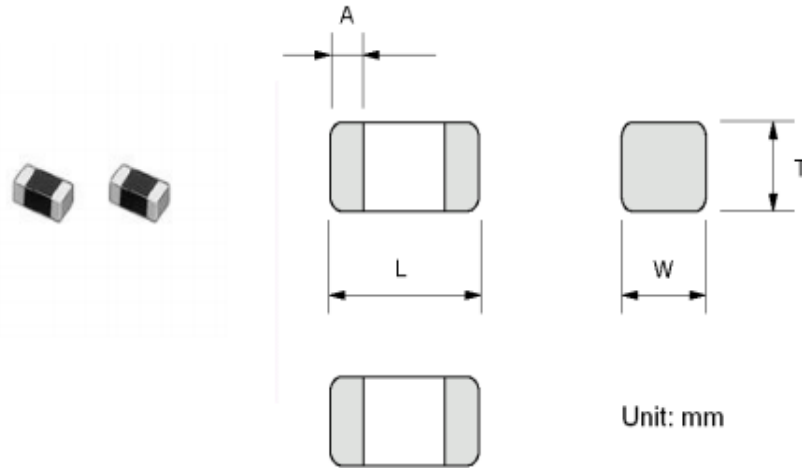
7. Various automotive electronics.

各式汽車設備。

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## 積層式高頻鐵氧體晶片磁珠

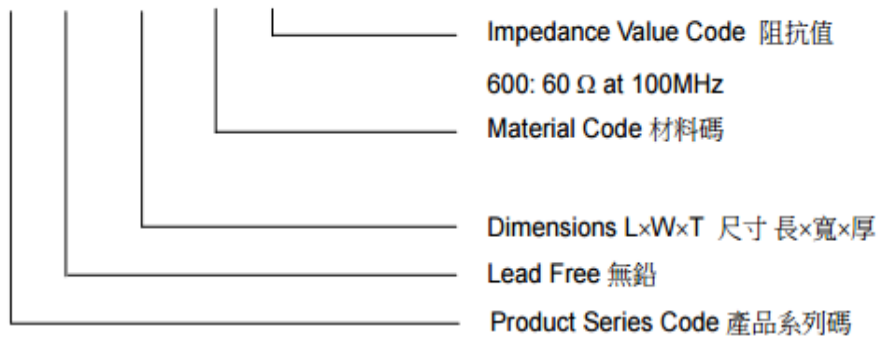
### SIZE AND DIMENSION 尺寸和邊長



SIZE 尺寸	L 長 mm	W 寬 mm	T 厚 mm	a 銀寬 mm
100505 (0402)	1.0±0.05	0.5±0.05	0.5±0.05	0.25±0.1
160808 (0603)	1.6±0.15	0.8±0.15	0.8±0.15	0.4±0.2

### PART NUMBER SYSTEM 編碼系統

ZCA S 160808 A 600

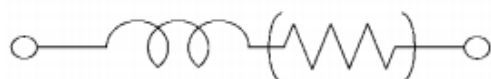


# Multilayer GHz High Frequency Ferrite Chip Bead

## 積層式高頻鐵氧體晶片磁珠

### ZCAS 100505 (0402) TYPE 類型

### EQUIVALENT CIRCUIT DIAGRAM 等效電路圖



### Electrical Characteristics 電氣特性

Part Number 產品料號	Impedance 阻抗 $\Omega \pm 25\%$ 歐姆 @ 100MHz	Impedance 阻抗 $\Omega \pm 40\%$ 歐姆 @ 1GHz	DC Resistance 直流電阻 $\Omega$ (Max.)	Rated Current 額定電流 mA (Max.)
ZCAS100505A201	200	420	0.7	200
ZCAS100505A221	220	420	0.7	200
ZCAS100505A301	300	560	0.8	200
ZCAS100505A331	330	560	0.8	200
ZCAS100505A471	470	1000	1.0	100
ZCAS100505A601	600	1100	1.2	100
ZCAS100505A102	1000	1700	1.6	100
ZCAS 100505B121	120	300	0.5	300
ZCAS100505B221	220	500	0.6	300
ZCAS100505B301	300	800	0.7	300
ZCAS100505B471	470	1100	0.8	300
ZCAS100505B601	600	1400	0.85	300
ZCAS100505H121	120	500	0.7	300
ZCAS 100505H221	220	1500	1.0	250
ZCAS100505H301	300	1700	1.25	250
ZCAS100505H331	330	2000	1.5	200
ZCAS100505K121	120	300	0.5	300
ZCAS100505K221	220	500	0.6	300
ZCAS100505K301	300	800	0.7	300
ZCAS100505K471	470	1100	0.8	300
ZCAS100505K601	600	1400	0.85	300

\* TEST EQUIPMENT: E4991A IMPEDANCE ANALYZER 量測儀器：E4991A 阻抗分析儀

# Multilayer GHz High Frequency Ferrite Chip Bead

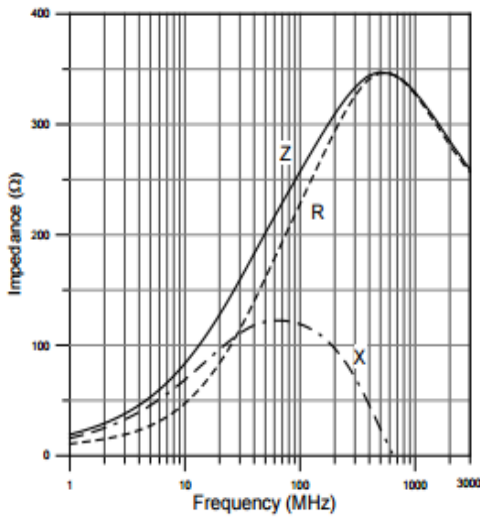
積層式高頻鐵氧體晶片磁珠

ZCAS100505 (0402) TYPE 類型

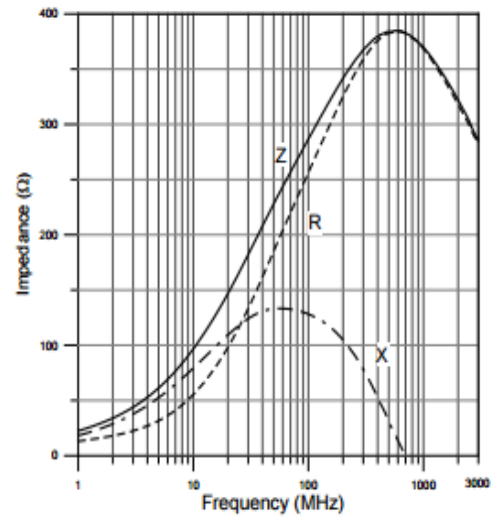
TYPICAL ELECTRICAL CHARACTERISTICS 典型電氣特性

Z, R, X vs. FREQUENCY CHARACTERISTICS 阻抗、電阻、感抗對頻率特性

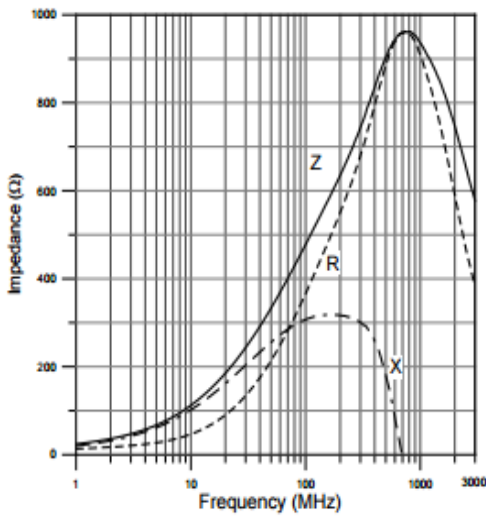
ZCAS 100505A221



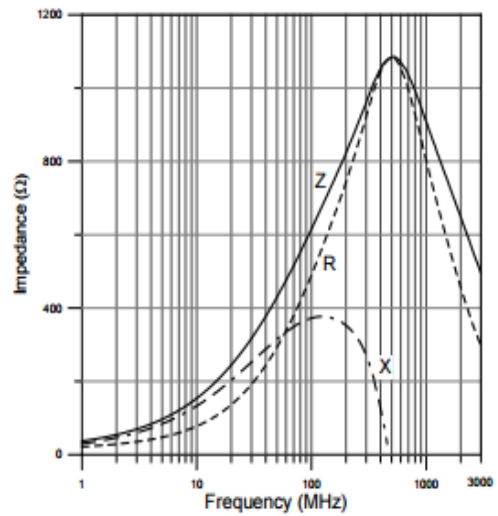
ZCAS 100505A301



ZCAS 100505B471



ZCAS 100505A471



# Multilayer GHz High Frequency Ferrite Chip Bead

積層式高頻鐵氧體晶片磁珠

ZCAS 160808 (0603) TYPE 類型

EQUIVALENT CIRCUIT DIAGRAM 等效電路圖



## Electrical Characteristics 電氣特性

Part Number 產品料號	Impedance 阻抗 $\Omega \pm 25\%$ 歐姆 @ 100MHz	Impedance 阻抗 $\Omega$ 歐姆 @ 1GHz	DC Resistance 直流電阻 $\Omega$ (Max.)	Rated Current 額定電流 mA (Max.)
ZCAS160808A121	120	140 $\pm 40\%$	0.25	300
ZCAS160808A221	220	300 $\pm 40\%$	0.5	200
ZCAS160808A301	300	400 $\pm 40\%$	0.5	200
ZCAS160808A331	330	400 $\pm 40\%$	0.5	200
ZCAS160808A471	470	500 $\pm 40\%$	0.7	200
ZCAS160808A601	600	600 $\pm 40\%$	0.9	100
ZCAS160808A801	800	1000 $\pm 40\%$	1.5	50
ZCAS 160808A102	1000	1200 $\pm 40\%$	1.5	50
ZCAS160808A122	1200	1000 $\pm 40\%$	1.5	50
ZCAS 160808B121	120	300 $\pm 40\%$	0.25	300
ZCAS 160808B221	220	500 $\pm 40\%$	0.5	200
ZCAS160808B301	300	800 $\pm 40\%$	0.5	200
ZCAS160808B331	330	800 $\pm 40\%$	0.5	200
ZCAS160808B471	470	800 (Min.)	1.2	100
ZCAS160808B601	600	1200 (Min.)	1.5	100
ZCAS 160808B801	800	1200 (Min.)	1.8	100
ZCAS160808B102	1000	1700 (Typ.)	1.8	50
ZCAS 160808H121	120	500 $\pm 40\%$	0.5	200
ZCAS160808H221	220	1100 $\pm 40\%$	0.8	100
ZCAS 160808H301	300	1300 $\pm 40\%$	1.2	50
ZCAS160808H331	330	1300 $\pm 40\%$	1.2	50
ZCAS 160808H471	470	2100 $\pm 40\%$	1.2	50

\* TEST EQUIPMENT: E4991A IMPEDANCE ANALYZER 量測儀器：E4991A 阻抗分析儀

# Multilayer GHz High Frequency Ferrite Chip Bead

積層式高頻鐵氧體晶片磁珠

ZCAS160808 (0603) TYPE 類型

EQUIVALENT CIRCUIT DIAGRAM 等效電路圖



## Electrical Characteristics 電氣特性

Part Number 產品料號	Impedance 阻抗 $\Omega \pm 25\%$ 歐姆 @ 100MHz	Impedance 阻抗 $\Omega$ 歐姆 @ 1GHz	DC Resistance 直流電阻 $\Omega$ (Max.)	Rated Current 額定電流 mA (Max.)
ZCAS160808H601	600	3000 $\pm 40\%$	1.2	50
ZCAS160808K121	120	300 (Typ.)	0.3	300
ZCAS160808K221	220	500 (Typ.)	0.5	200
ZCAS160808K301	300	800 (Typ.)	0.6	200
ZCAS160808K331	330	800 (Typ.)	0.6	200
ZCAS160808K471	470	800 (Typ.)	0.7	200
ZCAS160808K601	600	1000 (Typ.)	0.8	200
ZCAS160808K801	800	1200 (Typ.)	0.9	100
ZCAS160808K102	1000	1400 (Typ.)	1.0	100

\* TEST EQUIPMENT: E4991A IMPEDANCE ANALYZER 量測儀器：E4991A 阻抗分析儀

# Multilayer GHz High Frequency Ferrite Chip Bead

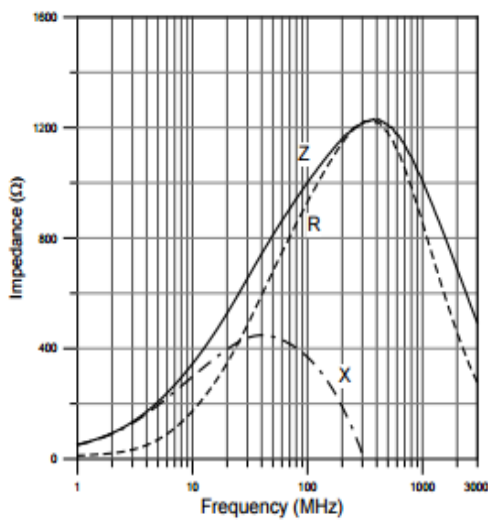
## 積層式高頻鐵氧體晶片磁珠

### ZCAS160808 (0603) TYPE 類型

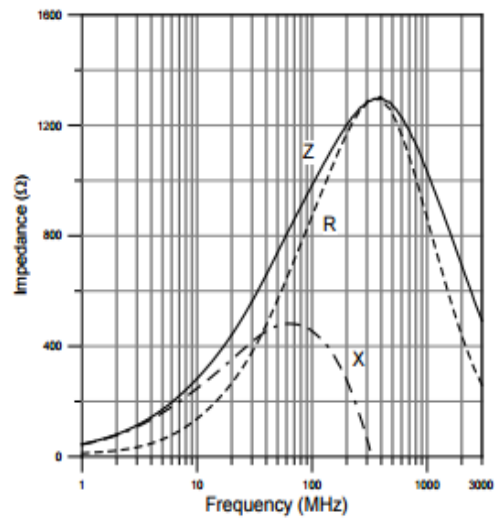
#### TYPICAL ELECTRICAL CHARACTERISTICS 典型電氣特性

#### Z, R, X vs. FREQUENCY CHARACTERISTICS 阻抗、電阻、感抗對頻率特性

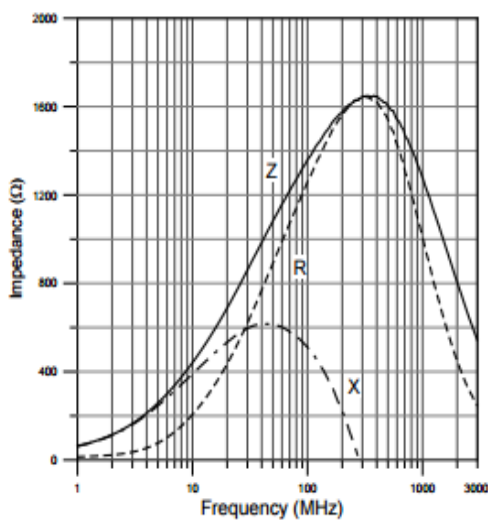
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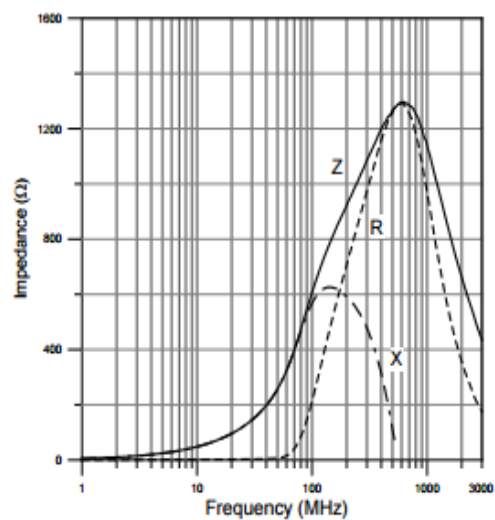
ZCAS160808A102 0.1A



ZCAS160808A152



ZCAS1060808B601



# Multilayer GHz High Frequency Ferrite Chip Bead

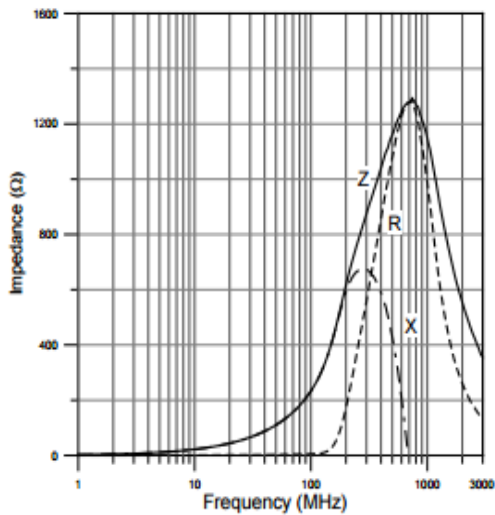
## 積層式高頻鐵氧體晶片磁珠

### ZCAS 160808 (0603) TYPE 類型

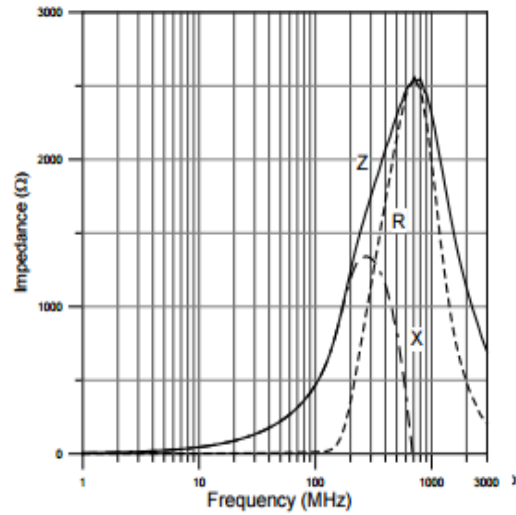
#### TYPICAL ELECTRICAL CHARACTERISTICS 典型電氣特性

#### Z, R, X vs. FREQUENCY CHARACTERISTICS 阻抗、電阻、感抗對頻率特性

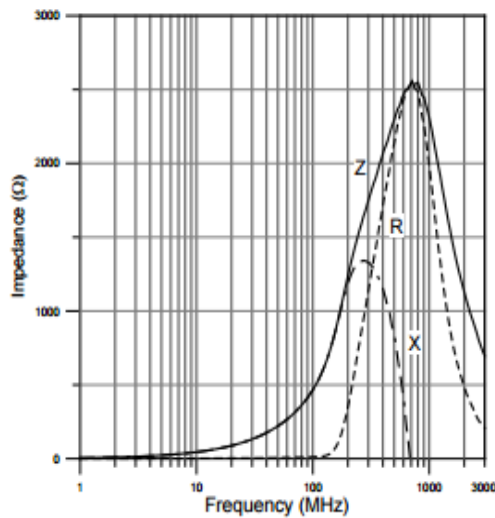
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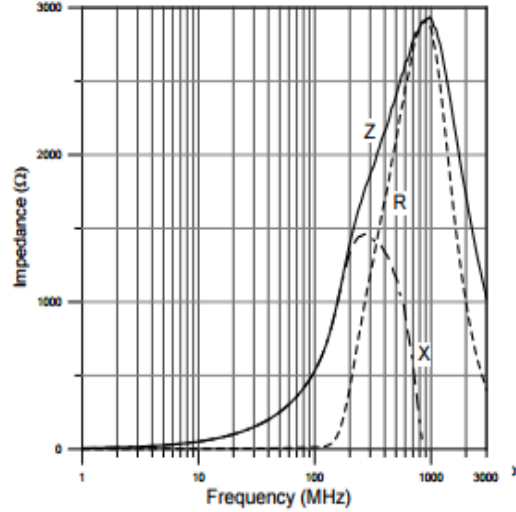
ZCAS 160808H471



ZCAS160808H471



ZCAS 160808H601





# Multilayer GHz High Frequency Ferrite Chip Bead

## 積層式高頻鐵氧體晶片磁珠

ZCGS Compares with ZCAS in Impedance Characteristics Curve.

### ZCGS & ZCAS 阻抗特性曲線比較

#### ZCGS TYPE

In the traditional vertical structure, the distributed capacitance exists between internal electrodes and between internal and outer electrodes, resulted the impedance is lower around hundreds of MHz.

在傳統的直向迴圈結構中，由於線圈的內部電極之間及內部電極與晶片外部電極之間存在著雜散電容，故在幾百 MHz 以上的高頻區阻抗值較低。

#### ZCAS TYPE

With new transverse structure, the distributed capacitance is reduced. The impedance will be increased to 3 times of EBM type around 1GHz.

內部結構成橫向迴圈結構時，雜散電容減少，在 1GHz 附近的阻抗值可以達到舊型的 3 倍。

