

Multilayer Ferrite Chip Beads - Z-SMS/Z-PMS Series

Z-SMS Features:

- Internal silver printed layer creates a closed circuit which acts as a magnetic shield to minimize heat generation and crosstalk
- No need for grounding provides greater circuit design flexibility
- Several material types and a broad range of impedance values provide noise countermeasures for various applications (10th digit in part number)
- "A" Suppresses the XL component. Helps stop the reduction of the wave-form integrity (digital wave-form overshoot, etc)
- "B" Increases the Z characteristics sharply above 20MHz and is applicable for radiated noise in the 100MHz-300MHz range. Especially effective on video signal lines.
- "C" Designed as a noise countermeasure for 200MHz-500MHz range where the rise of the Z component is in the high frequency area.
- "D" Intended for noise suppression around 200MHz. Effectively increase attenuation
- "E" The best material in the Z-SMS Series to suppress the XL component and stop the reduction of the wave-form integrity while maintaining attenuation in the high frequency area.
- "F" Reduced DC resistance version for noise countermeasures around LSI power supplies

Z-SMS Applications:

- High frequency noise countermeasure in personal computers, digital cameras and other information system products. For use on digital product clock lines and general signal lines.
- Radiated noise suppression in computer or printer interfaces harness connectors.
- Noise suppression in video and other AV products
- Prevents interference between circuits in cellular phones (PHS, PDC, etc)
- Due to the closed internal circuit which acts as a magnetic shield, the "F" material is extremely effective as a noise filter on LSI power supplies where downsizing of components is needed.

Z-PMS Applications:

- High frequency noise countermeasures on the DC power supply line in personal computers and other information system products
- Noise suppression in USB and IEEE1294 interface
- Prevents interference between circuits in mobile systems (PDC, PHS, PDA)

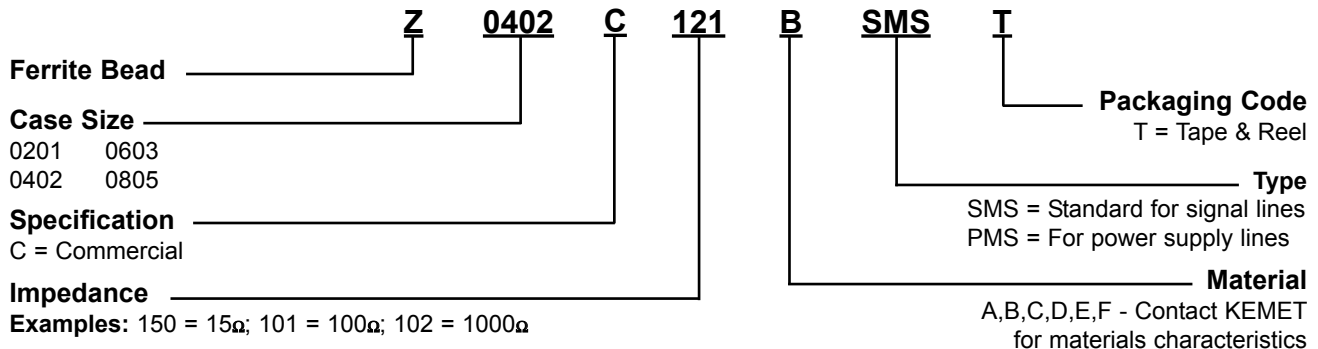
Operating Temperature:

- Z-SMS: -55°C to +125°C (includes self-generated heat)
- Z-PMS: -55°C to +85°C (includes self-generated heat)

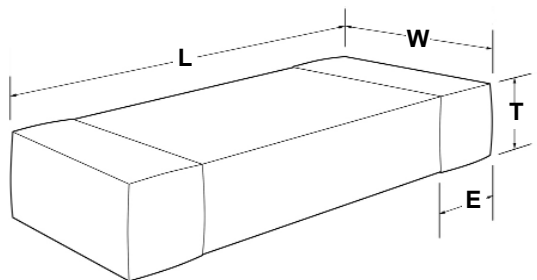
Z-PMS Features:

- Low Rdc values reduce power dissipation and extend battery life
- No need for grounding provides greater circuit design flexibility

Part Numbering Table



Dimension Table in millimeters (inches)



EIA Case Size	Metric Dim. Code	L Length (inches)	W Width (inches)	T Thickness Maximum (inches)	E (inches)
0201	0603	1.6 ±0.2 (0.063 ±0.008)	0.8 ±0.2 (0.031 ±0.008)	0.8 ±0.2 (0.031 ±0.008)	0.3 ±0.2 (0.012 ±0.008)
0402	1005	1.00 ±0.05 (0.039 ±0.002)	0.50 ±0.05 (0.020 ±0.002)	0.50 ±0.05 (0.020 ±0.002)	0.25 ±0.10 (0.010 ±0.004)
0603	1608	1.6 ±0.15 (0.063 ±0.006)	0.8 ±0.15 (0.031 ±0.006)	0.8 ±0.15 (0.031 ±0.006)	0.3 ±0.2 (0.012 ±0.008)
0805	2125	2.0 +0.3/-0.1 (0.079 +0.012/-0.004)	1.25 ±0.2 (0.049 ±0.008)	0.85 ±0.2 (0.033 ±0.008)	0.5 ±0.3 (0.020 ±0.012)

Multilayer Ferrite Chip Beads - Z-SMS, Z-PMS Series

0201 Multilayer Ferrite Chip Beads Standard Type (Z-SMS Series)

Ordering Code	Impedance (Ω) $\pm 25\%$	Measuring Frequency (MHz)	Maximum DC Resistance (Ω)	Maximum Rated Current (mA)	Thickness mm (inches)	Tape & Reel Packaging Quantity
Z0201C220ASMST	22	100	0.10	500	0.30 $\pm$ 0.03 (0.012 $\pm$ 0.001)	15,000
Z0201C330ASMST	33	100	0.20	350	0.30 $\pm$ 0.03 (0.012 $\pm$ 0.001)	15,000
Z0201C800ASMST	80	100	0.40	200	0.30 $\pm$ 0.03 (0.012 $\pm$ 0.001)	15,000
Z0201C121ASMST	120	100	0.50	200	0.30 $\pm$ 0.03 (0.012 $\pm$ 0.001)	15,000
Z0201C241ASMST	240	100	0.80	200	0.30 $\pm$ 0.03 (0.012 $\pm$ 0.001)	15,000
Z0201C600BSMST	60	100	0.40	200	0.30 $\pm$ 0.03 (0.012 $\pm$ 0.001)	15,000
Z0201C121BSMST	120	100	0.50	200	0.30 $\pm$ 0.03 (0.012 $\pm$ 0.001)	15,000
Z0201C241BSMST	240	100	0.80	200	0.30 $\pm$ 0.03 (0.012 $\pm$ 0.001)	15,000
Z0201C100CSMST	10	100	0.40	200	0.30 $\pm$ 0.03 (0.012 $\pm$ 0.001)	15,000
Z0201C220CSMST	22	100	0.50	200	0.30 $\pm$ 0.03 (0.012 $\pm$ 0.001)	15,000
Z0201C330CSMST	33	100	0.80	150	0.30 $\pm$ 0.03 (0.012 $\pm$ 0.001)	15,000
Z0201C470CSMST	47	100	1.00	150	0.30 $\pm$ 0.03 (0.012 $\pm$ 0.001)	15,000

0402 Multilayer Ferrite Chip Beads Standard Type (Z-SMS Series)

Ordering Code	Impedance (Ω) $\pm 25\%$	Measuring Frequency (MHz)	Maximum DC Resistance (Ω)	Maximum Rated Current (mA)	Thickness mm (inches)	Tape & Reel Packaging Quantity
Z0402C680ESMST	68	100	0.17	500	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C121ESMST	120	100	0.24	450	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C241ESMST	240	100	0.31	400	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C431ESMST	430	100	0.50	350	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C601ESMST	600	100	0.60	300	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C100ASMST	10	100	0.05	1000	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C330ASMST	33	100	0.10	700	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C680ASMST	68	100	0.13	600	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C121ASMST	120	100	0.23	500	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C241ASMST	240	100	0.33	400	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C601ASMST	600	100	0.58	300	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C121BSMST	120	100	0.25	300	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C241BSMST	240	100	0.36	300	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C471BSMST	470	100	0.56	250	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C601BSMST	600	100	0.59	250	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C102BSMST	1000	100	0.80	150	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C100CSMST	10	100	0.15	500	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C220CSMST	22	100	0.20	400	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C330CSMST	33	100	0.30	400	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C470CSMST	47	100	0.35	350	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C680CSMST	68	100	0.31	400	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C121CSMST	120	100	0.45	350	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C181CSMST	180	100	0.53	300	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000
Z0402C241CSMST	240	100	0.70	250	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000

0402 Multilayer Ferrite Chip Beads For Power Lines (Z-PMS Series)

Ordering Code	Impedance (Ω) $\pm 25\%$	Measuring Frequency (MHz)	Maximum DC Resistance (Ω)	Maximum Rated Current (mA)	Thickness mm (inches)	Tape & Reel Packaging Quantity
Z0402C121APMST	120	100	0.14	1000	0.50 $\pm$ 0.05 (0.020 $\pm$ 0.002)	10,000