

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)

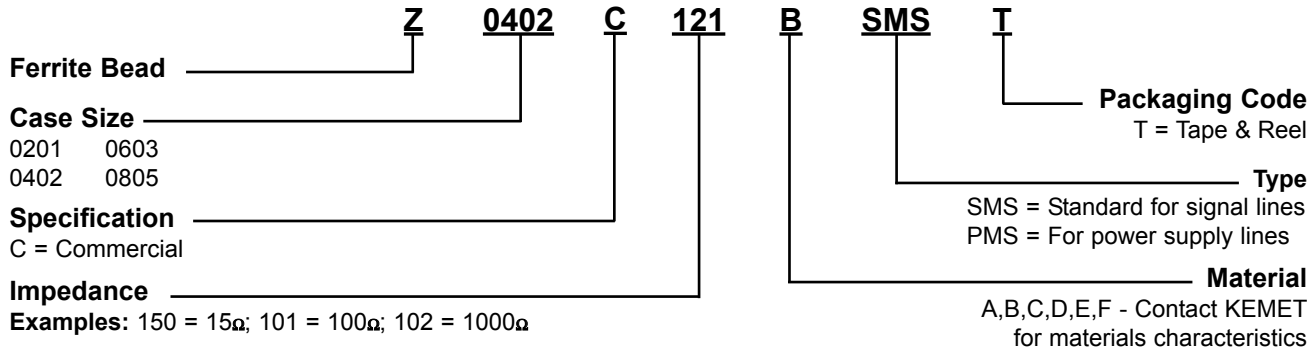
Operating Temperature:

- 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



0603 Multilayer Ferrite Chip Beads Standard Type (Z-SMS Series)

Ordering Code	Impedance (Ω) ±25%	Measuring Frequency (MHz)	Maximum DC Resistance (Ω)	Maximum Rated Current (mA)	Thickness mm (inches)	Tape & Reel Packaging Quantity
Z0603C121ESMST	120	100	0.15	600	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C241ESMST	240	100	0.25	450	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C431ESMST	430	100	0.30	400	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C601ESMST	600	100	0.40	300	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C220ASMST	22	100	0.05	1500	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C330ASMST	33	100	0.08	1200	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C470ASMST	47	100	0.10	900	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C600ASMST	60	100	0.10	800	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C800ASMST	80	100	0.10	600	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C121ASMST	120	100	0.18	500	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C241ASMST	240	100	0.25	400	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C601ASMST	600	100	0.45	350	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C102ASMST	1000	100	0.60	300	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C121BSMST	120	100	0.20	350	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C241BSMST	240	100	0.35	300	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C471BSMST	470	100	0.45	250	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C601BSMST	600	100	0.60	250	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C102BSMST	1000	100	0.70	200	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C300CSMST	30	100	0.20	500	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C470CSMST	47	100	0.30	400	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C560CSMST	56	100	0.30	400	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C680CSMST	68	100	0.35	300	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C121CSMST	120	100	0.50	300	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C181CSMST	180	100	0.65	250	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C241CSMST	240	100	0.80	250	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C331CSMST	330	100	0.85	200	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C431CSMST	430	100	0.85	200	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C511CSMST	510	100	0.90	200	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C681CSMST	680	100	1.00	150	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C751DSMST	750	100	0.60	300	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C152DSMST	1500	100	0.75	250	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C182DSMST	1800	100	0.85	200	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C252DSMST	2500	100	1.10	200	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C431FSMST	430	100	0.25 ±30%	400	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C601FSMST	600	100	0.27 ±30%	350	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C102FSMST	1000	100	0.35 ±30%	300	0.80 ±0.15 (0.031 ±0.006)	4,000

0603 Multilayer Ferrite Chip Beads For Power Lines (Z-PMS Series)

Ordering Code	Impedance (Ω) ±25%	Measuring Frequency (MHz)	Maximum DC Resistance (Ω)	Maximum Rated Current (mA)	Thickness mm (inches)	Tape & Reel Packaging Quantity
Z0603C330APMST	33	100	0.025	3000	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C600APMST	60	100	0.040	2500	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C101APMST	100	100	0.050	1700	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C121APMST	120	100	0.035	2700	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C181APMST	180	100	0.075	1500	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C271APMST	270	100	0.110	1200	0.80 ±0.15 (0.031 ±0.006)	4,000
Z0603C391APMST	390	100	0.140	1000	0.80 ±0.15 (0.031 ±0.006)	4,000

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

0805 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
Z0805C150ASMST	15	100	0.05	1200	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C220ASMST	22	100	0.05	1200	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C330ASMST	33	100	0.05	1200	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C470ASMST	47	100	0.05	1000	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C750ASMST	75	100	0.10	1000	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C101ASMST	100	100	0.10	900	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C121ASMST	120	100	0.15	800	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C241ASMST	240	100	0.20	600	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C431ASMST	430	100	0.25	500	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C601ASMST	600	100	0.30	500	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C102ASMST	1000	100	0.40	300	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C121BSMST	120	100	0.15	800	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C241BSMST	240	100	0.20	600	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C471BSMST	470	100	0.25	500	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C601BSMST	600	100	0.25	500	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C102BSMST	1000	100	0.35	400	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C560CSMST	56	100	0.20	600	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C121CSMST	120	100	0.30	400	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C241CSMST	240	100	0.35	300	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C751DSMST	750	100	0.30	400	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C152DSMST	1500	100	0.35	400	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C182DSMST	1800	100	0.45	300	1.25 \pm 0.2 (0.049 \pm 0.008)	2,000
Z0805C252DSMST	2500	100	0.75	200	1.25 \pm 0.2 (0.049 \pm 0.008)	2,000

0805 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
Z0805C330APMST	33	100	0.020	4000	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C600APMST	60	100	0.025	3000	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C101APMST	100	100	0.040	2500	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000
Z0805C221APMST	220	100	0.050	2000	0.85 \pm 0.2 (0.033 \pm 0.008)	4,000

DISCLAIMER

All electronic components or devices listed in this catalog are developed, designed and intended for use in general electronic equipment. Before incorporating these components into any equipment in the fields of aerospace, military or medical, where higher safety and reliability are required, please contact KEMET Corporation for more details.

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