

## 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)

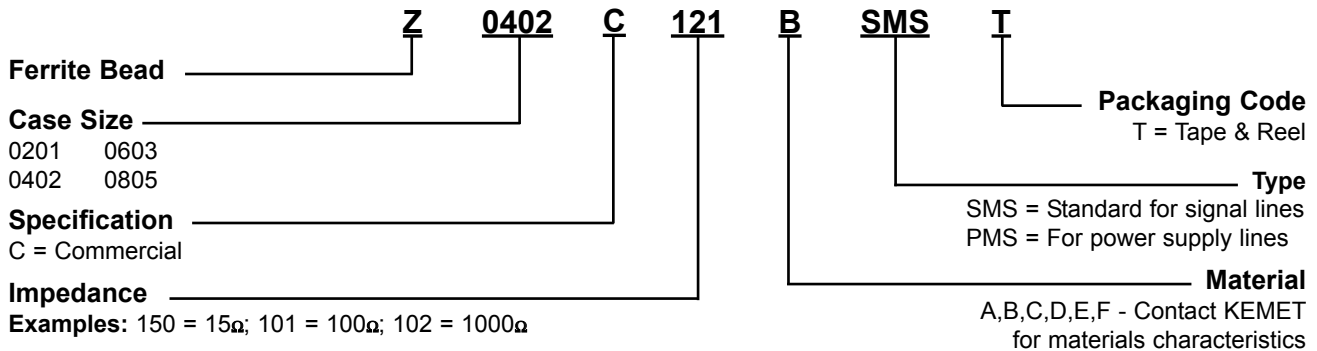
### Operating Temperature:

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

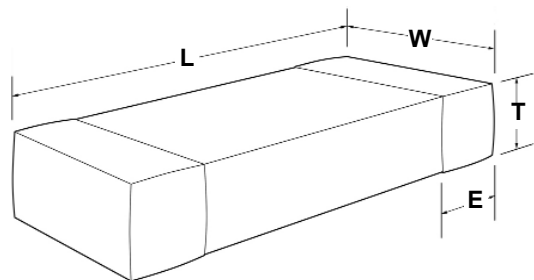
### Z-PMS Features:

- 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)

### 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