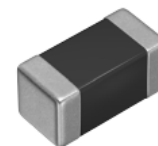


KMZ1608-HR Series

Ferrite Beads for Signal Line with Soft Termination

TDK's KMZ1608-HR Series ferrite beads were designed with innovative soft termination technology to offer high reliability under harsh conditions, even at high temperatures up to 150°C. The KMZ1608-HR series is qualified to AEC-Q200 and their compact size and robustness makes them ideal for use in demanding automotive applications such as in-vehicle electronic control units (ECUs), powertrains, body controls, and car multimedia (telematics). The external electrodes of the KMZ1608-HR series feature a conductive resin layer that offers effective protection against board flexure and solder cracks due to mechanical stress during mounting and thermal shock during operation. The KMZ1608-HR series product offers various frequency characteristics with 6 materials of different features for countermeasures against everything from general signals to high-speed signals.



Signal

Soft Termination

AEC-Q200

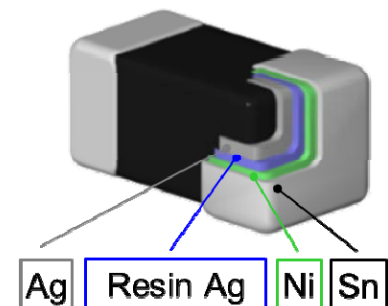
Features

- Noise reduction solution for general signal lines
- Has low direct current resistance for compatibility with large currents, optimal for low power consumption
- Effective protection against board flexure and solder cracks
- Suitable for high operating temperatures up to 150°C
- Qualified to AEC-Q200

Applications

- In-vehicle electronic control units (ECUs)
- Powertrains, body controls, car multimedia (telematics)

Soft Termination Electrode Design



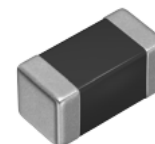
Part Number Information

KMZ	1608	B	HR	601	C	T	DH5
Series name	LxWxT dimensions (mm)	Material name	Specifications (Grade)	Impedance (Ω) at 100MHz	Characteristic type	Packaging style	Internal code
1608	1.6x0.8x0.6	A	HR Soft termination	601 600	C	T Taping	DH5
	1.6x0.8x0.8	B		102 1000	A		D25
		D			B		
		R					
		S					
		Y					

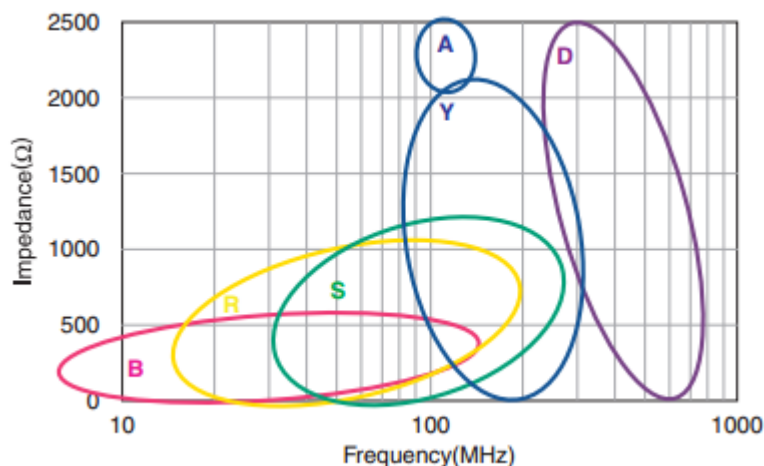
Series	Size [mm]	Impedance [Ω] @ 100MHz	DC Resistance [Ω] Max.	Rated Current [mA] Max.	
KMZ1608-HR (Signal Lines)	1.6 x 0.8	50 to 2500	0.1 to 0.8	-55 to +85°C	+125 to +150°C
				200 to 800	100 to 400

KMZ1608-HR Series

Ferrite Beads for Signal Line with Soft Termination



Material Selection Chart



B Material Characteristics

This type is perfectly suited for fast digital signals. By equalizing R and X components that beads possess at a frequency of 5MHz, B material type product is able to suppress overshooting, undershooting, and ringing of fast digital signals.

R Material Characteristics

For wide frequency applications calling for broad impedance characteristics. For digital signal line applications requiring good waveform integrity. Impedance values selected for effectiveness at 10 to 200MHz.

S Material Characteristics

Standard type that features impedance characteristics similar to those of a typical ferrite core. For signal line applications in which the blocking region is near 100MHz. Impedance values selected for effectiveness at 40 to 300MHz.

Y Material Characteristics

High frequency range type intended for the 100MHz region and above. For signal line applications in which the signal frequency is far from the cutoff frequency. Impedance values selected for effectiveness at 80 to 400MHz.

A Material Characteristics

This high-impedance product is based on the impedance frequency characteristics of our Y-material. The product offers excellent impedance characteristics, which is greater than 2500Ω, in the vicinity of 100MHz range (KMZ1608AHR252B).

D Material Characteristics

For applications calling for low insertion loss at low frequencies and sharply increasing impedance at high frequencies. Designed for high impedance at high frequencies (300 MHz to 1GHz) for signal line applications.