Bulk Metal® Foil Resistors for Audio Applications Current Noise of - 40 dB, Inductance of 0.08 µH and Voltage Coefficient of < 0.1 ppm/V

INTRODUCTION

Bulk Metal® Foil Technology outperforms all other resistor technologies available today for applications that require high precision and high stability. This technology has been invented, patented and pioneered by Vishay. Products based on this technology are most suitable for a wide range of applications.

BMF technology allows to produce customer oriented products designed to satisfy challenging and specific technical requirements. As sound reproduction requirements become more demanding, the selection of circuit components becomes more exacting and the resistors in the signal path are critical. Amplifiers and pre-amplifiers as well as volume controls are likely sources of noise and signal distortion if the resistor is not selected properly. Signal purity can be a function of the resistor technology selection for pre-amp and amplifier applications.

Foil resistors are made by etching a pattern etched in metal foil. This planar geometry and the two axis design permit the current paths to be laid out in parallel producing self cancelling of inductance. Also, path-to-path capacitance is in series resulting in a minimum of lumped internal capacitance. These low inductance/capacitance resistors cause the least amount of peak-to-peak distortion with no measurable noise insertion.

Bulk Metal® Foil Resistors are the first choice for noise-free operation.

Our Applications Engineering Department is available to advise and to make recommendations for non standard technical requirements and special applications, please contact us.

MODEL	PRODUCT DESCRIPTION	RESISTANCE RANGE (Ω)	BEST TOLERANCE (%)	TYPICAL TCR (ppm/°C)	FEATURES
THROUGH HOLE RESISTORS (LEADED)					• Load life stability: at 70 °C for 2000 hours to ± 0.005 % • Low current noise: - 40 dB • Thermal EMF: 0.05 µV/°C typical • Voltage coefficient: < 0.1 ppm/V • Shelf life stability: to 0.0025 % after 1 year • Non inductive: 0.08 µH • High speed response time • Matched Sets available Higher and lower values are available, please contact Application Engineering.
Z201 	Ultra high performance aerospace and instrumentation resistor. Industry breakthrough with **"zero" TCR**	10 Ω to 100 kΩ	± 0.005 %	± 0.2 ppm/°C	
S SERIES S102C, S102K, S104D, S104K, S105D, S105K, S106D, S106K 	High performance aerospace and instrumentation resistor	0.5 Ωto 1 MΩ	± 0.005 %	± 2 ppm/°C	
VSR SERIES VSR, VSRJ, VSR4, VSR5, VSR6 	Industrial precision resistor	0.5 Ω to 1 MΩ	± 0.01 %	± 4 ppm/°C	
SURFACE MOUNT RESISTORS					
VSM SERIES, VSMP SERIES, VFCP SERIES (0805, 1206, 1506, 2010, 2512) 	High Precision chip resistor	10 Ω to 150 kΩ	± 0.01 %	VSM Series; ± 2 ppm/°C VSMP Series, VFCP Series; ± 0.2 ppm/°C	