



Vishay Intertechnology Precision Thin Film MELF Resistors Reduce Component Counts to Save Space, Simplify Designs, and Lower Costs

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Devices Feature Low TCR to ± 15 ppm/K, Tight Tolerances to ± 0.1 %, and High Resistance of Up to 10 M Ω in 0102, 0204, and 0207 Case Sizes

MALVERN, Pa., Dec. 18, 2024 (GLOBE NEWSWIRE) -- Vishay Intertechnology, Inc. (NYSE: VSH) today introduced an enhanced resistance range for precision versions of its AEC-Q200 qualified thin film MELF resistors in the 0102, 0204, and 0207 case sizes. Designed to meet the needs of applications with high stability and reliability requirements, the Vishay Beyschlag [MMU 0102](#), [MMA 0204](#), and [MMB 0207](#) are now available with low TCR down to ± 15 ppm/K, tight tolerances down to ± 0.1 %, and high resistance values of up to 10 M Ω .

Compared to previous thin film MELF resistor offerings, the devices released today provide significantly higher resistance. For example, for a device in the 0204 case size with a TCR of ± 25 ppm/K and a tolerance of 0.1 %, resistance had previously been limited to 511 k Ω . The precision MMA 0204, however, now offers 10 times higher resistance of 5.11 M Ω at the same TCR and tolerance, and 1 M Ω at an even lower TCR of ± 15 ppm/K. With its high resistance, a single MMA 0204 or MMB 0207 resistor can replace multiple lower-value devices used in series, which not only saves spaces but also simplifies designs and lowers overall costs.

Built on an advanced metal film technology, the precision resistors provide proven reliability for current sensing in power supplies for automotive ADAS, LIDAR, connectivity, and camera systems, in addition to telecom, industrial, and medical equipment. For these applications, the devices feature a robust design, intrinsic sulfur resistance, and excellent overall stability that exceeds stability class 0.05. Suitable for processing on automatic SMD assembly systems, the lead (Pb)-free resistors are RoHS-compliant, halogen-free, and [Vishay Green](#).

Device Specification Table:

Part #	MMU 0102	MMA 0204	MMB 0207
Case size	0102	0204	0207
Resistance range (Ω)	22 to 332 k	10 to 5.11 M	15 to 10 M
Tolerance (%)	± 0.5 ; ± 0.25 ; ± 0.1		± 0.25 ; ± 0.1
TCR (ppm/K)	± 25 ; ± 15		
Rated dissipation P ₇₀ (W)	0.2	0.25	0.4
Operating voltage (V)	150	200	350
Operating temp. range ($^{\circ}$ C)	-55 to +125		

Samples and production quantities of the precision thin film MELF resistors are available now, with lead times of 12 weeks.

Vishay manufactures one of the world's largest portfolios of discrete semiconductors and passive electronic components that are essential to innovative designs in the automotive, industrial, computing, consumer, telecommunications, military, aerospace, and medical markets. Serving customers worldwide, Vishay is **The DNA of tech.**[®] Vishay Intertechnology, Inc. is a Fortune 1000 Company listed on the NYSE (VSH). More on Vishay at www.vishay.com.

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Link to product datasheets:

<http://www.vishay.com/ppg?28714> (MMU 0102, MMA 0204, MMB 0207 - Precision)

Link to product photo:

<https://www.flickr.com/photos/vishay/albums/72177720322622848/>

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