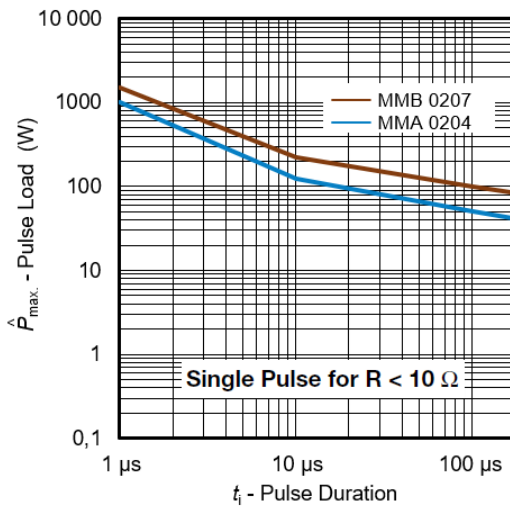




The DNA of tech.

# Enhanced Pulse Load Capability for Professional Thin Film MELF Resistors



Maximum pulse load, single pulse; applicable if  $P \rightarrow 0$  and  $n \leq 1000$  and  $\dot{U} \leq \dot{U}_{max}$ ; for permissible resistance change  $\pm (0.5 \% R + 0.01 \Omega)$

Vishay has enhanced the pulse load capability for its professional thin film MELF resistors to limit peak currents and to suppress surge voltages. In modern applications, GaN or SiC transistors are used to benefit from faster switching cycles. Each switching cycle results in a very short pulse that may affect weaker gate resistors.

Due to their three-dimensional cylindrical shape, MELF resistors feature a 3x more resistive layer. With that they are the most predictable and stable SMD gate resistors. Within extensive tests, the pulse load capability of the MELF professional resistor series is now proven for rectangular pulses as short as 1 µs, increasing the maximum power to 1500 W for the MMB 0207 (2010 chip size) and 1000 W for the MMA 0204 (1206 chip size).

## Key Advantages

- Best in class pulse load capability up to 1500 W for 1 µs
- AEC-Q200 qualified Vishay Automotive Grade and IECQ-CECC approved
- Intrinsically sulfur-resistant and PFAS-free
- Rated dissipation up to 1 W
- Failure rate FIT<sub>observed</sub>:  $\leq 0.05 \times 10^{-9} /h$

## Useful Links

- [Datasheet](#)
- [Product Page](#)
- [Free Samples via Vishay's Sample Service Portal](#)
- [Infographic: MELF Resistors for Pulse Load Applications](#)
- [White Paper: Pulse Load Handling for Fixed Linear Resistors](#)
- [Check List: 12 Things to Know About Resistors in Pulse Load Applications](#)
- [Tool: Pulse Load Calculation](#)

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