2015 Super 12 Products
MEPIC
Massive Electro-Pyrotechnic SMD Initiator Resistor
MEPIC Resistors

Industry-First Electro-Pyrotechnic Initiator Resistor with Predictable, Reproducible, and Reliable Behavior

- Features:
  - Industry-first
  - SMD for standard assembly process (case size 0805)
  - FLIP versions available
  - Ohmic value: 1 Ω to 8 Ω
  - Firing energy down to 1.5 mJ
  - Firing time down to 250 µs
  - Joule effect ignition
  - No fire, all fire, ESD withstands USCAR and AKLV16 standards
  - Very predictable, reproducible, and reliable behavior
  - Can be adapted for use with various pyrotechnic materials

- Applications / Market Segments:
  - Mining electronic detonators (digital blasting)
MEPIC Resistors

- Fireworks, electric matches
- Civil detonators for demolition / precision blasting
- Airbag initiators and seatbelts pretensioners

- Competition
  - No direct competition
  - Indirect competition is NiCr Bridge Wire technology

- Datasheet document number: 53058
- Product page: [www.vishay.com/ppg?53058](http://www.vishay.com/ppg?53058)
MEPIC Resistors

- Why use MEPIC?
  - **Cost efficiency**: Offers an alternative technology to bridge wire enabling the use of standard surface-mount equipment for assembly on a flat header or PC board
  - **Reliability**: Made from ignitor technology used in airbag initiators and seatbelt pretensioners in the automotive industry
  - **Safety**: Ignition performance such as no fire, all fire, ignition time, and ESD-withstanding are inherent to the MEPIC “active area” geometry and material construction, without any interaction with the header that becomes a lower value-added component (surface lapping is not required as it is for bridge wire assembly)
MEPIC Resistors

- **Reproducibility**: The “active area” design is finely monitored by photolithography and chemical etching and is 100% inspected with high-resolution cameras, providing reliable and reproducible performance for very safe usage (when associated with the appropriate qualified pyrotechnic material).

- Samples are available for customer testing

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