Massive Electro-Pyrotechnic Initiator Chip Resistor

FEATURES
- Surface mount design for standard assembly process
- SMD version only
- Active area designed upon performances
- Case size 0805
- Firing energy down to 1.0 mJ (1)
- Firing time down to 250 μs
- Ohmic value: 2 Ω to 8 Ω ± 10 % (typical) (2)
- Joule effect ignition
- Easy set up by design of firing levels
- Very predictable, reproducible and reliable behavior
- Compatibility with pyrotechnic element has to be tested in real environment
- Material categorization: for definitions of compliance please see www.vishay.com/doc?799812

Notes
- This datasheet provides information about parts that are RoHS-compliant and / or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant.
- Please see the information / tables in this datasheet for details.
- Ignitor performances are dependent on both pyrotechnic primer chemistry and active areas geometry.
- For ohmic value < 3 Ω the tolerance will be discussed with Vishay Sfernice.

REVISED DATE: 25-Nov-2021

For technical questions, contact: sferthinfilm@vishay.com
THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000
CONSTRUCTION

- Substrate: epoxy based (FRx type)
- Resistive element: NiCr
- Terminations: SMD wraparound
- Tin plated copper or silver plated copper

HOW TO GET THE RIGHT MEPIC

Each MEPIC will have to be adapted to customer pyrotechnic primer chemistry (energetic material). To reach the right MEPIC design it is necessary to work by “iterations”. Upon receipt of the MEPIC Design Guide duly filled, an initial sampling lot is given to customer (along with a MEPIC reference) so he can provide “No Firing” / “All Firing” performances obtained after first testing. After the analysis of these first test results a new set of samples will be proposed (eventually tooling charges will be necessary) in order to get closer to the customer requirements. It may be several iterations until the right design is found. It may also happen that all requirements cannot be fulfilled simultaneously and then a compromise will be necessary between MEPIC design and customer pyrotechnic primer chemistry or ignition parameters.

When the iterations are finished, which means that the design is validated with total or partial requirements fulfilled, Vishay Sfernice will design a final set of photomasks for serial production.
ORDERING PROCEDURE

Global Part Numbering: MEPICxxxxWTT

<table>
<thead>
<tr>
<th>M</th>
<th>E</th>
<th>P</th>
<th>I</th>
<th>C</th>
<th>x</th>
<th>x</th>
<th>x</th>
<th>x</th>
<th>W</th>
<th>T</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>MODEL</td>
<td>xxxx</td>
<td>TERMINATION TYPE</td>
<td>TERMINATION MATERIAL (1)</td>
<td>PACKAGING (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEPIC</td>
<td>Determined at design step</td>
<td>W: wraparound</td>
<td>T = tin&lt;br&gt;S = silver, please consult</td>
<td>T = tape and reel (plastic tape)&lt;br&gt;W = waffle pack&lt;br&gt;B = bag</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes
- MEPIC being a semi-custom product, please fill EPIC / MEPIC Design Guide (www.vishay.com/doc?53045) and send to sferthinfilm@vishay.com to get appropriate part number
- Silver termination finish valid for both reflow soldering and conductive gluing. Tin termination finish only valid for reflow soldering
- Customer assembly process requirement:
  - Waffle pack for manual placing on PCB
  - Tape and reel for automatic pick and place
  - Bag for bowl feeding
Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Vishay”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer’s responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer’s technical experts. Product specifications do not expand or otherwise modify Vishay’s terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.