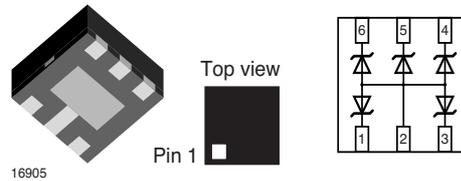


Low Capacitance ESD Protection Diode Array

Features

- Transient protection for data lines as per **IEC 61000 - 4 - 2 (ESD) 15 kV (air), 8 kV (contact)**
IEC 61000 - 4 - 5 (Lightning) 5 A (tp = 8/20 μs)
- Small package for use in portable electronics
- Bidirectional protection of 4 I/O lines
- Unidirectional protection of 5 I/O lines
- Low leakage current
- Ideal for cellular handsets, cordless phones, notebooks, handhelds and digital cameras
- Space saving LiLiPut package



Mechanical Data

Case: LLP75-6A Plastic package

Molding Compound Flammability Rating:
UL 94 V-0

Terminals: High temperature soldering guaranteed:
260 °C/10 sec. at terminals

Weight: 5 mg

Parts Table

| Part | Ordering code | Marking | Remarks |
|-------------|------------------|---------|---------------|
| GMF05LC-HS3 | GMF05LC-HS3-GS08 | F6 | Tape and Reel |

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

| Parameter | Test condition | Symbol | Value | Unit |
|--------------------|------------------|-----------|-------|------|
| Peak pulse power | 8/20 μs waveform | P_{ppm} | 70 | W |
| Peak pulse current | 8/20 μs waveform | I_{pp} | 5 | A |

Thermal Characteristics

Ratings at 25 °C, ambient temperature unless otherwise specified

| Parameter | Test condition | Symbol | Value | Unit |
|-----------------------|----------------|-----------|---------------|------|
| Operating temperature | | T_j | - 55 to + 125 | °C |
| Storage temperature | | T_{stg} | - 55 to + 150 | °C |

Electrical Characteristics

Ratings at 25 °C, ambient temperature unless otherwise specified

| Parameter | Test condition | Symbol | Min | Typ. | Max | Unit |
|---|--|-----------|-----|------|------|------|
| Reverse stand-off voltage | | V_{RWM} | | | 5 | V |
| Reverse breakdown voltage | $I_t = 1 \text{ mA}$ | V_{BR} | 6 | | | V |
| Reverse leakage current | $V_{RWM} = 5 \text{ V}$ | I_R | | | 3 | μA |
| Clamping voltage | $I_{pp} = 1 \text{ A}, 8/20 \text{ μs waveform}$ | V_C | | | 9.5 | V |
| | $I_{pp} = 5 \text{ A}, 8/20 \text{ μs waveform}$ | V_C | | | 12.5 | V |
| Peak forward voltage | $I_F = 1 \text{ A}, 8/20 \text{ μs waveform}$ | V_F | | 1.5 | | V |
| Junction capacitance between I/O pins and Gnd | $V_R = 0 \text{ V}, f = 1 \text{ MHz}$ | C_j | | | 50 | pF |

Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

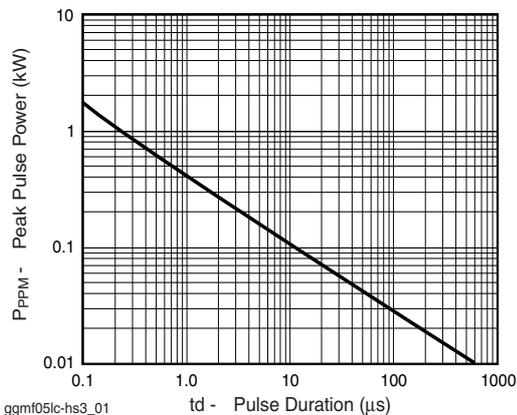


Figure 1. Non -Repetitive Peak Pulse Power vs. Pulse Time

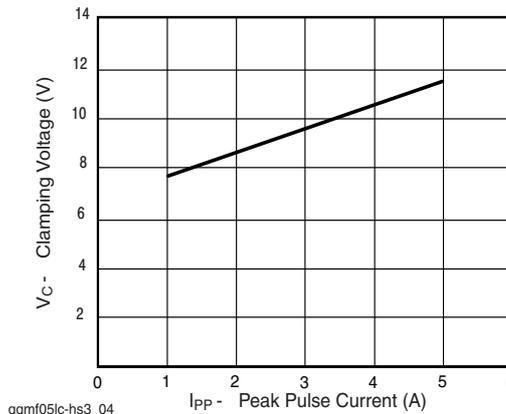


Figure 4. Clamping Voltage vs. Peak Pulse Current

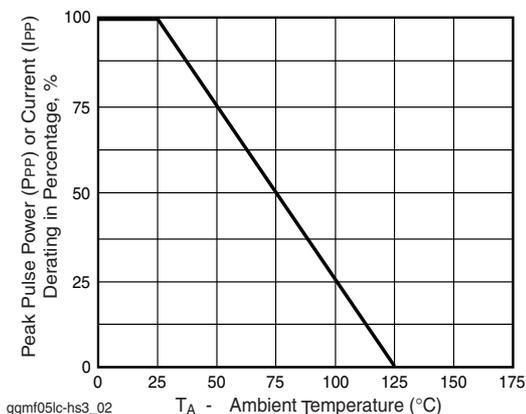


Figure 2. Pulse Derating Curve

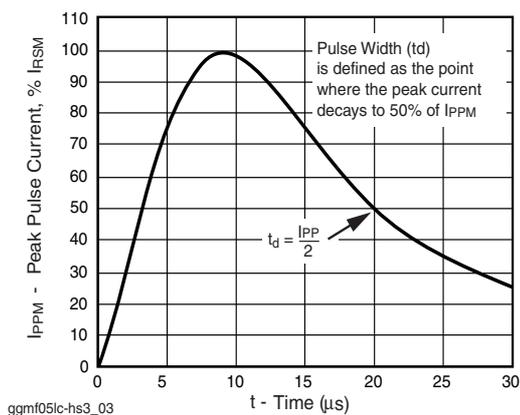
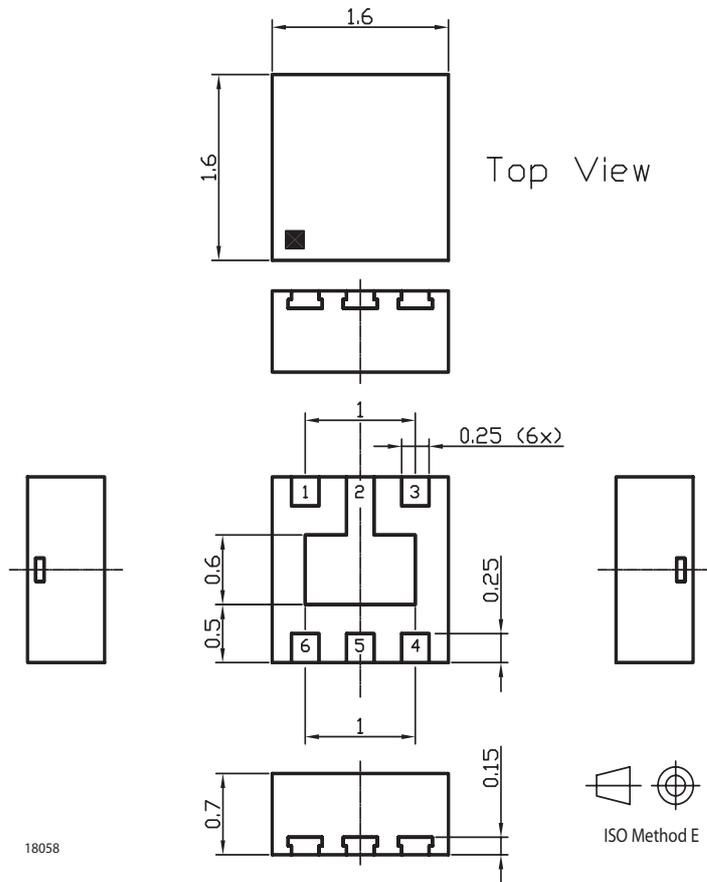


Figure 3. Pulse Waveform

Package Dimensions in mm



18058

Ozone Depleting Substances Policy Statement

It is the policy of **Vishay Semiconductor GmbH** to

1. Meet all present and future national and international statutory requirements.
2. Regularly and continuously improve the performance of our products, processes, distribution and operating systems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

Vishay Semiconductor GmbH has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively
2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA
3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

Vishay Semiconductor GmbH can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

**We reserve the right to make changes to improve technical design
and may do so without further notice.**

Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer. Should the buyer use Vishay Semiconductors products for any unintended or unauthorized application, the buyer shall indemnify Vishay Semiconductors against all claims, costs, damages, and expenses, arising out of, directly or indirectly, any claim of personal damage, injury or death associated with such unintended or unauthorized use.

Vishay Semiconductor GmbH, P.O.B. 3535, D-74025 Heilbronn, Germany
Telephone: 49 (0)7131 67 2831, Fax number: 49 (0)7131 67 2423