# Two-Electrode Specialty Spark Gaps
## Selection Guide

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<th>Spark Gaps</th>
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<td>Voltage Range</td>
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<td>UMT(275)</td>
<td>UBD</td>
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### Description
- **Two Electrode**: Ultra-Fast Surge Protection
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- **Two Electrode**: Ultra-Fast Surge Protection
- **Two Electrode**: Long Life (Millions)

### DC @ 100V/s
- Impulse @ 5kV/μs
- IR @ 100Vdc
- Capacitance @ 1 MHz

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<th>350 - 20,000V</th>
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### Surge Life Ratings
- 500 surges @ 1,000A (8/20)
- 6,000 - 68,100 surges @ 100A (8/20)
- 330 - 2,400 surges @ 3,000A (1/15)
- 1,300 surges @ 10,000A (1/5)
- 10,000 surges @ 3,000A (0.2/0.7)

### Cumulative Charge Ratings 📌
- 10 Coulombs
- 12 - 136 Coulombs
- 15 - 108 Coulombs
- 65 Coulombs
- 24,000 Coulombs

### Applications
- Avionic
- Military
- Industrial
- Medical
- Antenna Feed Lines
- Military
- Industrial
- Medical

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**Note (1)**: PMT(301) is the lowest capacitance Power Gap suitable for protection of high frequency antennas and transmission lines.

**Note (2)**: Uni-Imps protect sensitive components against over voltages without regard to rate of voltage rise.

**Note (3)**: Specifications listed for Impulse Breakdown and Capacitance are maximum values while IR specifications are nominal values and Surge Life specifications are minimum values.

**Note (4)**: Life ratings on select members of a Series are determined by laboratory tests and are dependent on the cumulative charge, in coulombs, that is passed during the tests.

**Note (8)**: Impulse Breakdown measurements taken at 80kV/μs.

**Note (9)**: The range of values corresponds to the low and high member of the Series.

**Note (10)**: Life ratings on select members of a Series are determined by laboratory tests and are dependent on the cumulative charge, in coulombs (Q), that is passed during the tests.

**Note (11)**: Impulse Breakdown measurement taken at 7kV/μs.

**Note (12)**: The surge life ratings listed are conservative values based upon limited laboratory testing at HED. Over a two year period, a randomly selected SIG3.0 gap was life tested at 3.6 joules at three (3) shots per second with the dc breakdown voltage and insulation resistance monitored daily. After months of continuous operation and occurrence of over 35 million shots, there was essentially no change in dc breakdown voltage, even when subjected for 96 hour periods to extreme temperatures of –65°C and +125°C. Furthermore, the insulation resistance level remained above 10^10 ohms. As is true for all products, since the longevity of life is based upon test conditions, in order to best determine the operating life, it is recommended that tests be conducted by the customer under actual operating conditions.