Technical Excellence

Semelab RF MOSFETs are manufactured with proven high performance technology that gives high performance and maximum reliability even in severe applications.

- Single-ended up to 2GHz
- Double-ended up to 1GHz
- UV -Toroidal / Single-ended up to 1GHz
- UV -Flange Mount / Single-ended up to 1GHz
- UV -Flange Mount / Double-ended up to 1GHz
- UV -Flange Mount / Single-ended up to 2GHz
- UV -Flange Mount / Double-ended up to 2GHz

Parts for 12.5V, 28V and 50V are available in both single-ended and double-ended configurations. RF MOSFETs are designed to withstand all types of systems. These include systems such as television and radio transmitters, space applications.

Quality and Experience in RF Technology

Since 1974 Semelab has been supplying high quality, high performance components worldwide. The company offers component technology for RF, microwave, and millimeter wave applications. Semelab is committed to providing the highest quality products and service to meet the needs of our customers.

We are a subsidiary of TT electronics plc. TT electronics is a world leader in electronic components, providing a wide range of products from major standards organisations, including ISO, ESA (European Space Agency), DSCC, and CECC. Products are available to ISO, ESA (European Space Agency), DSCC, and CECC.

All aspects of design, processing, testing, packaging and quality control are carried out in-house. Every product undergoes rigorous testing to ensure its performance, consistency and reliability are imperative.

Equipment as diverse as television and radio transmitters, space applications, and high performance components are critical to our world. Many companies are using Semelab devices in applications where RF performance, consistency and reliability are imperative.

Examples of RF technology - including not only silicon but also package specifications. Our specialist team has experience in all aspects of design, processing, testing, packaging and quality control are carried out in-house. Every product undergoes rigorous testing to ensure its performance, consistency and reliability are imperative.

Among the benefits of the Semelab process are:

- High breakdown voltage (typically 85V for 28V parts) for maximum reliability at high power levels.
- Vertical DMOS process with gold metalisation which gives high performance and maximum reliability.
- Technical Excellence
  - Excellent thermal stability
  - High stability
  - High gain via reduced Miller Effect
  - Exceptionally low feedback capacitance resulting in:
    - Easier design
    - High stability
    - Low Rds(on) for high efficiency (>50%)
- Continuity of Supply
  - Excellent thermal stability
  - High stability
  - High gain via reduced Miller Effect
  - Exceptionally low feedback capacitance resulting in:
    - Easier design
    - High stability
    - Low Rds(on) for high efficiency (>50%)

Quality and Experience in RF Technology

A Power-House

Since 1974 Semelab has been supplying high quality, high performance components worldwide. The company offers component technology for RF, microwave, and millimeter wave applications. Semelab is committed to providing the highest quality products and service to meet the needs of our customers.

We are a subsidiary of TT electronics plc. TT electronics is a world leader in electronic components, providing a wide range of products from major standards organisations, including ISO, ESA (European Space Agency), DSCC, and CECC.

All aspects of design, processing, testing, packaging and quality control are carried out in-house. Every product undergoes rigorous testing to ensure its performance, consistency and reliability are imperative.

Technical Excellence

- Excellent thermal stability
- High stability
- High gain via reduced Miller Effect
- Exceptionally low feedback capacitance resulting in:
  - Easier design
  - High stability
  - Low Rds(on) for high efficiency (>50%)

Continue reading the document for more information.
Very high gain and exceptionally rugged

The exceptional ruggedness of the D10 series is retained

- High breakdown voltage
- High efficiency
- Very high gain
- Exceptionally rugged
- We will be pleased to discuss your requirements for die and package configurations not listed above

<table>
<thead>
<tr>
<th>Power (W)</th>
<th>(%)</th>
<th>(dB)</th>
<th>Frequency</th>
<th>Voltage (V)</th>
<th>Type</th>
<th>Push-Pull</th>
<th>Frequency</th>
<th>Configutation</th>
<th>Voltage (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIGH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

28V DEVICES

PACKAGING TECHNOLOGY

- Higher Gain
- BeO free
- New Packaging Technology

<table>
<thead>
<tr>
<th>Device</th>
<th>Min. Output</th>
<th>Min. Efficiency</th>
<th>Min. Gain</th>
<th>Test Operating</th>
<th>Package</th>
<th>Single-Ended/ Application</th>
<th>Active FET</th>
<th>Breakdown</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMD5029</td>
<td>350</td>
<td>60</td>
<td>20</td>
<td>175</td>
<td>50</td>
<td>D1 or A1</td>
<td>Push-Pull</td>
<td>7+7</td>
</tr>
<tr>
<td>DMD5028</td>
<td>300</td>
<td>60</td>
<td>20</td>
<td>175</td>
<td>50</td>
<td>D1 or A1</td>
<td>Push-Pull</td>
<td>6+6</td>
</tr>
<tr>
<td>DMD5012</td>
<td>100</td>
<td>50</td>
<td>15</td>
<td>500</td>
<td>50</td>
<td>D1 or A1</td>
<td>Push-Pull</td>
<td>3+3</td>
</tr>
<tr>
<td>DMD1037</td>
<td>140</td>
<td>50</td>
<td>13</td>
<td>175</td>
<td>28</td>
<td>D2 or A2</td>
<td>Single-Ended</td>
<td>7</td>
</tr>
<tr>
<td>DMD1010</td>
<td>125</td>
<td>50</td>
<td>13</td>
<td>400</td>
<td>28</td>
<td>D1 or A1</td>
<td>Push-Pull</td>
<td>4+4</td>
</tr>
<tr>
<td>DMD1003</td>
<td>300</td>
<td>50</td>
<td>10</td>
<td>175</td>
<td>50</td>
<td>D1 or A1</td>
<td>Push-Pull</td>
<td>3</td>
</tr>
<tr>
<td>DMD1002</td>
<td>400</td>
<td>50</td>
<td>16</td>
<td>175</td>
<td>50</td>
<td>DA SINGLE-ENDED</td>
<td>Push-Pull</td>
<td>2</td>
</tr>
<tr>
<td>DMD1001</td>
<td>200</td>
<td>50</td>
<td>16</td>
<td>175</td>
<td>50</td>
<td>DA SINGLE-ENDED</td>
<td>Push-Pull</td>
<td>1</td>
</tr>
<tr>
<td>DMD1000</td>
<td>100</td>
<td>60</td>
<td>12</td>
<td>175</td>
<td>50</td>
<td>D2 or A2</td>
<td>Push-Pull</td>
<td>3</td>
</tr>
<tr>
<td>DMD0999</td>
<td>500</td>
<td>60</td>
<td>20</td>
<td>175</td>
<td>50</td>
<td>D1 or A1</td>
<td>Push-Pull</td>
<td>4+4</td>
</tr>
<tr>
<td>DMD0998</td>
<td>100</td>
<td>60</td>
<td>15</td>
<td>500</td>
<td>50</td>
<td>D1 or A1</td>
<td>Push-Pull</td>
<td>3+3</td>
</tr>
</tbody>
</table>

NEW and FREE PACKAGING TECHNOLOGY

- Better Thermal Performance
- Improved Power Dissipation
- Higher Gain
- Higher Efficiency