# Uninterruptible Power Supply

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Uninterruptible Power Supply

VISHAY components used for a UPS can include:

- Power MOSFETs
- High-Power Modules
- Diodes and Rectifiers
- Capacitors
- Resistors
- Analog Switches
- Visible LEDs
- Optical Isolators
- Inductors / EMI Filters
- Shunt Resistors
- ESD Protection Devices
- LDOs

Application Overview

An Uninterruptible Power Supply, or UPS, is required when the AC power that runs sensitive equipment is not reliable or not well regulated or filtered. During power brownouts or blackouts the UPS can provide AC power to the equipment, such as computers or emergency lighting, for a period of time, usually until normal power source is restored. Most UPS circuits include some or all of the system blocks shown above.
## Uninterruptible Power Supply: AC Input Section, Diode Bridge

### Multi Phase

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>VSKT570-18PbF</td>
<td></td>
<td>Thyristor/Thyristor, 570 A</td>
<td>High current capability High surge capability</td>
<td>Power Modules</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3000 VRMS isolating voltag</td>
<td>SUPER MAGN-A-PAK</td>
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### Single Phase

<table>
<thead>
<tr>
<th>Product Name</th>
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<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>36MB60A</td>
<td>Glass Passivated Bridge Rectifier</td>
<td>600V, 35 A</td>
<td>TH / Module D-34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GBPC3506A</td>
<td>Glass Passivated Bridge Rectifier</td>
<td>600V, 35 A</td>
<td>TH / Module GBPC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Uninterruptible Power Supply: AC Input Section, Power Factor Correction

### Aluminum Electrolytic Capacitors

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>101/102 PHR-ST</td>
<td></td>
<td>Screw-Terminal</td>
<td>25 V to 450 V</td>
<td>Screw Term</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Long useful life</td>
<td>220 µF to 100000 µF</td>
<td>35x60 - 90x220</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Life@85°C=10000-15000h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>157 PUM-SI</td>
<td></td>
<td>Snap-In</td>
<td>200 V to 450 V</td>
<td>Snap-In</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Long useful life</td>
<td>56 µF to 2200 µF</td>
<td>22x25 to 35x60</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Life at 85°C = 5000 h</td>
<td></td>
<td></td>
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</table>

### Bulk Capacitor

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKP 1848 DC-Link</td>
<td>NEW</td>
<td>DC-link film capacitor</td>
<td>up to 400uF; up to 1200V no electrolyte, long life</td>
<td>TH / Radial</td>
<td></td>
</tr>
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</table>

### PFC fast diode

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>15ETX06</td>
<td></td>
<td>UltraFast Diode</td>
<td>600 V, 15 A, 18 nsec Trr</td>
<td>TH / Radial</td>
<td></td>
</tr>
<tr>
<td>30EPH06</td>
<td></td>
<td>UltraFast Diode</td>
<td>600 V, 30 A, 35 nsec Trr</td>
<td>TH / Radial</td>
<td></td>
</tr>
<tr>
<td>HFA50PA60C</td>
<td></td>
<td>HexFRED Diode</td>
<td>600 V, 50 A, 75 nsec Trr</td>
<td>TH / Radial</td>
<td></td>
</tr>
<tr>
<td>VS-8ETX06</td>
<td></td>
<td>UltraFast Diode</td>
<td>600 V, 8 A, 16 nsec Trr</td>
<td>TH / Radial</td>
<td></td>
</tr>
</tbody>
</table>

### PFC MOSFET

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRF32N50K</td>
<td></td>
<td>Power MOSFET</td>
<td>500 V, 160 mohm</td>
<td>TH / Radial</td>
<td></td>
</tr>
<tr>
<td>IRFPS43N50K</td>
<td></td>
<td>Power MOSFET</td>
<td>500 V, 90 mohm</td>
<td>TH / Radial</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Super TO-247</td>
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</table>

### Shunt resistor

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSL</td>
<td></td>
<td>Power Metal Strip, for current sensing; low resistance values; tight tolerances; low TCR;</td>
<td>R0002 to R500, 1% TCR &lt;= ± 75ppm P70 = 0.1W - 10W</td>
<td>SMD</td>
<td>0603-5931</td>
</tr>
</tbody>
</table>
Uninterruptible Power Supply: AC Input Section, XY Capacitors

Film RFI caps

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>BFC2 336 60103</td>
<td></td>
<td>Film Capacitor Y2 Polypropylene</td>
<td>300V, 10 nF, 20%</td>
<td>TH / Radial</td>
<td></td>
</tr>
</tbody>
</table>
## Uninterruptible Power Supply: Battery Charger, Discretes

### Aluminum Electrolytic Capacitors

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
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<tbody>
<tr>
<td>101/102 PHR-ST</td>
<td></td>
<td>Screw-Terminal</td>
<td>25 V to 450 V&lt;br&gt;220 µF to 1000000 µF&lt;br&gt;Life@85°C=10000-15000h</td>
<td>Screw Term 35x60 - 90x220</td>
<td></td>
</tr>
<tr>
<td>157 PUM-SI</td>
<td></td>
<td>Snap-In</td>
<td>200 V to 450 V&lt;br&gt;56 µF to 2200 µF&lt;br&gt;Life at 85°C = 5000 h</td>
<td>Snap-In 22x25 to 35x60</td>
<td></td>
</tr>
</tbody>
</table>

### Balancing Resistors

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>RW 20 x 117 series</td>
<td></td>
<td>Wirewound High-Power Vitreous Resistor</td>
<td>3K3 - 3K9 80 W</td>
<td></td>
<td></td>
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</tbody>
</table>

### Film Capacitors

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>2222 368 series</td>
<td></td>
<td>Snubber Capacitor</td>
<td>1200 V 1µF 20%</td>
<td>TH / Radial 22.0×38.0×44.0mm</td>
<td></td>
</tr>
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</table>

### Pre-Charge Resistor

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSO 30x250 series</td>
<td></td>
<td>Wirewound High-Power Resistor</td>
<td>5R1 - 10R 350 W</td>
<td></td>
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### Shunt Resistor

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSL</td>
<td></td>
<td>Power Metal Strip, for current sensing; low resistance values; tight tolerances; low TCR;</td>
<td>R0002 to R500, 1% TCR &lt;= ± 75ppm P70 = 0.1W - 10W</td>
<td>SMD 0603-5931</td>
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### Power Switches

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
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</thead>
<tbody>
<tr>
<td>IRFP32N50K</td>
<td></td>
<td>Power MOSFET</td>
<td>500 V, 160 Mohm</td>
<td>TH / Radial TO-247</td>
<td></td>
</tr>
<tr>
<td>IRFPS40N60K</td>
<td></td>
<td>Power MOSFET</td>
<td>600 V, 130 Mohm</td>
<td>TH / Radial Super TO-247</td>
<td></td>
</tr>
<tr>
<td>Product Name</td>
<td>Status</td>
<td>Description</td>
<td>Features</td>
<td>Package</td>
<td>Q-Level</td>
</tr>
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<td>--------------</td>
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<td>----------------</td>
<td>---------</td>
</tr>
<tr>
<td>LPE-325</td>
<td></td>
<td>Gate Drive Transformer</td>
<td>SMD Transformers</td>
<td>SMD 6.5 x 8.2 mm</td>
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</tbody>
</table>

**Power Transformer**

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom</td>
<td></td>
<td>Dale Custom Magnetics</td>
<td></td>
<td>TH</td>
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</table>
# Uninterruptible Power Supply: Control Section, Capacitors

## Tantalum Capacitors

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>592D</td>
<td></td>
<td>Solid Tantalum Chip Capacitors; Low Profile, Conformal Terminals, Maximum C/V, Extended Range Offerings</td>
<td>4 - 35 Volt, 1 µF - 3300 µF, 2.5mm down to 1.3mm Heigh</td>
<td>SMD</td>
<td>A - X Case</td>
</tr>
<tr>
<td>595D</td>
<td></td>
<td>Solid Tantalum Chip Capacitors, TANTAMOUNT®, Conformal-Coated, Maximum CV, Low ESR</td>
<td>4 - 50 Volt, 0.1 µF - 1500 µF</td>
<td>SMD</td>
<td>T - R Case</td>
</tr>
</tbody>
</table>
### ESD Protection Diodes

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSOT03 to GSOT36</td>
<td></td>
<td>Low-Capacitance Single Line ESD Protection Diode</td>
<td>VZT = 3.3-36V, C=80-800pF</td>
<td>SMD SOT-23</td>
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</tr>
</tbody>
</table>

### Opto Isolator

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>4N25</td>
<td></td>
<td>Optocoupler, Phototransistor Output</td>
<td>Isolation Test Voltage 5300 VRMS</td>
<td>SMD SMD-6, DIP-6</td>
<td></td>
</tr>
<tr>
<td>CNY17-3</td>
<td></td>
<td>Optocoupler, Phototransistor Output</td>
<td>Isolation Test Voltage 5300 VRMS</td>
<td>SMD SMD-6, DIP-6</td>
<td></td>
</tr>
</tbody>
</table>

### Switching Diode

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1N4148WS</td>
<td></td>
<td>Small-Signal Switching Diodes</td>
<td>VRRM = 50-75 Volts, IFRM = 350 mA</td>
<td>SMD SOD-323</td>
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<tr>
<td>BAS16WS-V</td>
<td></td>
<td>Space-Saving SMD Packages in SOD323</td>
<td>VRRM = 75 Volts</td>
<td>SMD SOD323</td>
<td></td>
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<tr>
<td>BAV19WS</td>
<td></td>
<td>Fast Switching</td>
<td>VRRM = 120-250 Volts, IFRM = 625 mA</td>
<td>SMD SOD323</td>
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Analog Switch

<table>
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<th>Product Name</th>
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<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DG2002</td>
<td></td>
<td>Single-Pole/Double-Throw Analog Switches</td>
<td>Supply Voltage max = 6V, Ron = 15 Ohms</td>
<td>SMD SC70-6</td>
<td></td>
</tr>
<tr>
<td>DG2011</td>
<td></td>
<td>Single-Pole/Double-Throw Analog Switches</td>
<td>Supply Voltage max = 6V, Ron = 2.7 Ohms</td>
<td>SMD SC89-6</td>
<td></td>
</tr>
<tr>
<td>DG2711</td>
<td></td>
<td>Single-Pole/Double-Throw Analog Switches</td>
<td>Supply Voltage max = 3.6V, Ron = 0.6 Ohms</td>
<td>SMD SC70-6</td>
<td></td>
</tr>
<tr>
<td>DG2717</td>
<td></td>
<td>Single-Pole/Double-Throw Analog Switches</td>
<td>Supply Voltage max = 5V, Ron = 0.7 Ohms</td>
<td>SMD SC89-6</td>
<td></td>
</tr>
<tr>
<td>DG2731</td>
<td><strong>NEW</strong></td>
<td>Dual Single-Pole/Double-Throw Analog Switches</td>
<td>Supply Voltage max = 4.3V, Ron = 0.3 Ohms</td>
<td>SMD DFN-10 MSOP-10</td>
<td></td>
</tr>
<tr>
<td>DG4599</td>
<td></td>
<td>Single-Pole/Double-Throw Analog Switches</td>
<td>Supply Voltage max = 6V, Ron = 95 Ohms</td>
<td>SMD SC70-6</td>
<td></td>
</tr>
</tbody>
</table>
**Uninterruptible Power Supply** : DC/DC Step-up (boost or full bridge), Batt to 180 VDC to the inverter

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRFB18N50K</td>
<td></td>
<td>Power MOSFET</td>
<td>500 V, 290 mohm</td>
<td>TH / Radial TO-220</td>
<td></td>
</tr>
<tr>
<td>SUM65N20-30</td>
<td></td>
<td>Power MOSFET</td>
<td>200 V, 30 mohm</td>
<td>SMD D2-Pak</td>
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</tbody>
</table>
### Uninterruptible Power Supply: House-Keeping Supply (off-line, flyback), Discretes

#### Film RFI Capacitors

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>BFC2 336 60103</td>
<td></td>
<td>Film Capacitor Y2 Polypropylene</td>
<td>300 V, 10 nF, 20%</td>
<td>TH / Radial 5.0×11.0×17.5mm</td>
<td></td>
</tr>
</tbody>
</table>

#### Power Transformer

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
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<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom</td>
<td></td>
<td>Dale Custom Magnetics</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Shunt resistor

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
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<tbody>
<tr>
<td>WSL</td>
<td></td>
<td>Power Metal Strip, for current sensing; low resistance values; tight tolerances; low TCR;</td>
<td>R0002 to R500, 1% TCR &lt;= ± 75ppm P70 = 0.1W - 10W</td>
<td>SMD</td>
<td>0603-5931</td>
</tr>
</tbody>
</table>

#### Tantalum Capacitors

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>592D</td>
<td></td>
<td>Solid Tantalum Chip Capacitors; Low-Profile, Conformal Terminals, Maximum C/V, Extended Range Offerings</td>
<td>4 - 35 Volt, 1 µF - 3300 µF 2.5mm down to 1.3mm Height</td>
<td>SMD</td>
<td>A - X Case</td>
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<tr>
<td>595D</td>
<td></td>
<td>Solid Tantalum Chip Capacitors, TANTAMOUNT®, Conformal-Coated, Maximum CV, Low ESR</td>
<td>4 - 50 Volt; 0.1 µF - 1500 µF</td>
<td>SMD</td>
<td>T - R Case</td>
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</table>

#### TVS and ESD protection

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>GSOT03 to GSOT36</td>
<td></td>
<td>Low-Capacitance Single Line ESD Protection Diode</td>
<td>VZT=3.3-36V, C=80-800pF</td>
<td>SMD</td>
<td>SOT-23</td>
</tr>
<tr>
<td>P4KE series</td>
<td></td>
<td>Transient Voltage Suppressor Diodes</td>
<td>Clamps at 10.5 to 772V</td>
<td>TH / Axial DO-204AL (DO-41)</td>
<td></td>
</tr>
</tbody>
</table>
### Uninterruptible Power Supply

**Flyback Diode**

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>V20100S</td>
<td>NEW</td>
<td>Schottky</td>
<td>100 V, 20A, single</td>
<td>TH / Radial TO-220AC</td>
<td></td>
</tr>
<tr>
<td>VS-16CTQ100</td>
<td></td>
<td>Schottky</td>
<td>100 V, 16A, dual</td>
<td>TH / Radial TO-220AC</td>
<td></td>
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</tbody>
</table>

**Flyback Switch**

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRFIB30G</td>
<td></td>
<td>Power MOSFET</td>
<td>800 V, 3 ohm</td>
<td>TH / Radial FullPak TO-220</td>
<td></td>
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<tr>
<td>IRFPE40</td>
<td></td>
<td>Power MOSFET</td>
<td>800 V, 2 ohm</td>
<td>TH / Radial TO-247</td>
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</tr>
<tr>
<td>IRFPE50</td>
<td></td>
<td>Power MOSFET</td>
<td>800 V, 1.2 ohm</td>
<td>TH / Radial TO-247</td>
<td></td>
</tr>
<tr>
<td>VSKT570-18PbF</td>
<td></td>
<td>Thyristor/Thyristor, 570 A</td>
<td>High current capability, High surge capability, 3000 VRMS isolating voltage</td>
<td>Power Modules SUPER MAGN-A-PAK</td>
<td></td>
</tr>
</tbody>
</table>
## Uninterruptible Power Supply: Inverter Section (DC/AC) AC Output, Discretes

### Power transformer

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom Magnetics</td>
<td></td>
<td>Custom Capabilities Power Transformers All Switch Mode Power Topologies</td>
<td></td>
<td>TH</td>
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</table>

### Shunt Resistor

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSL</td>
<td></td>
<td>Power Metal Strip, for current sensing; low resistance values; tight tolerances; low TCR;</td>
<td>R0002 to R500, 1% TCR &lt;= ± 75ppm P70 = 0.1W - 10W</td>
<td>SMD 0603-5931</td>
<td></td>
</tr>
</tbody>
</table>

### Tantalum Capacitors

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>592D</td>
<td></td>
<td>Solid Tantalum Chip Capacitors; Low-Profile, Conformal Terminals, Maximum C/V, Extended Range Offerings</td>
<td>4 - 35 Volt , 1 µF - 3300 µF 2.5mm down to 1.3mm Heigh</td>
<td>SMD A - X Case</td>
<td></td>
</tr>
<tr>
<td>595D</td>
<td></td>
<td>Solid Tantalum Chip Capacitors, TANTAMOUNT®, Conformal-Coated, Maximum CV, Low ESR</td>
<td>4 - 50Volt; 0.1 µF - 1500 µF</td>
<td>SMD T - R Case</td>
<td></td>
</tr>
</tbody>
</table>
## Uninterruptible Power Supply: Inverter Section (DC/AC) AC Output, Power Semiconductors

### Power Switches

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRFP22N60K</td>
<td></td>
<td>Power MOSFET</td>
<td>600 V, 280 mohm</td>
<td>TH / Radial TO-247</td>
<td></td>
</tr>
<tr>
<td>IRFPE50</td>
<td></td>
<td>Power MOSFET</td>
<td>800 V, 1.2 ohm</td>
<td>TH / Radial TO-247</td>
<td></td>
</tr>
</tbody>
</table>

### Rectifier

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Status</th>
<th>Description</th>
<th>Features</th>
<th>Package</th>
<th>Q-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>V20100S</td>
<td>NEW</td>
<td>Schottky</td>
<td>100 V, 20 A, single</td>
<td>TH / Radial TO-220AC</td>
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</tr>
<tr>
<td>VS-16CTQ100</td>
<td></td>
<td>Schottky</td>
<td>100 V, 16 A, dual</td>
<td>TH / Radial TO-220AC</td>
<td></td>
</tr>
</tbody>
</table>