Company Profile

Who We Are
Founded in 2001, Union Semiconductor is a fabless integrated circuit design company, engaged in inventing, designing and marketing high performance linear and mixed-signal integrated circuits (ICs) for use in a variety of electronic equipment.
Union Semiconductor’s products bridge the analog real world and digital world by detecting, measuring, amplifying, converting power supply and providing protection for electronic circuits.

Corporate Mission
Union Semiconductor’s mission is to continuously develop high quality and innovative mixed signal IC solutions that add value to customers’ electronics equipment worldwide.

Products and Applications
Our products include power supplies, power management circuits, analog switches, interface circuits, ESD protection ICs and EMI filters.
Union Semiconductor markets over 180 analog ICs for uses in a wide variety of electronic equipment. These include PCs and their peripherals, portable devices, instrumentation, test equipments and digital consumer electronics.

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# Analog and Data Switches

## Low Ron Analog Switches (Ron<1Ω)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>$V_{CC}$ (V)</th>
<th>Features</th>
<th>$R_{ON}$ (Ω) (Max)</th>
<th>Bandwidth (MHz)</th>
<th>Off Isolation @ 100kHz (dB)</th>
<th>Cross-Talk @ 100kHz (dB)</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>UM4157</td>
<td>1.65~4.3</td>
<td>Single SPDT</td>
<td>0.8</td>
<td>70</td>
<td>-75</td>
<td>-75</td>
<td>SOT363</td>
</tr>
<tr>
<td>UM2268</td>
<td>1.8~4.4</td>
<td>Dual SPDT</td>
<td>0.75</td>
<td>80</td>
<td>-78</td>
<td>-93</td>
<td>QFN10 1.8×1.4</td>
</tr>
<tr>
<td>UM2268A</td>
<td>1.8~4.4</td>
<td>Dual SPDT</td>
<td>0.75</td>
<td>80</td>
<td>-78</td>
<td>-93</td>
<td>QFN10 2.1×1.6</td>
</tr>
<tr>
<td>UM4684</td>
<td>1.8~5.5</td>
<td>Dual SPDT</td>
<td>0.8</td>
<td>20</td>
<td>-69</td>
<td>-69</td>
<td>CSP10  MSOP10</td>
</tr>
<tr>
<td>UM5223</td>
<td>1.65~4.5</td>
<td>Dual SPDT</td>
<td>0.5</td>
<td>75</td>
<td>-78</td>
<td>-92</td>
<td>QFN10 1.8×1.4</td>
</tr>
<tr>
<td>UM3689A</td>
<td>1.65~5.5</td>
<td>Dual DPDT</td>
<td>0.75</td>
<td>20</td>
<td>-62</td>
<td>-62</td>
<td>QFN16 3.0×3.0</td>
</tr>
</tbody>
</table>

* Future product, contact factory.

## High Bandwidth Data Switches (BW>200MHz)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>$V_{CC}$ (V)</th>
<th>Features</th>
<th>$R_{ON}$ (Ω) (Max)</th>
<th>Bandwidth (MHz)</th>
<th>Off Isolation (dB)**</th>
<th>Cross-Talk (dB)**</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>UM3156</td>
<td>1.65~5.5</td>
<td>Single SPDT, Low $I_{CCT}$</td>
<td>10</td>
<td>230</td>
<td>-60</td>
<td>-54</td>
<td>SOT363</td>
</tr>
<tr>
<td>UM3157</td>
<td>1.65~5.5</td>
<td>Single SPDT, Low $I_{CCT}$</td>
<td>10</td>
<td>250</td>
<td>-57</td>
<td>-54</td>
<td>SOT363</td>
</tr>
<tr>
<td>UM3257</td>
<td>1.65~5.5</td>
<td>Dual SPDT, Low $I_{CCT}$</td>
<td>10</td>
<td>250</td>
<td>-55</td>
<td>-54</td>
<td>DFN12 3.0×1.6</td>
</tr>
<tr>
<td>UM3258</td>
<td>1.65~5.5</td>
<td>Dual SPDT, Low $I_{CCT}$</td>
<td>10</td>
<td>300</td>
<td>-55</td>
<td>-54</td>
<td>DFN12 3.0×1.0</td>
</tr>
<tr>
<td>UM4717</td>
<td>1.8~5.5</td>
<td>Dual SPDT</td>
<td>6</td>
<td>300</td>
<td>-55</td>
<td>-80</td>
<td>CSP10</td>
</tr>
<tr>
<td>UM4717Q</td>
<td>1.8~5.5</td>
<td>Dual SPDT</td>
<td>6</td>
<td>300</td>
<td>-55</td>
<td>-80</td>
<td>QFN10 1.8×1.4</td>
</tr>
<tr>
<td>UM4258Q</td>
<td>1.8~5.5</td>
<td>Dual SPDT</td>
<td>4.5</td>
<td>300</td>
<td>-55</td>
<td>-80</td>
<td>QFN10 1.8×1.4</td>
</tr>
<tr>
<td>UM3670</td>
<td>1.8~5.5</td>
<td>Dual DPDT</td>
<td>10</td>
<td>300</td>
<td>-55</td>
<td>-60</td>
<td>QFN16 3.0×3.0</td>
</tr>
<tr>
<td>UM3670A</td>
<td>1.8~5.5</td>
<td>Dual DPDT</td>
<td>10</td>
<td>300</td>
<td>-55</td>
<td>-60</td>
<td>QFN16 2.6×1.8</td>
</tr>
<tr>
<td>UM7222</td>
<td>2.7~5.5</td>
<td>Dual SPDT</td>
<td>9</td>
<td>550</td>
<td>-25dB @ 250MHz</td>
<td>-48dB @ 250MHz</td>
<td>QFN10 1.8×1.4</td>
</tr>
<tr>
<td>UM7222A</td>
<td>2.7~5.5</td>
<td>Dual SPDT</td>
<td>9</td>
<td>550</td>
<td>-25dB @ 250MHz</td>
<td>-48dB @ 250MHz</td>
<td>QFN10 2.1×1.6</td>
</tr>
<tr>
<td>UM7222MA</td>
<td>2.7~5.5</td>
<td>Dual SPDT</td>
<td>9</td>
<td>550</td>
<td>-25dB @ 250MHz</td>
<td>-48dB @ 250MHz</td>
<td>MSOP10</td>
</tr>
<tr>
<td>UM9636</td>
<td>2.7~12</td>
<td>Dual SPDT</td>
<td>110</td>
<td>720</td>
<td>-58</td>
<td>-67</td>
<td>QFN10 1.8×1.4</td>
</tr>
<tr>
<td>&quot;UM1153&quot;</td>
<td>2.7~5.0</td>
<td>Single DPDT, Negative Signal Capability</td>
<td>4.6 (Audio) 5.5 (USB)</td>
<td>900 (USB)</td>
<td>-81dB @ 100kHz</td>
<td>-33dB @ 100kHz</td>
<td>QFN10 1.8×1.4</td>
</tr>
</tbody>
</table>

*: Future product, contact factory.

**: Typically, the spec value is measured at f=10MHz, otherwise see the measurement condition in the table.

## Video Switch

<table>
<thead>
<tr>
<th>Part Number</th>
<th>$V_{CC}$ (V)</th>
<th>Features</th>
<th>$R_{ON}$ (Ω) (Max)</th>
<th>Bandwidth (MHz)</th>
<th>Off Isolation (dB)**</th>
<th>Cross-Talk (dB)**</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>UM330</td>
<td>1.8~5.5</td>
<td>Quad SPDT</td>
<td>10</td>
<td>500</td>
<td>-50</td>
<td>-60</td>
<td>TSSOP16</td>
</tr>
</tbody>
</table>

*: Future product, contact factory.

**: Typically, the spec value is measured at f=10MHz, otherwise see the measurement condition in the table.
The UM7222/UM7222A is a dual port high-speed, low-power data switch optimized for USB 2.0 signal switching. The UM7222/UM7222A switch is configured in double-pole/double-throw DPDT. It handles bidirectional signal flow, achieving a 550 MHz -3dB bandwidth, and a port to port crosstalk and isolation at -50dB at 250MHz. The UM7222/UM7222A operates from a single +2.7V to +5.5V supply, with current consumption less than 1μA.

The UM7222/UM7222A features wide bandwidth and low bit-to-bit skew allow it to pass high-speed differential signal with good signal integrity, offers little or no attenuation of the high-speed signals at the outputs. Its high channel-to-channel crosstalk rejection results in minimal noise interface. Its bandwidth is wide enough to pass high-speed USB 2.0 differential signals (480Mbps). The control logic threshold is guaranteed to be compatible with 1.8V logic.

The UM9636 is a high-speed, low-power dual single-pole/double-throw (SPDT) analog switch that operates from a single +2.7V to +12V supply. The UM9636 features 720MHz -3dB bandwidth, -67dB crosstalk and -58dB off-isolation at 10MHz frequency. Wide bandwidth and low on resistant allow it to pass high-speed differential signal with good signal integrity. The switch is bidirectional and offers little or no attenuation of the high-speed signals at the outputs. Its high channel-to-channel crosstalk rejection results in minimal noise interference. Key applications for the UM9636 are logic level translation, pulse generator, and high speed or low noise signal switching in precision instrumentations and portable device designs.
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