



## **Richtek Power IC Solutions for Portable / Wearable / Battery-Powered Applications**

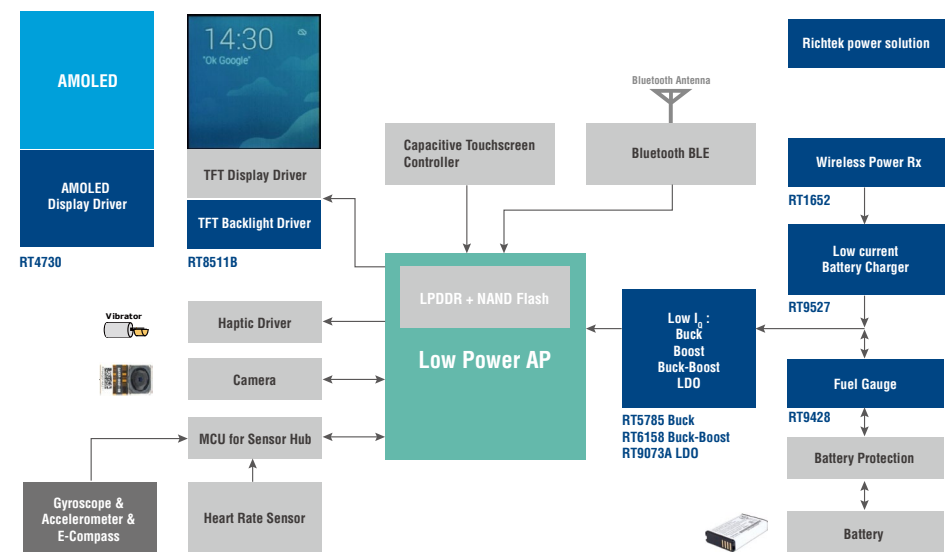
Nov. 2017

# Power IC Solutions for Portable / Wearable / Battery-Powered Applications



**RICHTEK**

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**Wearable Device Function Block**

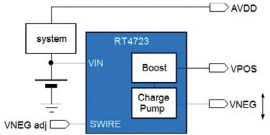

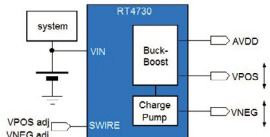

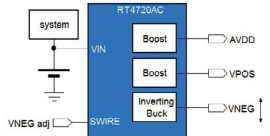

## Boost Converters



| Topology | Part Number             | Vin       | Vout  | I           | Iq    | Fsw          | Key Features   | Package                            |
|----------|-------------------------|-----------|---|-------------|-------|--------------|--|------------------------------------|
|          | <a href="#">RT9266</a>  | 1.0V-6.0V | 1.8V-5.5V                                   | 0.1A out    | 75uA  | 450kHz       | <ul style="list-style-type: none"> <li>→ Asynchronous</li> <li>→ Low Vin range</li> </ul>  | SOT-23-6<br>SOT-89-5               |
|          | <a href="#">RT4812</a>  | 1.8V-5.5V | 1.8V-5.5V                                   | 2.1A out    | 90uA  | 500kHz       | <ul style="list-style-type: none"> <li>→ Synchronous</li> <li>→ CMCOT topology</li> <li>→ Selectable average I-lim 1A &amp; 2.1A</li> </ul>            | TSOT-23-8                          |
|          | <a href="#">RT4813</a>  | 1.8V-5.5V | 1.8V-5.5V                                   | 3.4A out    | 120uA | 500kHz       | <ul style="list-style-type: none"> <li>→ Synchronous</li> <li>→ I<sup>2</sup>C Programmable average I-lim: 0.55A-3.1A</li> </ul>                       | UQFN2x2-9                          |
|          | <a href="#">RT4803</a>  | 1.8V-5.0V | 2.85V-4.4V<br>(3.3V/3.55V/I <sup>2</sup> C) | 2A out      | 65uA  | 2.5MHz       | <ul style="list-style-type: none"> <li>→ Synchronous</li> <li>→ Low Iq 15uA @ Force bypass</li> <li>→ Stand-alone or I<sup>2</sup>C control</li> </ul> | WL-CSP1.67x1.67-16(BSC)            |
|          | <a href="#">RT4803A</a> | 1.8V-5.0V | 2.85V-4.4V<br>(3.15V/3.4V/I <sup>2</sup> C) | 2A out      | 55uA  | 2.5MHz       | <ul style="list-style-type: none"> <li>→ Synchronous</li> <li>→ Low Iq 4uA @ Force bypass</li> <li>→ Stand-alone or I<sup>2</sup>C control</li> </ul>  | WL-CSP1.67x1.67-16(BSC)            |
|          | <a href="#">RT9361A</a> | 2.8V-5.0V | 5.0V/4.5V                                   | 0.1A out    | 2uA   | 1MHz         | <ul style="list-style-type: none"> <li>→ Charge pump</li> </ul>  | SOT-23-6<br>TSOT-23-6<br>WDFN2x2-6 |
|          | <a href="#">RT9277C</a> | 2.5V-5.5V | 3V-16V                                      | 1.6A switch | 2mA   | 640k/1.2MHz  | <ul style="list-style-type: none"> <li>→ Asynchronous</li> <li>→ Ext. programmable Soft Start</li> </ul>   | MSOP-8<br>WDFN3x3-8                |
|          | <a href="#">RT9297</a>  | 2.6V-5.5V | 2.6V-24V                                    | 3.8A switch | 4mA   | 640k/1.24MHz | <ul style="list-style-type: none"> <li>→ Asynchronous</li> <li>→ Programmable Soft Start</li> </ul>  | WDFN3x3-10                         |
|          | <a href="#">RT8509</a>  | 2.8V-14V  | 3.5V- 24V                                   | 3.5A switch | 1mA   | 1.2MHz       | <ul style="list-style-type: none"> <li>→ Asynchronous</li> <li>→ Soft Start</li> <li>→ Ext. comp.</li> </ul>   | WDFN3x3-10                         |
|          | <a href="#">RT8509A</a> | 2.8V-14V  | 3.5V- 24V                                   | 4.5A switch | 5mA   | 1.2MHz       | <ul style="list-style-type: none"> <li>→ Asynchronous</li> <li>→ Soft Start</li> <li>→ Ext. comp.</li> </ul>   | WDFN5x5-12                         |

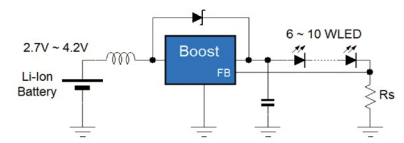
## AMOLED Power ICs



| Topology   | Part Number            | VBAT      | Iout                             | Key Features   | Package                 |
|--|------------------------|-----------|----------------------------------|--|-------------------------|
|  <p>Optimized for 1" to 2" AMOLED displays with non-symmetrical supplies</p>         | <a href="#">RT4723</a> | 2.5V-4.6V | 30mA                             | → Dual output with integrated Boost converter for Vpos and charge pump for Vneg      | WL-CSP1.39x2.07-15(BSC) |
|  <p>Optimized for 1" to 2" AMOLED displays requiring symmetrical supplies</p>        | <a href="#">RT4730</a> | 2.9V-4.8V | 50mA                             | → Dual output with integrated Buck-Boost converter for Vpos and charge pump for Vneg | WL-CSP2.34x2.34-16(BSC) |
|  <p>Optimized for 3.5" to 5" AMOLED displays requiring non-symmetrical supplies</p>  | RT4720A                | 2.9V-4.5V | 300mA (Vneg&Vpos)<br>50mA (AVDD) | → Triple output with three integrated DC/DC converters for Vpos, Vneg and AVDD       | WQFN3x3-16              |

## LED Drivers



| Topology  | Part Number             | Vin       | Vout      | I           | Key Features  | Package                |
|---|-------------------------|-----------|-----------|-------------|---|------------------------|
|  <p>Low power &lt;4W</p> | <a href="#">RT9285B</a> | 2.5V-5.5V | up to 22V | 0.4A switch | → 1MHz Fsw<br>→ Built-in Diode  | TSOT-23-6              |
|   | RT9292                  | 2.5V-5.5V | up to 25V | 0.5A switch | → 1MHz Fsw<br>→ Asynchronous for 6 WLEDs                              | WDFN2x2-8<br>TSOT-23-6 |
|   | <a href="#">RT4533</a>  | 2.5V-5.5V | up to 35V | 1.0A switch | → 1.1MHz Fsw<br>→ Asynchronous for 10 WLEDs                           | TSOT-23-6              |
|   | <a href="#">RT9293B</a> | 2.5V-5.5V | up to 40V | 1.2A switch | → 1MHz Fsw<br>→ Asynchronous for 10 WLEDs<br>→ 100-200kHz PWM dimming | TSOT-23-6<br>WDFN2x2-8 |
|   | <a href="#">RT8511B</a> | 2.7V-24V  | up to 43V | 1.7A switch | → 500kHz Fsw<br>→ 43V Asynchronous<br>→ 100-8kHz Direct PWM dimming   | WDFN2x2-8              |

## LED Drivers



| Topology                   | Part Number            | Vin      | Vout      | I           | Key Features  | Package    |
|----------------------------|------------------------|----------|-----------|-------------|---|------------|
| <p>Single/multi-string</p> | <a href="#">RT8532</a> | 2.5V-24V | up to 43V | 2.5A switch | <ul style="list-style-type: none"> <li>→ 0.5M/1MHz Fsw</li> <li>→ 6 String 10 WLEDs/per string</li> <li>→ Direct PWM dimming &amp; PWM to Analog dimming</li> </ul> | WQFN3x3-20 |
| <p>Buck or Boost</p>       | <a href="#">RT8498</a> | 3.0V-18V | 3.0V-18V  | 2A switch   | <ul style="list-style-type: none"> <li>→ 350kHz Fsw</li> <li>→ Multi-topology</li> <li>→ Analog, PWM Digital or PWM to Analog dimming</li> </ul>                    | SOT-23-6   |

## LDOs



| Topology | Part Number               | Vin       | Vout             | Iout            | Iq            | dropout                | Key Features  | Package                             |
|----------|---------------------------|-----------|------------------|-----------------|---------------|------------------------|---|-------------------------------------|
|          | <a href="#">RT9073A/N</a> | 1.2V-5.5V | Fixed 0.9V-3.3V  | 250mA           | 1uA           | 0.5V@0.25A             | → With Enable   | ZQFN1x1-4 (ZDFN1x1-4), SC-82        |
|          | <a href="#">RT9063</a>    | 2.5V-6.0V | Fixed 1.2V-3.3V  | 250mA           | 1uA           | 0.4V@0.2A              | → -   | SOT-23-3, SOT-89-3                  |
|          | <a href="#">RT9078/N</a>  | 1.2V-5.5V | Fixed 0.8V-3.3V  | 300mA           | 2uA           | 0.15V@0.3A             | → With Enable   | TSOT-23-5, ZQFN1x1-4 (ZDFN1x1-4)    |
|          | <a href="#">RT9080/N</a>  | 1.2V-5.5V | Fixed 0.8V-3.3V  | 600mA           | 2uA           | vary in different Vout | → With Enable   | TSOT-23-5, ZQFN1x1-4 (ZDFN1x1-4)    |
|          | <a href="#">RT9058</a>    | 3.5V-36V  | Fixed 2.5-12V    | 100mA           | 2uA           | 0.3V@10mA              | → -   | SOT-23-3, SOT-89-3                  |
|          | RT9086 (Q1'2018)          | 2.2V-5.5V | Adj. 1.2V-4.5V   | 250mA           | 16uA          | 0.12V@0.25A            | <ul style="list-style-type: none"> <li>→ Ultra-high PSRR</li> <li>→ With Enable</li> <li>→ -40°C to 125°C Tj operating</li> </ul> | WL-CSP0.67x0.67-4(BSC), ZDFN1x1-4   |
|          | <a href="#">RT9076</a>    | 2.5V-5.5V | Fixed 1.2V-3.3V  | 250mA           | 25uA          | 0.4V@0.2A              | → -   | SOT-23-3                            |
|          | <a href="#">RT9013</a>    | 2.2V-5.5V | Fixed 1.2V-2.85V | 500mA           | 25uA          | 0.25V@0.5A             | → Very low noise  | SC-82, SOT-23-5, SC-70-5, WDFN2x2-6 |
|          | <a href="#">RT9083</a>    | 1.2V-5.5V | Fixed 0.9V-3.0V  | 250mA           | 30uA          | 0.45V@0.25A            | → With Enable   | TSOT-23-5                           |
|          | <a href="#">RT9055</a>    | 1.5V-5.5V | Fixed 1.0V-3.5V  | 300mA<br>+300mA | 29uA<br>+29uA | 0.4V@0.3A              | <ul style="list-style-type: none"> <li>→ Dual outputs</li> <li>→ With Enable</li> </ul>   | WL-CSP0.8x1.2-6(BSC)                |

## LDOs



| Topology | Part Number             | Vin       | Vout                              | Iout  | Iq   | dropout    | Key Features   | Package  |
|----------|-------------------------|-----------|-----------------------------------|-------|------|------------|--|--|
|          | <a href="#">RT9081A</a> | 0.8V-5.5V | Fixed 0.9V-1.8V<br>Adj. 0.8V-3.6V | 500mA | 80uA | 0.14V@0.5A | <ul style="list-style-type: none"> <li>→ Low Vin / low Vout</li> <li>→ With Enable</li> <li>→ Vbias 2.4V-5.5V</li> </ul> | ZADFN1.2x1.2-6                                       |
|          | <a href="#">RT9193</a>  | 2.2V-5.5V | Fixed 1.5V-5.0V                   | 300mA | 90uA | 0.22V@0.3A | <ul style="list-style-type: none"> <li>→ Low Vin / low Vout</li> <li>→ With Enable</li> </ul>                            | SC-70-5, SOT-23-5, TSOT-23-5, WDFN2x2-6, MSOP-8 etc. |

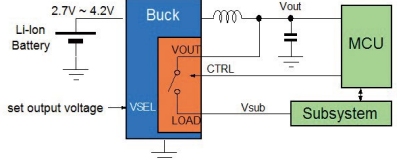
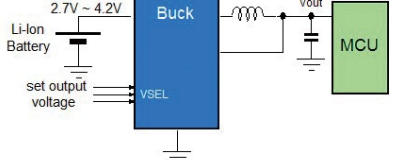
## Buck Converters



| Topology   | Part Number               | Vin       | Vout      | Iout | Iq       | Fsw    | Key Features | Package                |
|--|---------------------------|-----------|-----------|------|----------|--------|--------------|------------------------|
| <p><b>CMCOT mode</b></p> <ul style="list-style-type: none"> <li>→ Fast transient</li> <li>→ max duty-cycle 80%</li> <li>→ PSM and force-PWM</li> </ul> | <a href="#">RT5710</a>    | 2.5V-6.0V | 0.6V-3.4V | 1A   | 22uA     | 1.5MHz | → Power Good | WDFN2x2-6              |
|  | <a href="#">RT8096</a>    | 2.5V-6.0V | 0.6V-3.4V | 1A   | 22uA     | 1.5MHz | → Power Good | TSOT-23-5/6            |
|  | <a href="#">RT5711</a>    | 2.5V-6.0V | 0.6V-3.4V | 1.5A | 22uA     | 1.0MHz |              | WDFN2x2-6              |
|  | <a href="#">RT5796</a>    | 2.5V-6.0V | 0.6V-3.4V | 1.5A | 22uA     | 1.0MHz | → Power Good | TSOT-23-5/6            |
|  | <a href="#">RT5712</a>    | 2.7V-6.0V | 0.6V-3.4V | 2A   | 22uA     | 1.0MHz |              | WDFN2x2-6              |
|  | <a href="#">RT8097</a>    | 2.7V-6.0V | 0.6V-3.4V | 2A   | 22uA     | 1.0MHz | → Power Good | SOT-23-5/6             |
|  | <a href="#">RT5797</a>    | 2.7V-6.0V | 0.6V-3.4V | 3A   | 22uA     | 1.0MHz | → Power Good | WDFN2x2-8S             |
| <p><b>ACOT mode</b></p> <ul style="list-style-type: none"> <li>→ Ultra-fast transient</li> <li>→ Power Good</li> <li>→ 100% duty-cycle mode</li> </ul> | <a href="#">RT5784</a>    | 2.5V-6.0V | VFB=0.6V  | 2A   | 22uA     | 1.5MHz | → Power Good | WDFN2x1.5-8J(FC)       |
|  | <a href="#">RT5785</a>    | 2.5V-6.0V | VFB=0.6V  | 2A   | 25uA     | 1.5MHz | → Power Good | TSOT-23-8 (FC)         |
|  | <a href="#">RT5795A</a>   | 2.5V-5.5V | VFB=0.45V | 2A   | 30uA     | 2.7MHz | → PSM only   | WDFN2x2-8S             |
|  | <a href="#">RT5788A/B</a> | 2.5V-6.0V | VFB=0.6V  | 4A   | 35uA (A) | 1.5MHz | → Power Good | TSOT-23-8              |
|  | <a href="#">RT5789A/B</a> | 2.5V-6.0V | VFB=0.6V  | 6A   | 35uA (A) | 1.5MHz | → Power Good | TSOT-23-8, UDFN2.5x2-8 |

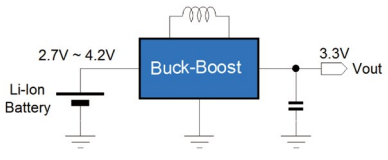
## Buck Converters



| Topology   | Part Number      | Vin       | Vout                   | Iout  | Iq     | Fsw    | Key Features   | Package              |
|--|------------------|-----------|------------------------|-------|--------|--------|--|----------------------|
|  <p><b>HCOT mode</b></p> <ul style="list-style-type: none"> <li>→ Ultra-fast transient</li> <li>→ 100% duty-cycle mode</li> <li>→ Ultra low Iq</li> <li>→ Build in load switch</li> </ul> | RT5706 (Q1'2018) | 2.2V-5.5V | 1.2V / 1.8V            | 600mA | 0.36uA | 1.2MHz | <ul style="list-style-type: none"> <li>→ Ultra low Iq</li> <li>→ Load switch</li> <li>→ 1 Vout select pin</li> </ul> | WL-CSP0.9x1.6-8(BSC) |
|  <p><b>HCOT mode</b></p> <ul style="list-style-type: none"> <li>→ Ultra-fast transient</li> <li>→ 100% duty-cycle mode</li> <li>→ Ultra low Iq</li> </ul>                                 | RT5707 (Q1'2018) | 2.2V-5.5V | 1.2V-3.3V<br>0.7V-3.1V | 600mA | 0.36uA | 1.2MHz | <ul style="list-style-type: none"> <li>→ Ultra low Iq</li> <li>→ 3 Vout select pins</li> </ul>                       | WL-CSP0.9x1.6-8(BSC) |

## Buck Boost Converters



| Topology  | Part Number               | Vin       | Vout                      | Switching current | Iq   | Fsw                                    | Key Features   | Package                 |
|---|---------------------------|-----------|---------------------------|-------------------|------|--|--|-------------------------|
|  | <a href="#">RT6150A</a>   | 1.8V-5.5V | 1.8V-5.5V                 | 1.6A              | 60uA | 1MHz                                   | <ul style="list-style-type: none"> <li>→ PSM/PWM</li> <li>→ Synchronous</li> </ul> | WDFN3x3-10              |
|   | <a href="#">RT6158H</a>   | 2.5V-5.5V | 2.1V-5.2V                 | 3A                | 8uA  | 2MHz, Synchronous with ext. freq.      | <ul style="list-style-type: none"> <li>→ PSM/PWM</li> <li>→ Synchronous</li> </ul> | WL-CSP2.07x2.33-25(BSC) |
|   | RT6158A                   | 2.5V-5.2V | 2.1V-5.2V                 | 2A                | 5uA  | 2.2-2.6MHz Synchronous with ext. freq. | <ul style="list-style-type: none"> <li>→ PSM/PWM</li> <li>→ Synchronous</li> </ul> | WLCSP2.07x2.33-25(BSC)  |
|   | <a href="#">RT6154A/B</a> | 1.8V-5.5V | 1.8V-5.5V (A)<br>3.3V (B) | 5A                | 20uA | 2.4MHz / 2.2-2.6MHz ext sync           | <ul style="list-style-type: none"> <li>→ PSM/PWM</li> <li>→ Synchronous</li> </ul> | WDFN4x3-14              |

## Switching Chargers



| Topology  | Part Number             | Vin      | VBAT                  | Key Features  | Package                 |
|---|-------------------------|----------|-----------------------|---|-------------------------|
|  <p>Generic switching chargers for lead-acid or Ni-MH batteries</p>  | <a href="#">RT9535A</a> | 4.5V-28V | 2.5V-22V              | <ul style="list-style-type: none"> <li>→ Internal switch</li> <li>→ Asynchronous Adj. CV</li> <li>→ Fsw 500kHz</li> </ul>   | WQFN4x4-16              |
|   | <a href="#">RT9535B</a> | 4.5V-28V | 2.5V-22V              | <ul style="list-style-type: none"> <li>→ ICH 2A</li> <li>→ Internal switch</li> <li>→ Input current limit</li> <li>→ End of charge flag</li> <li>→ ASynchronous Adj. CV</li> <li>→ Fsw 500kHz</li> </ul>  | WQFN4x4-24              |
|   | <a href="#">RT9538</a>  | 4.5V-28V | 2.5V-25V              | <ul style="list-style-type: none"> <li>→ External switch, Input current limit, Asynchronous Adj. CV, Fsw 475kHz</li> </ul>  | WQFN4x4-16              |
|  <p>Li-ion switching chargers for mobile phones, tablet PC with large capacity batteries: single cell Li-ion or LiPo 1800mAh-4000mAh</p> | <a href="#">RT9458</a>  | 4.3V-6V  | 3.5V-4.44V (per 20mV) | <ul style="list-style-type: none"> <li>→ I<sup>2</sup>C control</li> <li>→ I<sub>ch</sub>(adj.) 0.5A-1.55A</li> <li>→ Int.MOSFETs</li> <li>→ Thermal regulation</li> <li>→ USB OTG 1A</li> </ul>  | WL-CSP2.1x1.87-20(BSC)  |
|   | <a href="#">RT9460</a>  | 4.3V-9V  | 3.5V-4.62V (per 20mV) | <ul style="list-style-type: none"> <li>→ I<sup>2</sup>C control &amp; stand-alone</li> <li>→ I<sub>ch</sub>(adj.) 1.25A-3.125A</li> <li>→ Int.MOSFETs</li> <li>→ NTC sense JEITA CC.</li> <li>→ Thermal regulation</li> <li>→ USB OTG 0.5A/1A</li> </ul>  | WL-CSP2.52x2.52-25(BSC) |
|   | <a href="#">RT9466</a>  | 4V-14V   | 3.9V-4.71V (per 20mV) | <ul style="list-style-type: none"> <li>→ I<sup>2</sup>C I-ch(adj) 0.1-5A</li> <li>→ int. MOSFETs</li> <li>→ NTC sense JEITA CC</li> <li>→ CV. Thermal Reg.</li> <li>→ IR compensation</li> <li>→ USB OTG 0.5A-2.4A</li> <li>→ Ship &amp; Factory mode</li> <li>→ Current reporting</li> </ul>                                   | WQFN4x4-24              |
|   | <a href="#">RT9468</a>  | 4V-14V   | 3.9V-4.71V (per 20mV) | <ul style="list-style-type: none"> <li>→ Supports Direct Charge</li> <li>→ I<sup>2</sup>C I-ch(adj) 0.1-5A</li> <li>→ int. MOSFETs</li> <li>→ NTC sense JEITA CC</li> <li>→ CV. Thermal Reg.</li> <li>→ IR compensation</li> <li>→ USB OTG 0.5A-2.4A</li> <li>→ Ship &amp; Factory mode</li> <li>→ Current reporting</li> </ul> | WQFN4x4-32              |



## Linear Single Cell Li-Ion Charger ICs



| Topology  | Part Number             | AC Adapter | Vin       | I-ch (adj.) | CV                          | Key Features   | Package    |
|---|-------------------------|------------|-----------|-------------|-----------------------------|--|------------|
| <p>Low capacity batteries 100mAh-500mAh for sensors, wearables &amp; IOT</p> <p>For 400-1000mAh Li-ion batteries</p> <p>For 400-1000mAh Li-ion batteries &amp; different battery voltages</p> | <a href="#">RT9527</a>  |            | 4.4V-6V   | 10mA-600mA  | 4.2V                        | <ul style="list-style-type: none"> <li>→ NTC sense</li> <li>→ Timer</li> <li>→ 2 indicators</li> </ul>   | WDFN2x2-8  |
|   | <a href="#">RT9505</a>  | 18V        | 4.5V-6V   | 1.2A        | 4.2V                        | <ul style="list-style-type: none"> <li>→ NTC sense</li> <li>→ 2 indicators</li> </ul>  | WDFN3x3-10 |
|   | <a href="#">RT9502</a>  | 18V        | 4.5V-6V   | 1.2A        | 4.2V                        | <ul style="list-style-type: none"> <li>→ USB 100/500 mode</li> <li>→ NTC sense</li> <li>→ 2 indicators</li> </ul>  | WDFN3x3-10 |
|   | <a href="#">RT9532</a>  | 28V        | 4.3V-6.2V | 1A          | 4.2V & factory mode         | <ul style="list-style-type: none"> <li>→ 4.9V LDO</li> <li>→ USB 100/500 mode</li> <li>→ 2 indicators</li> </ul>   | WDFN3x2-10 |
|   | <a href="#">RT9536</a>  |            | 4.3V-5.5V | 1A          | 4.2V & 4.35V & factory mode | <ul style="list-style-type: none"> <li>→ 4.9V LDO</li> <li>→ USB 100/500 mode</li> <li>→ 2 indicators</li> </ul>   | WDFN3x2-10 |
| <p>Linear chargers with auto power path</p>   | <a href="#">RT9519B</a> | 28V        | 4.4V-6V   | 1.2A        | 4.2V                        | <ul style="list-style-type: none"> <li>→ APPM</li> <li>→ Adjustable Vbat &amp; Vin current limit 0.1/0.5/1.5A</li> <li>→ NTC sense</li> <li>→ 2 indicators</li> </ul>      | WQFN3x3-20 |
|   | <a href="#">RT9525</a>  | 28V        | 4.2V-6V   | 1.2A        | 4.2V                        | <ul style="list-style-type: none"> <li>→ APPM with system off</li> <li>→ Adjustable Vin current limit 0.1/0.5/1.5A</li> <li>→ NTC sense</li> <li>→ 2 indicators</li> </ul> | WQFN3x3-16 |

## Battery Gauge

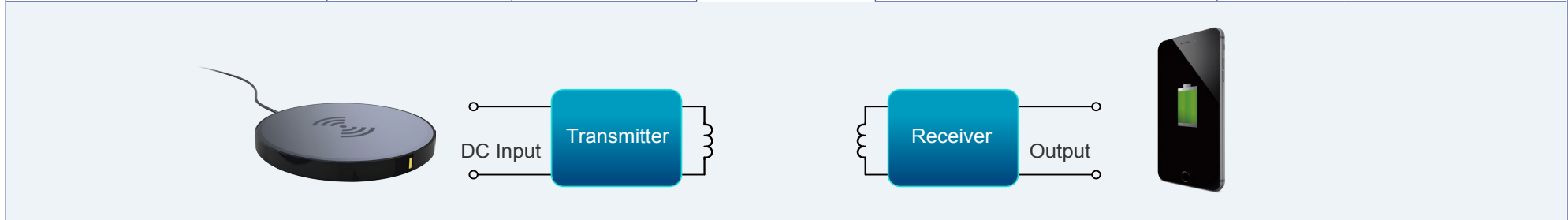


| Topology                        | Part Number            | Vin       | Key Features   | Package               |
|---------------------------------|------------------------|-----------|--|-----------------------|
| <p>Single cell Li-ion gauge</p> | <a href="#">RT9428</a> | 2.5V-4.5V | <ul style="list-style-type: none"> <li>→ 7.5mV sense accuracy</li> <li>→ 3% SOC accuracy</li> <li>→ I<sup>2</sup>C control with Alert pin</li> </ul> | WL-CSP1.6x1.52-8(BSC) |

# Wireless Power



| WPC Family            |  |   | Multi-Mode Family     |               |
|-----------------------|--|---|-----------------------|---------------|
| WPC Qi EPP Certified  | Transmitter (Tx)                         | Receiver (Rx)                                   |                       | Receiver (Rx) |
| Low Power(<5W)        | RT3181A (LP-A11)<br>WPC Qi EPP Certified | RT1652<br>integrated battery charger<br>Q1'2018 | Low Power(<5W)        | MT3188        |
| Medium Power (5W-15W) | RT3181A (MP-A5)<br>WPC Qi EPP Certified  | RT3180W<br>WPC Qi EPP Certified                 | Medium Power (5W-15W) | RT3180M       |



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