

# Small Signal MOSFETs for the Industrial market

## Infineon's next generation of products in SOT-23 and SOT-223 packages

Infineon offers high-performance products with the best price/performance ratio in the industry by using cost-effective packages combined with leading, reliable and proven silicon technology.

The Small Signal/ Small Power P-channel and N-channel MOSFETs simplify the design complexity for various of applications in the consumer industry market. The products are available in logic and normal level gate drive capability and feature a wide range of on-resistance ( $R_{DS(on)}$ ) options.

The new products are good alternatives or replacements to existing P-channel and N-channel products and enable designers to improve performance while reducing the overall bill of material.

Infineon's Small signal/Small power MOSFET packages are optimized for a variety of applications and circuits, such as low voltage drives, linear battery charger, battery protection, load switches, DC-DC converters, reverse polarity protection and many more.

**Infineon's new Small Signal/Small Power P-channel and N-channel MOSFETs for the Industrial market are available in 2 small outline packages:**

- SOT-23 (body dimensions: 2.9 mm x 1.3 mm x 1 mm)
- SOT-223 (body dimensions: 6.5 mm x 3.5 mm x 1.6 mm)



### Key features

- Small outline packages
- Normal level and logic level gate drive availability
- Enhancement Mode and Depletion Mode options
- RoHS compliant and halogen free
- Fast switching
- Avalanche rated
- Qualified according to JEDEC for Industrial applications

### Key benefits

- PCB space and cost savings
- Gate drive flexibility
- Reduced design complexity
- Environmentally friendly
- High overall efficiency
- Enables robust design
- Industry standard qualification level

### Target applications

- Home Appliance
- Cordless Power Tools
- Lighting
- SMPS
- Industrial Automation
- Medical
- High overall efficiency
- Enables robust design
- Industry standard qualification level



Product portfolio

| Package                              | $V_{BRDSS}$ | Part number | $R_{DS(on)}$ max. @ $V_{GS}=10\text{ V}$<br>[ $\Omega$ ] | Qualification |
|--------------------------------------|-------------|-------------|----------------------------------------------------------|---------------|
| Best fit for Industrial applications |             |             |                                                          |               |
| SOT-23                               | 60 V        | BSS83I      | 1.7                                                      | Industrial    |
|                                      |             | BSS84I      | 5.5                                                      |               |
|                                      |             | 2N7002      | 3.0                                                      |               |
|                                      |             | BSS138I     | 3.5                                                      |               |
|                                      |             | SN7002I     | 5.0                                                      |               |
|                                      | 100 V       | BSS123I     | 6.0                                                      |               |
|                                      |             | BSS169I*    | 6.0                                                      |               |
|                                      | 240 V       | BSS131I     | 14                                                       |               |
|                                      | 250 V       | BSS139I*    | 14.0                                                     |               |
|                                      | 600 V       | BSS127I     | 500                                                      |               |
| SOT-223                              | -60 V       | ISP650P06NM | 0.065                                                    | Industrial    |
|                                      |             | ISP12DP06NM | 0.125                                                    |               |
|                                      |             | ISP75DP06LM | 0.75                                                     |               |
|                                      |             | BSP171I     | 0.25                                                     |               |
|                                      |             | BSP170I     | 0.25                                                     |               |
|                                      | 600 V       | BSP135I*    | 45.0                                                     |               |

\*Depletion mode



[www.infineon.com](http://www.infineon.com)

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