# SD49xx: 50 V RF MOSFETs for ISM applications

STMicroelectronics

## New DMOS series for ISM applications provides better RF performance, higher ruggedness and improved reliability

**The new SD49xx series is designed especially for industrial scientific and medical applications. It uses an optimized process layout in order to improve RF performances over HF and VHF frequency bands.**

**It exhibits outstanding RF gain and power saturation, higher breakdown voltage, improved ruggedness and reliability (higher MTTF), resulting in a high-performance and cost-effective solution.**

M177

M174

### Key features

- $V_{(BR)DSS}$ > 200 V
- Operating voltage up to 80 V
- $P_{OUT}$ > 300 W @ 50 V
- Gain > 20 dB at 30 MHz
- Efficiency > 60%
- 20:1 all phases - load mismatch capability

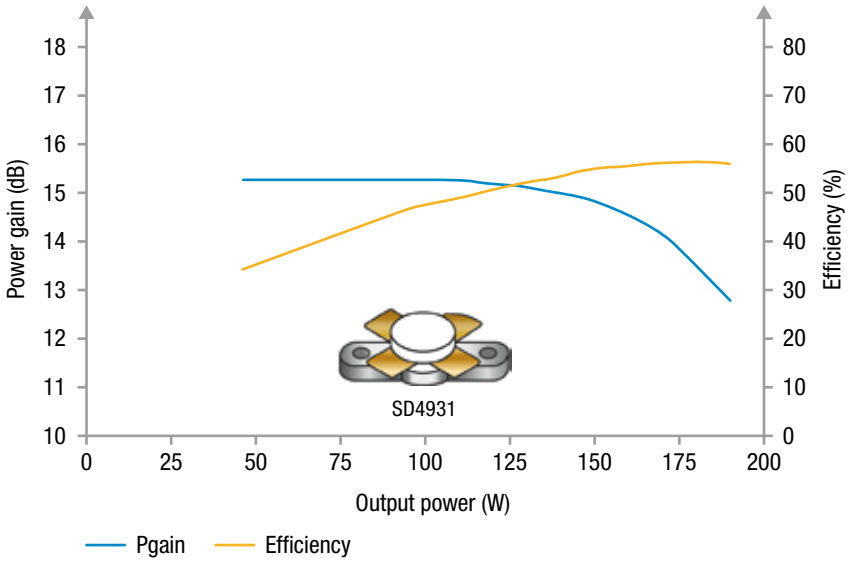
### Key benefits

- Enhanced gain and $P_{SAT}$
- Excellent thermal behavior
- High ruggedness
- Greater reliability
- Higher breakdown voltage versus competition

### Targeted applications

- Plasma enhanced CVD
- Plasma sputtering
- $CO_2$ laser drivers
- HF transceivers

Power gain and efficiency vs output power
Vdd = 50 V, Idq = 250 mA, Freq = 175 MHz




Power gain and efficiency vs output power
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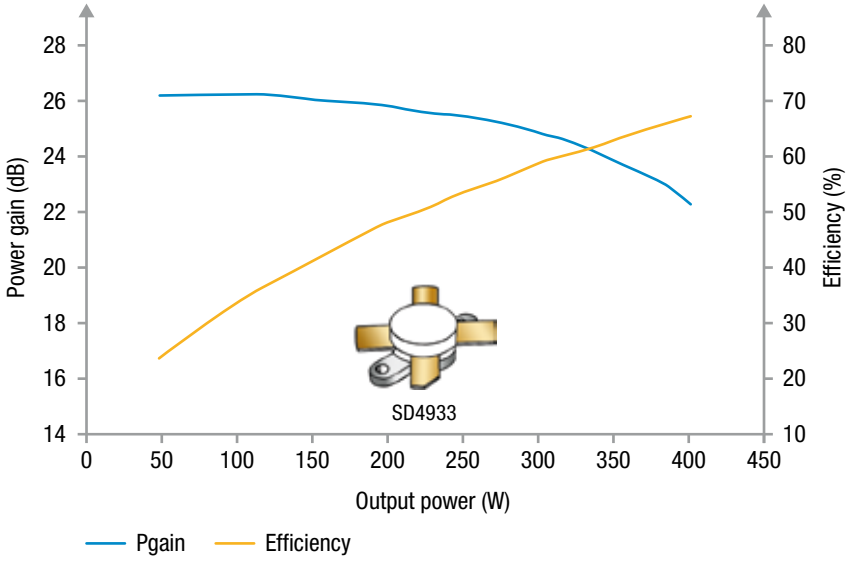


## Product table

| Part number | Package | Frequency nom. (MHz) | Output power (Pout) nom. (W) | Power gain (PG) nom. (dB) | Transistor supply voltage (Vdd or Vcc) nom. (V) | Efficiency nom. (%) |
|---|---|---|---|---|---|---|
| **SD4931** | M174 | 175 | 150 | 14.8 | 50 | 56 |
| **SD4933** | M177 | 30 | 300 | 24 | 50 | 65 |