

# 50V RF LDMOS TRANSISTORS



## New IDEV technology boosts RF power performance up to 2.0 kW



### New IDEV power RF 50V LDMOS technology gives superior performance at frequencies up to 1.5 GHz

Combining high load mismatch capability with a high power density, this new LDMOS transistor family is well suited for RF power amplifiers where they can be used as well as in HF & VHF communications, FM & TV Broadcasting, ISM and Avionics & Radar systems.

In addition to our recently introduced IDDE & IDCH 28/32V product portfolio, this new IDEV 50V LDMOS technology expands the range of applications that ST can address, giving power RF designers a competitive edge for cost-efficient solutions in addition to superior performance.

#### KEY FEATURES & BENEFITS

- High efficiency
- Low thermal resistance
- High ruggedness capability
- Optimized power RF packages
- Operating frequencies up to 1.5 GHz
- Low power consumption
- High efficiency
- First-in-class reliability
- Cost-effective solutions

#### KEY APPLICATIONS

- HF & VHF communications
- FM & TV Broadcasting
- Plasma generators
- CO2 laser excitation
- Synchrotron
- Magnetic Resonance Imaging
- Industrial heating, welding and defrosting
- Avionics & Radar

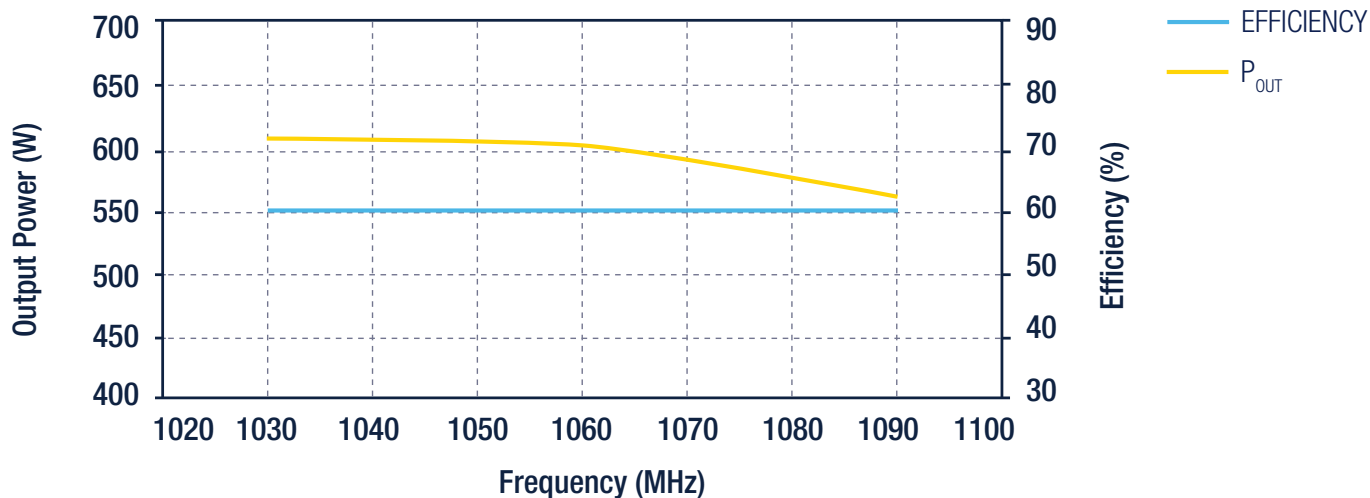
## IDEV TECHNOLOGY

### 50 V operating voltage up to 1.5 GHz

IDEV is a 50 V common source N-channel enhancement-mode lateral field-effect RF power transistor technology. With output power from 30W to 2.0 kW, our IDEV portfolio is specifically designed for HF & VHF communications, FM & TV Broadcasting, ISM and Avionics & Radar equipment at frequencies up to 1.5 GHz.



### Output power and efficiency over 1030-1090 MHz at $V_{DD} = 50\text{ V}$ (Evaluation board using STAC1011-500)



Part number	Package	Frequency (MHz)	Output power (W)	Power gain (dB)	Supply voltage (V)	Efficiency (%)
RF5L15030CB2	GXB	915	35	24	50	60
RF5L15120CB4	LBB	915	120	20	50	60
RF5L05500CB4*	LBB	325	550	16	50	68
RF5L05750CF2*	C2	27	750	20	50	80
RF5L05950CF2*	C2	27	900	20	50	75
RF5L051K0CB4*	D4E	27	1100	21	50	80
RF5L051K4CB4	D4E	27	1400	20	50	80
RF5L08350CB4	B4E	915	400	18	50	60
RF5L08600CB4*	D4E	650	650	18	50	67
STAC1011-500	STAC780-4F	1030 - 1090	500	16	50	54
RF5L10111K0CB4*	D4E	1030	1000	15	50	56
RF5L0912750CB4*	D4E	960 - 1215	850	14	50	46
STAC1214-350*	STAC780-4F	1200 - 1400	350	14	50	55
RF5L1214750CB4*	D4E	1200 - 1400	850	14	50	46
RF5L051K5CB4*	D4E	108	1500	20	50	80
RF5L052K0CB4*	D4E	108	2000	20	50	80

\*In development



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