

28/32 V LDMOS

New IDCH technology boosts RF power performance up to 4 GHz



New IDCH power RF LDMOS technology gives superior performance at frequencies up to 4 GHz

Combining a shorter conduction-channel length with a high power density, this new LDMOS family is well suited for RF power amplifiers where they can be used as well as in 2.45 GHz Industrial, Scientific & Medical or Telecom and S-Band radar systems.

Our innovative IDCH 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

- High efficiency
- Low thermal resistance
- Optimized power RF packages
- Operating frequencies up to 4 GHz

KEY BENEFITS

- Power consumption savings
- First-in-class reliability
- Cost-effective solutions

KEY APPLICATIONS

- 2.45 GHz ISM
- Cellular infrastructure
- 1.4/1.5 GHz bands for IMT
- Satellite communications
- S-band radar
- Wideband radio

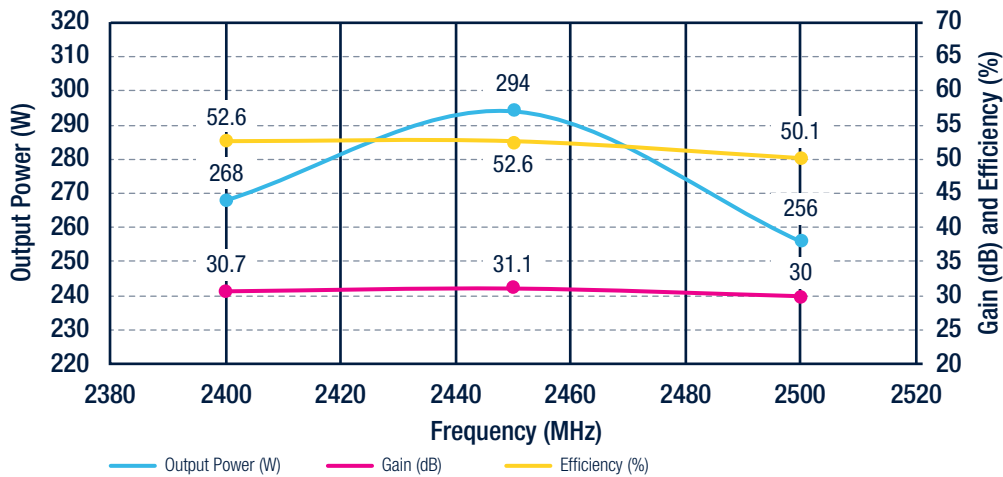
IDCH technology

28/32 V operating voltage up to 4 GHz

IDCH is a 28/32 V common source N-channel enhancement-mode lateral field-effect RF power transistor technology. With output power from 8 to 300 W, our IDCH portfolio is specifically designed for 2.45 GHz ISM, wireless infrastructure, satellite communications and S-band radar equipment at frequencies up to 4 GHz for all types of modulation formats.

Output power and efficiency versus frequency at $V_{DD} = 30$ V

(Evaluation board: RF2L27015CG2 + RF2L24280CB4 + circulator)



Part number	Package	Frequency (MHz)	Output power (W)	Power gain (dB)	Supply voltage (V)	Efficiency (%)
RF2L42008CG2	E2	4200	8	14	28	40
RF2L27015CG2	E2	2700	15	18	28	60
ST36015	E2	3450	15	15	28	45
RF2L27025CG2	E2	2700	35	18	28	55
RF2L36040CF2	A2	3500	40	13	28	45
ST16045	A2	1615	45	19	28	65
RF2L36075CF2	B2	3500	75	12.7	28	45
RF2L16080CF2	A2	1615	80	19	28	58
RF2L16180CF2	B2	1470	180	19	28	59
RF2L16180CB4	B4E	1457	180	16	28	58
RF2L15200CB4	LBB	1300	200	18	28	65
ST24180	B2	2350	180	14	32	55
RF2L24280CB4*	D4/D4E	2450	300	15	32	57

Note: *In development: please contact your local ST sales office.



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