

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

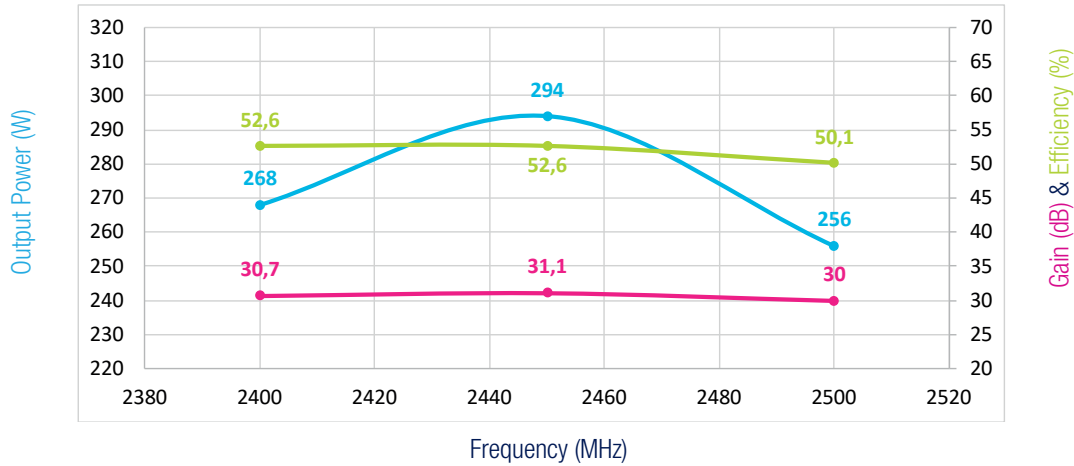


IDCH TECHNOLOGY

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 $V_{DD} = 30\text{ V}$ (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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