

LET series

The new LDMOS series for applications from 1 MHz to 2 GHz



- The LET series of RF power MOSFETs is based on the STH5P LDMOS technology
- The latest STH5P LDMOS technology increases the power saturation capability, minimizing the distortion at higher power levels
- Compared to devices using earlier LDMOS processes, the LET series features improved RF performance (+3 dB, +15% efficiency), ruggedness and reliability
- It is specifically designed for 28 V (basestation) and 32/36 V (avionics) applications and operating frequencies up to 2 GHz

ST advantages

- Enhanced gain and power saturation
- Excellent thermal behavior
- Higher ruggedness: 20:1 all phases
- Improved reliability
- Specified breakdown voltage of 80 V min
- Available in die form for COB design



Applications up to 2 GHz

- Government broadband communications
- Cellular repeaters
- Private mobile radio (PMR) basestations
- L-band satellite radio uplinks

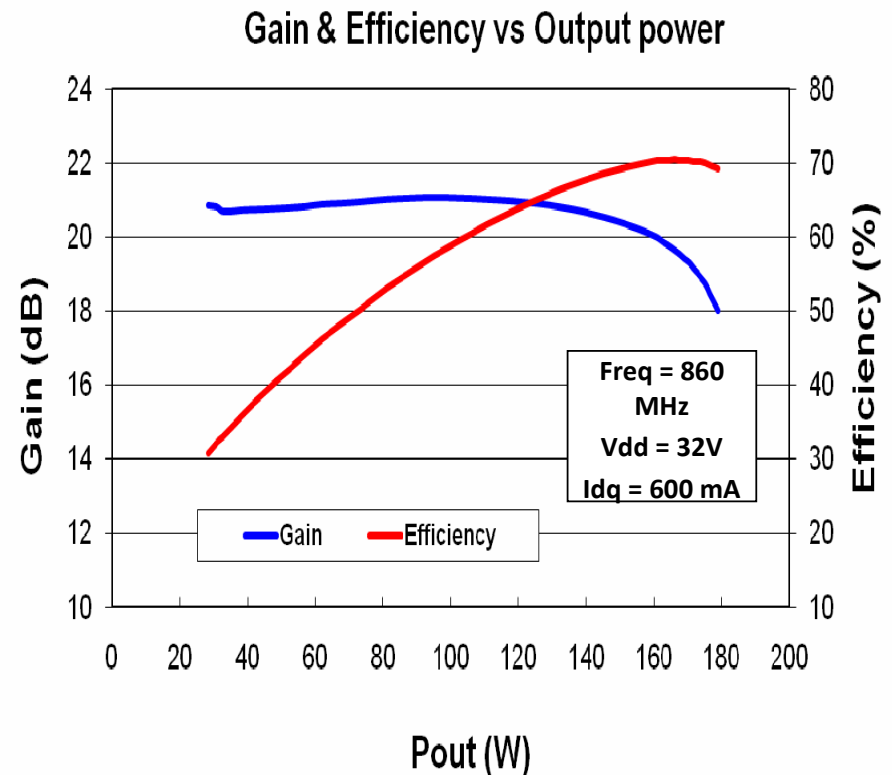
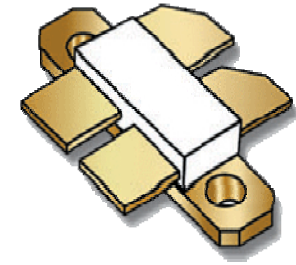


Gain and efficiency at 860 MHz



LET9150

- High breakdown voltage: $B_{VDSS} > 80\text{ V}$
- Frequency: 860 MHz
- Operating voltage: up to 36 V
- $P_{OUT} > 150\text{ W}$ @ $V_{DD} = 32\text{ V}$
- Power gain: $> 18\text{ dB}$
- Efficiency: $> 65\%$
- Load mismatch: 20:1 all phases



Gain and efficiency at 2 GHz

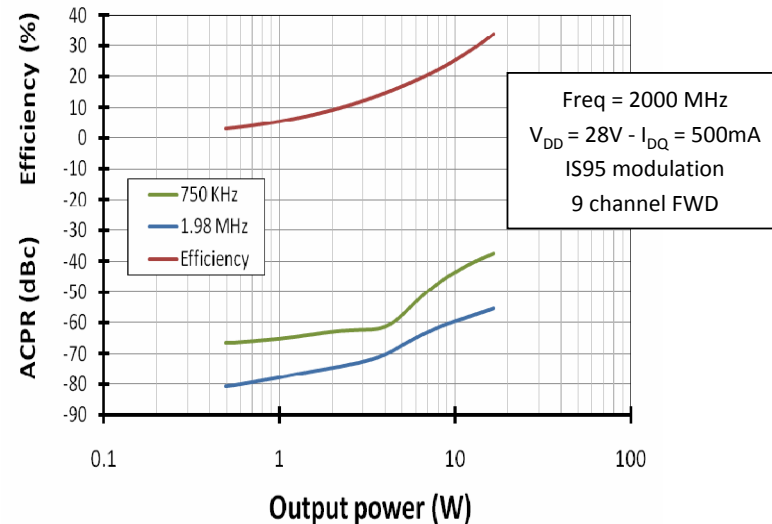
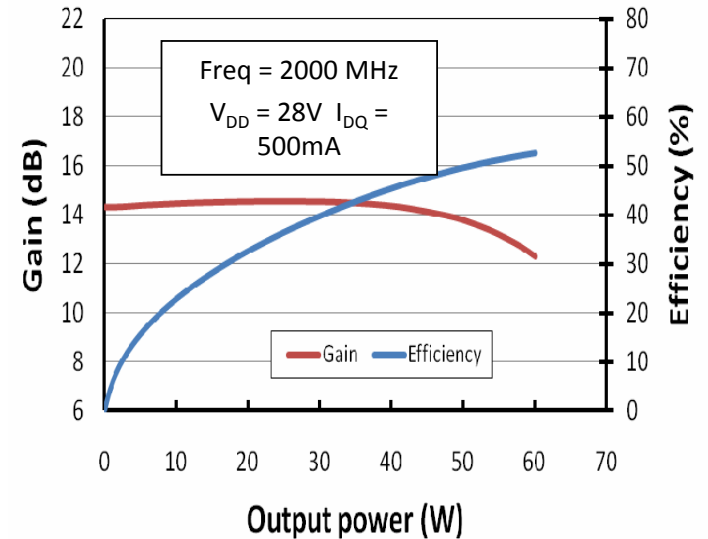


LET20045C

- High breakdown voltage: $B_{VDSS} > 80\text{ V}$
- Frequency: 2 GHz
- Operating voltage: up to 36 V
- $P_{OUT} > 45\text{ W}$ @ $V_{DD} = 28\text{ V}$
- Power gain: $> 12\text{ dB}$
- Efficiency: $> 45\%$
- Load mismatch: 20:1 all phases



Gain & Efficiency vs Output power



- Evaluation board⁽¹⁾
- ADS model
- Mismatch analysis EDA tool

- More information at: www.st.com/rf

Note: 1. Can be developed upon request. Please contact online support.

LET selection



- You can find further information on the LET family at <http://www.st.com/internet/analog/subclass/523.jsp>
- Including fully updated information on ST's RF power products



www.st.com/rf

