



NXP Gen8 LDMOS RF power

Gen8: the next generation of LDMOS RF power for wireless infrastructures

This groundbreaking new version of NXP's proven LDMOS process increases Doherty efficiency by as much as three points and improves gain by as much as 1 dB.

Key features

- ▶ Products covering all main cellular frequency bands between 700 and 2700 MHz
- ▶ High efficiency: 27 to 30% in class AB (at 8 dB back-off), with Doherty efficiencies in the range of 46 to 51%
- ▶ Up to 270 W in SOT502-sized packages and 400 W in SOT539-sized packages
- ▶ Products with extended video bandwidth (VBW) performance: up to 300 MHz VBW to enable full-band operation at all cellular frequency bands (GSM, WCDMA, LTE)
- ▶ Industry-leading product consistency for higher PA manufacturing yields

Key benefits

- ▶ Best cost/performance option available: P1dB of 270 W in SOT502-sized packages
- ▶ No compromise on linearity, ruggedness, or thermal aspects
- ▶ Full range of Doherty solutions: symmetrical, asymmetrical, two-way, three-way
- ▶ Easy thermal design: low Rth packaging, excellent power distribution, low product variance

- ▶ Reduced design-time and greater peace of mind through best-in-class product consistency
- ▶ Package options to meet all assembly needs, including OMP; gull-wing variants for surface-mount assembly

Applications

- ▶ Base station power amplifiers in the range of 700 to 2700 MHz (GSM, W-CDMA, LTE)

Capitalizing on more than 30 years of power device expertise, NXP has unleashed its eighth generation of LDMOS RF transistors for cellular base stations. The upgraded process enables higher efficiency and higher gain, and sets a new standard for the industry.

Optimized packaging, die design, and I/O matching structures make Gen8 a key enabler of wideband, affordable, compact, multi-standard, and highly efficiency Doherty amplifiers.



Selection guide

Typenumber	f _{min} (MHz)	f _{max} (MHz)	P1dB (W)	Package	Planned release	Samples available	Description
BLP8G07S-140P	700	850	140	SOT1223	Q412	now	Gen8 OMP push-pull LDMOS transistor for LTE applications
BLP8G09S-140P	850	960	140	SOT1223	Q412	now	Gen8 OMP push-pull LDMOS transistor for GSM and LTE applications
BLF8G10L(S)-160	850	960	160	SOT502	now	now	Gen8 ceramic LDMOS transistor for GSM, WCDMA & LTE applications
BLF8G10LS-160V	850	960	160	SOT1244B	Q312	now	Gen8 ceramic LDMOS transistor for GSM, WCDMA & LTE applications with wide VBW
BLF8G10LS-200V	700	960	200	SOT1244B	Q412	Q412	Gen8 ceramic LDMOS transistor for GSM, WCDMA & LTE applications with wide VBW
BLP8G10S-230	700	960	230	SOT1223	Q113	Q312	Gen8 OMP LDMOS transistor for GSM and LTE applications
BLF8G10LS-270	700	960	270	SOT502B	Q412	now	Gen8 ceramic LDMOS transistor for GSM, WCDMA & LTE applications
BLF8G10LS-270V	700	960	270	SOT1244B	Q412	now	Gen8 ceramic LDMOS transistor for GSM, WCDMA & LTE applications with wide VBW
BLF8G10L(S)-300P	850	960	300	SOT539	Q412	now	Gen8 ceramic push-pull LDMOS transistor for GSM, WCDMA & LTE applications
BLF8G10LS-400PV	700	960	400	SOT1242B	Q412	Q412	Gen8 ceramic push-pull LDMOS transistor for GSM, WCDMA & LTE applications with wide VBW
BLF8G20LS-200V	1800	2000	200	SOT1120B	Q312	now	Gen8 ceramic LDMOS transistor for GSM & LTE applications with wide VBW
BLF8G20LS-260A	1800	2000	260	SOT539B	Q412	now	Gen8 asymmetric LDMOS transistor for GSM & LTE applications with wide VBW
BLF8G20LS-270	1800	2000	270	SOT502B	Q412	Q312	Gen8 ceramic LDMOS transistor for GSM & LTE applications
BLF8G19LS-170BV	1900	2000	170	SOT1120B	Q113	now	Gen8 ceramic LDMOS transistor for GSM & LTE applications with wide VBW and auto-bias
BLP8G22S-160	2000	2200	160	SOT1223	Q113	Q312	Gen8 OMP LDMOS transistor for WCDMA and LTE applications
BLF8G22LS-160BV	2000	2200	160	SOT1120B	now	now	Gen8 ceramic LDMOS transistor for WCDMA & LTE applications with wide VBW and auto-bias
BLF8G22LS-200	2000	2200	200	SOT1244B	Q312	Q312	Gen8 ceramic LDMOS transistor for WCDMA & LTE applications
BLF8G22LS-270V	2000	2200	270	SOT1244B	Q312	now	Gen8 ceramic LDMOS transistor for WCDMA & LTE applications with wide VBW
BLF8G22LS-310AV	2000	2200	310	SOT1110B	Q113	now	Gen8 asymmetric LDMOS transistor for WCDMA & LTE applications with wide VBW
BLF8G22LS-400PV	2000	2200	400	SOT1242B	Q412	Q412	Gen8 ceramic push-pull LDMOS transistor for WCDMA & LTE applications with wide VBW
BLF8G24LS-100V	2300	2400	100	SOT1244B	Q412	now	Gen8 ceramic LDMOS transistor for LTE applications with wide VBW
BLF8G24LS-160P	2300	2400	160	SOT539B	now	now	Gen8 ceramic push-pull LDMOS transistor for LTE applications
BLF8G24L(S)-200P	2300	2400	200	SOT539	Q312	now	Gen8 ceramic push-pull LDMOS transistor for LTE applications
BLF8G27LS-60A	2500	2700	60	SOT1120B	Q412	Q312	Gen8 asymmetric LDMOS transistor for micro-LTE applications
BLF8G27LS-100V	2500	2700	100	SOT1244B	Q412	Q312	Gen8 ceramic LDMOS transistor for LTE applications with super wide VBW
BLF8G27LS-140	2500	2700	140	SOT502B	Q412	Q312	Gen8 ceramic LDMOS transistor for LTE applications
BLF8G27LS-140V	2500	2700	140	SOT1120B	Q412	now	Gen8 ceramic LDMOS transistor for LTE applications with wide VBW
BLF8G27LS-200V	2500	2700	200	SOT1244B	Q412	Q412	Gen8 ceramic LDMOS transistor for LTE applications with wide VBW

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