polyfet rf devices

GX4001

General Description

Polyfet's GAN (on SiC) HEMT power transistors contain no internal matching; making them suitable for both broadband and narrow band applications.
The use of a thermally enhanced package enables this device to have superior heat dissipation properties. The high drain break down voltage permits this device to operate over a wide voltage range.



RF POWER GAN TRANSISTOR

35.0 Watts Single Ended

Package Style GX

HIGH EFFICIENCY, LINEAR

HIGH GAIN, LOW NOISE

ROHS COMPLIANT

Suitable for use across 1-3000Mhz

ABSOLUTE MAXIMUM RATINGS (T = 25 °C)

Total Device Dissipation	Junction to Case Thermal Resistance	Maximum Junction Temperature	Storage Temperature	Drain to Source Voltage	Gate to Source Voltage
145 Watts	2.40 °C/W	200 °C	-65 °C to 150 °C	125 V	-10 V to + 2 V

RF CHARACTERISTICS (35.0 WATTS OUTPUT)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Gps	Common Source Power Gain	11			dB	Idq = 0.30 A, Vds = 28.0 V, F = 2,000 MHz
η	Drain Efficiency		60		%	Idq = 0.30 A, Vds = 28.0 V, F = 2,000 MHz
VSWR	Load Mismatch Tolerance			10:1	Relative	Idq = 0.30 A, Vds = 28.0 V, F = 2,000 MHz

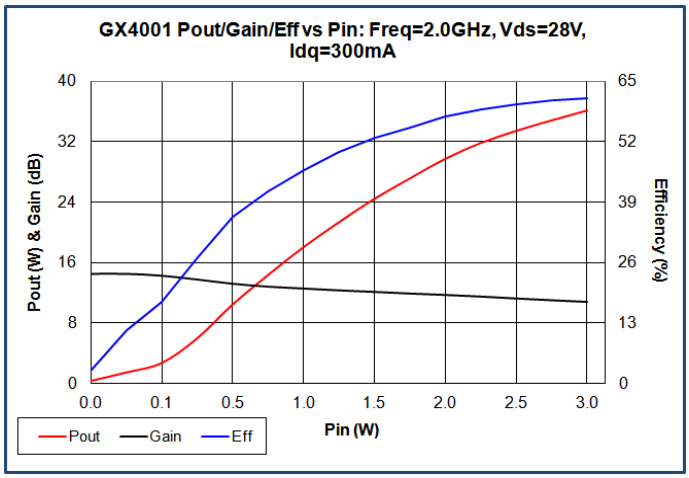
ELECTRICAL CHARACTERISTICS (EACH SIDE)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Bvdss	Drain Breakdown Voltage	125			V	Ids = 15.00 mA, Vgs = -8V
Idsat	Saturation Current		14.50		Amp	Vgs = +2V, Vds = 10V
Idss	Zero Bias Drain Current			4.0	mA	Vds = 28.0 V, Vgs = -8V
Vgs	Gate Bias for Drain Current		-2.5		V	Vds = 28.0 V Ids = 0.30 A
Ciss	Common Source Input Capacitance		13.0		pF	Vds = 28.0 Vgs = -8V, F = 1 MHz
Crss	Common Source Feedback Capacitance		1.10		pF	Vds = 28.0 Vgs = -8V, F = 1 MHz
Coss	Common Source Output Capacitance		7.5		pF	Vds = 28.0 Vgs = -8V, F = 1 MHz

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POUT VS PIN GRAPH



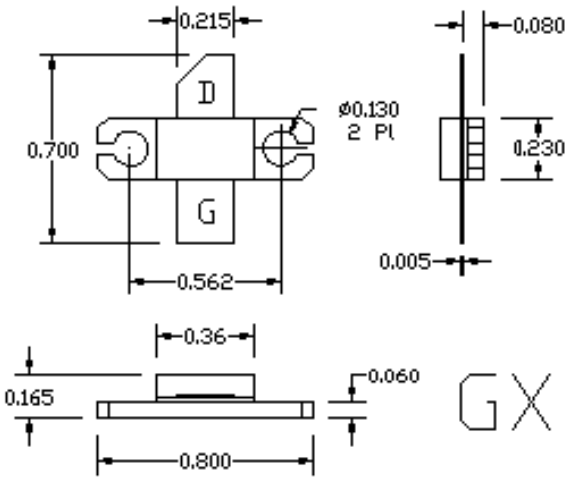
BROADBAND PERFORMANCE

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PACKAGE DIMENSIONS IN INCHES



Tolerance .XX +/-0.01 .XXX +/-.005 inches

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REVISION 09/09/2013

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