

## DESCRIPTION

The high power HVV0912-800 device is a high voltage silicon enhancement mode RF transistor designed for L-band pulsed avionics applications operating over the frequency range of 960 MHz and 1215 MHz.

## FEATURES

- High Power Gain
- Excellent Ruggedness
- 50V Supply Voltage

## ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V <sub>DSS</sub>	Drain-Source Voltage	95	V
V <sub>GS</sub>	Gate-Source Voltage	-10 to +10	V
I <sub>DSX</sub>	Drain Current	80	A
P <sub>D</sub> <sup>2</sup>	Power Dissipation	TBD	W
T <sub>S</sub>	Storage Temperature	-65 to +150	°C
T <sub>J</sub>	Junction Temperature	200	°C

## THERMAL CHARACTERISTICS

Symbol	Parameter	Max	Unit
θ <sub>JC</sub> <sup>1</sup>	Thermal Resistance	TBD	°C/W

## ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Conditions	Typ	Units
V <sub>BR(DSS)</sub>	Drain-Source Breakdown	V <sub>GS</sub> =0V, I <sub>D</sub> =10mA	102	V
I <sub>DSS</sub>	Drain Leakage Current	V <sub>GS</sub> =0V, V <sub>DS</sub> =50V	<500	µA
I <sub>GSS</sub>	Gate Leakage Current	V <sub>GS</sub> =5V, V <sub>DS</sub> =0V	<10	µA
G <sub>p</sub> <sup>1</sup>	Power Gain	P <sub>OUT</sub> =800W, F=960,1215 MHz	15.5	dB
IRL <sup>1</sup>	Input Return Loss	P <sub>OUT</sub> =800W, F=960,1215 MHz	10	dB
η <sub>p</sub> <sup>1</sup>	Drain Efficiency	P <sub>OUT</sub> =800W, F=960,1215 MHz	50	%
PD <sup>1</sup>	Pulse Droop	P <sub>OUT</sub> =800W, F=960,1215 MHz	0.2	dB

<sup>1</sup>Under Pulse Conditions: Pulse Width = 10µs, Pulse Period = 100µs at V<sub>DD</sub> = 50V, I<sub>DQ</sub> = 200mA

<sup>2</sup>Rated at T<sub>CASE</sub> = 25°C

## PACKAGE



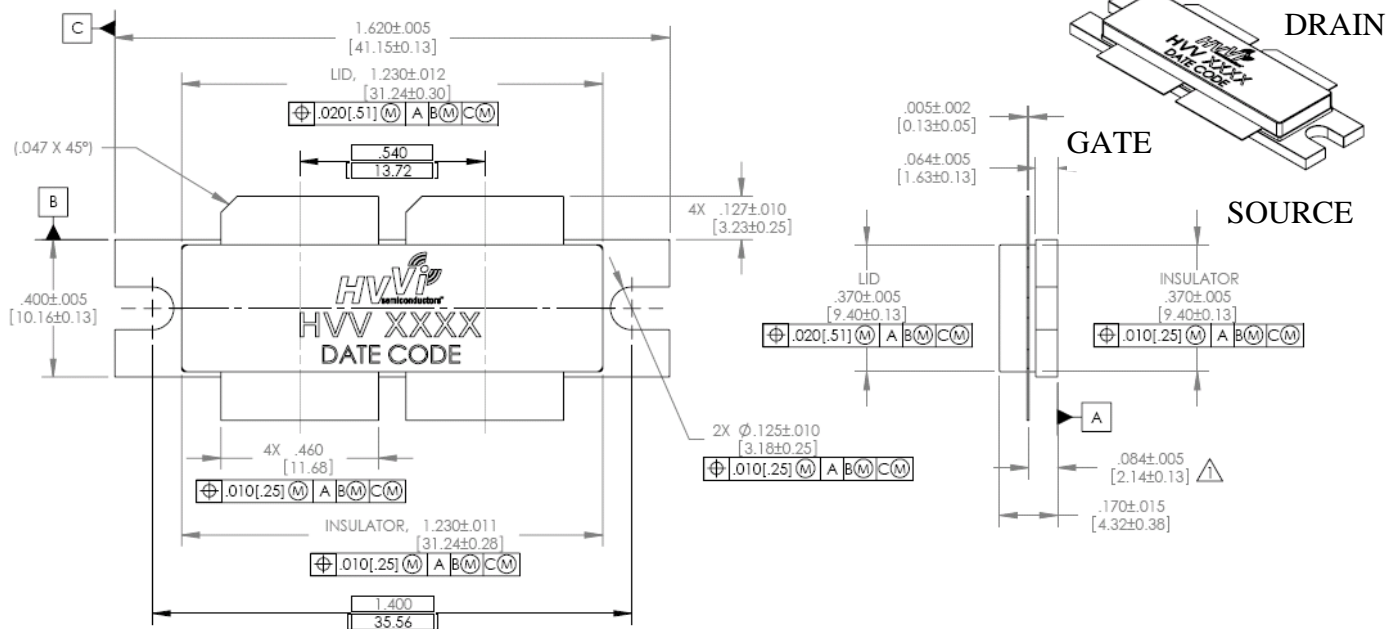
The device utilizes a RoHS compliant flanged package with a ceramic lid. The HV1230 package style is qualified for gross leak test – MIL-STD-883, Method 1014.

## RUGGEDNESS

The HVV0912-800 device is capable of withstanding an output load mismatch corresponding to a 20:1 VSWR at rated output power over all phase angles and operating voltage across the frequency band of operation.

Symbol	Parameter	Test Condition	Max	Units
LMT <sup>1</sup>	Load Mismatch Tolerance	P <sub>OUT</sub> = 800W F = 1215 MHz	20:1	VSWR

**PACKAGE DIMENSIONS**



Note: Drawing is not actual size.

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