

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 _{DSS}	Drain-Source Voltage	95	V
V _{GS}	Gate-Source Voltage	-10 to +10	V
I _{DSX}	Drain Current	80	A
P _D ²	Power Dissipation	TBD	W
T _s	Storage Temperature	-65 to +150	°C
T _j	Junction Temperature	200	°C

THERMAL CHARACTERISTICS

Symbol	Parameter	Max	Unit
θ _{JC} ¹	Thermal Resistance	TBD	°C/W

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Conditions	Typ	Units
V _{BR(DSS)}	Drain-Source Breakdown	V _{GS} =0V, I _D =10mA	102	V
I _{DSS}	Drain Leakage Current	V _{GS} =0V, V _{DS} =50V	<500	µA
I _{GSS}	Gate Leakage Current	V _{GS} =5V, V _{DS} =0V	<10	µA
G _p ¹	Power Gain	P _{OUT} =800W, F=960 MHz	15.5	dB
IRL ¹	Input Return Loss	P _{OUT} =800W, F=960 MHz	10	dB
η _D ¹	Drain Efficiency	P _{OUT} =800W, F=960 MHz	50	%
PD ¹	Pulse Droop	P _{OUT} =800W, F=960 MHz	<0.20	dB

¹Under Pulse Conditions: Pulse Width = 10µs, Pulse Period = 100µs at V_{DD} = 50V, I_{DQ} = 200mA

²Rated at T_{CASE} = 25°C

PACKAGE



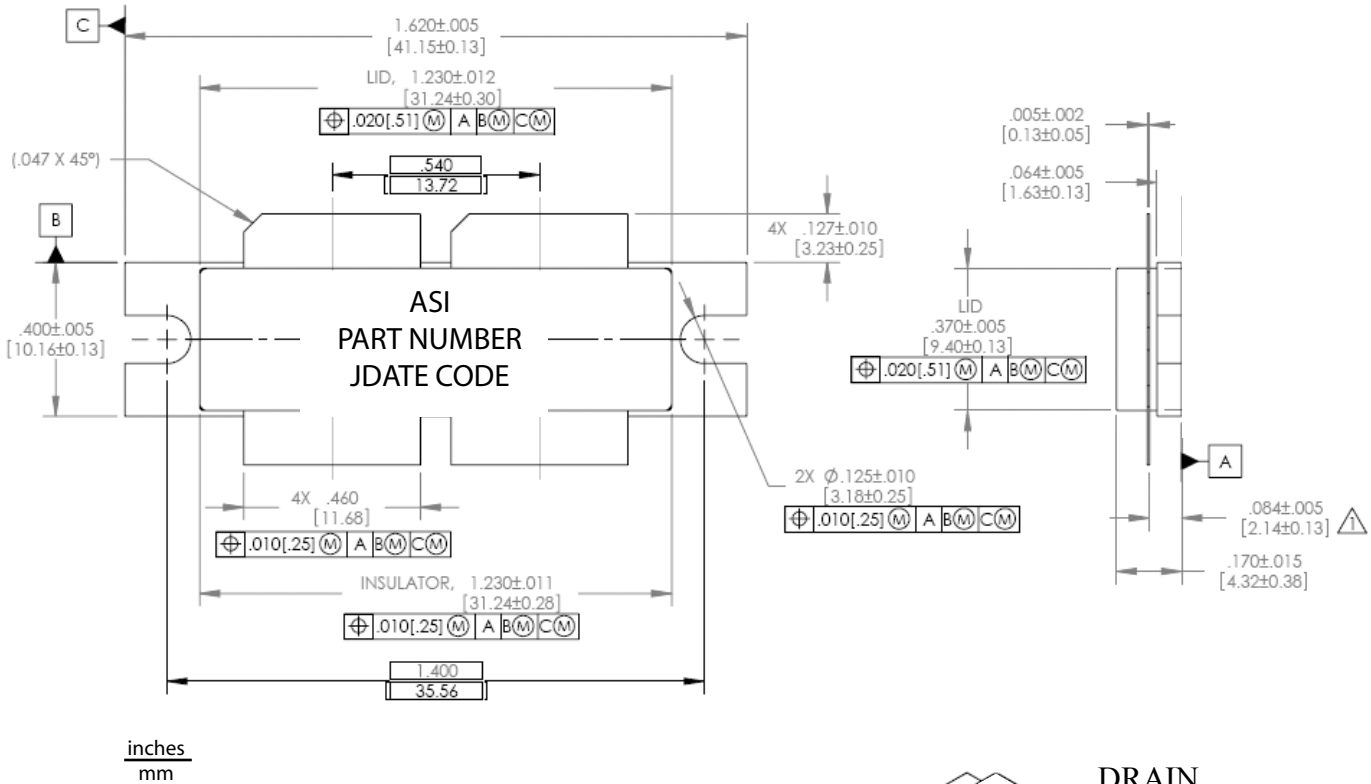
The device utilizes a RoHS compliant flanged package with a ceramic lid. The HV1230 package style is qualified for gross leak test – MIL-STD-883, Method 1014.

RUGGEDNESS

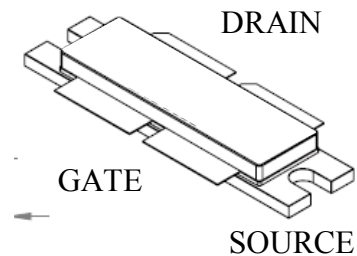
The HVV0912-800 device is capable of withstanding an output load mismatch corresponding to a 20:1 VSWR at rated output power over all phase angles and operating voltage across the frequency band of operation.

Symbol	Parameter	Test Condition	Max	Units
LMT ¹	Load Mismatch Tolerance	P _{OUT} = 800W F = 960 MHz	20:1	VSWR

PACKAGE DIMENSIONS



Note: Drawing is not actual size.



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