

DESCRIPTION

The high power HVV1011-075L device is a high voltage silicon enhancement mode RF transistor designed for L-band pulsed applications operating at 1030 and 1090 MHz using a 2.4ms pulse burst (32µs on/18µs off x 48) repeated every 24ms.

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	8	A
P _D ²	Power Dissipation	625	W
T _S	Storage Temperature	-40 to +150	°C
T _J	Junction Temperature	200	°C

THERMAL CHARACTERISTICS

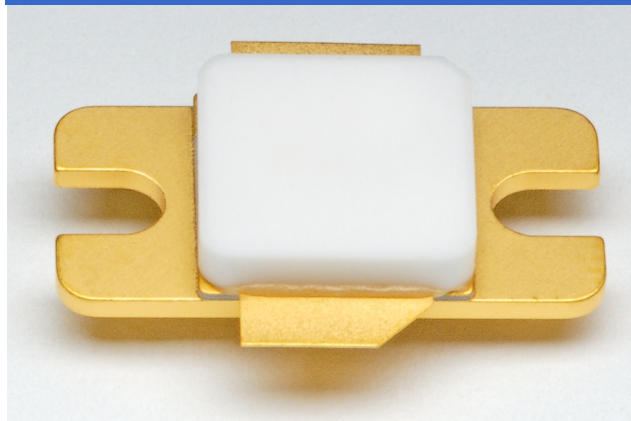
Symbol	Parameter	Max	Unit
θ _{JC} ¹	Thermal Resistance	0.28	°C/W

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Conditions	Typ	Units
V _{BR(DSS)}	Drain-Source Breakdown	V _{GS} =0V, I _D =2mA	102	V
I _{DSS}	Drain Leakage Current	V _{GS} =0V, V _{DS} =50V	<100	µA
I _{GSS}	Gate Leakage Current	V _{GS} =5V, V _{DS} =0V	<1	µA
G _p ¹	Power Gain	P _{in} =0.75W, F=1030/1090 MHz	20.5	dB
IRL ¹	Input Return Loss	P _{in} =0.75W, F=1030/1090 MHz	12	dB
P _{OUT}	Power Out	P _{in} =0.75W, F=1030/1090 MHz	84	W
η _{DP} ¹	Drain Efficiency	P _{in} =0.75W, F=1030/1090 MHz	45%	%
BD ²	Burst Droop	P _{in} =0.75W, F=1030/1090 MHz	0.7	dB

¹ Under Pulse Conditions: 32µs on/18µs off x 48, Period = 24ms at V_{DS} = 50V, I_{DD} = 30mA
² Rated at T_{CASE} = 25°C

PACKAGE



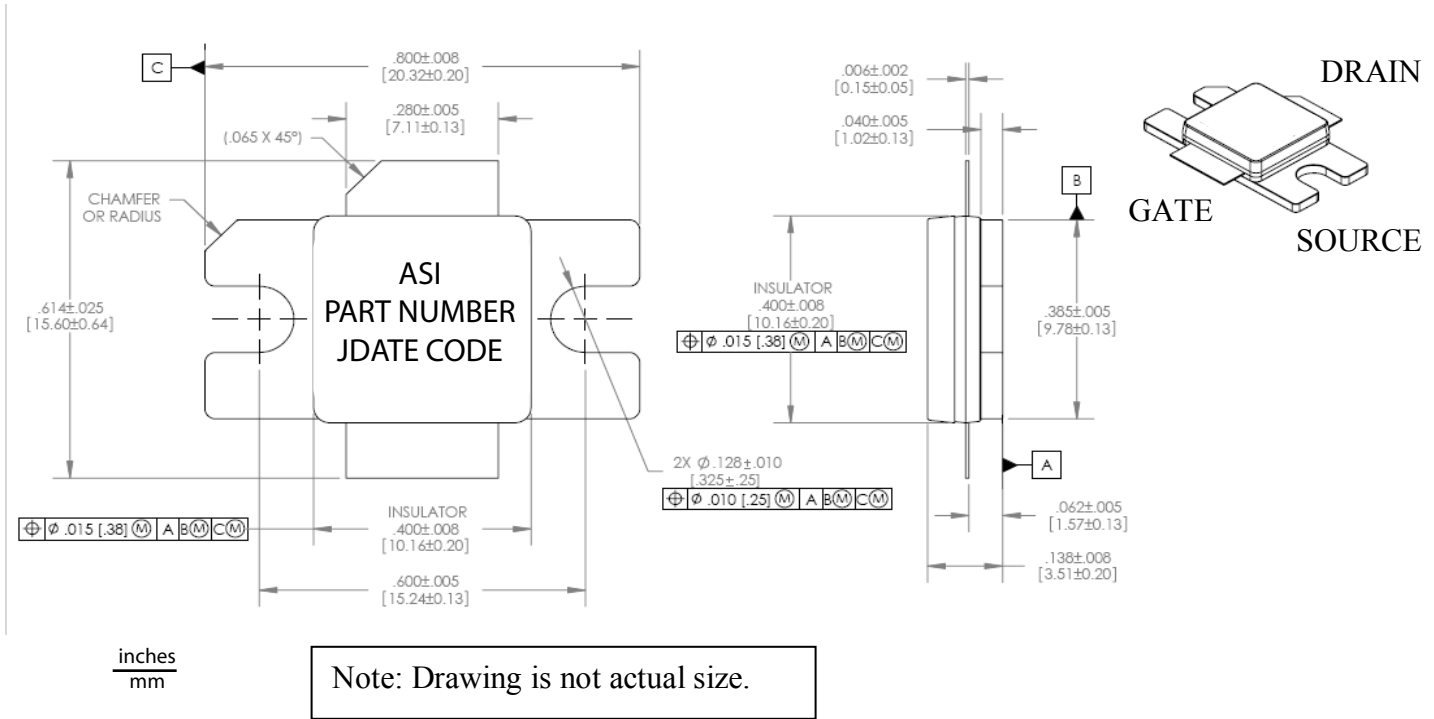
The device utilizes a RoHS compliant metal ceramic flanged package with a ceramic lid. The HV400A package style is qualified for gross leak test – MIL-STD-883, Method 1014.

RUGGEDNESS

The HVV1011-075L 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} = 75W F = 1030 MHz	20:1	VSWR

PACKAGE DIMENSIONS



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