

DESCRIPTION

The high power HVV1011-035 device is a high voltage silicon enhancement mode RF transistor designed for L-band pulsed applications operating at frequencies of 1030 MHz and 1090 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, 10	V
I _{DSX}	Drain Current	2	A
P _D ²	Power Dissipation	116	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	1.5	°C/W

PACKAGE


The device resides in the SM200 surface mount package with a ceramic lid.

RUGGEDNESS

The HVV1011-035 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} = 35W F = 1090 MHz	20:1	VSWR

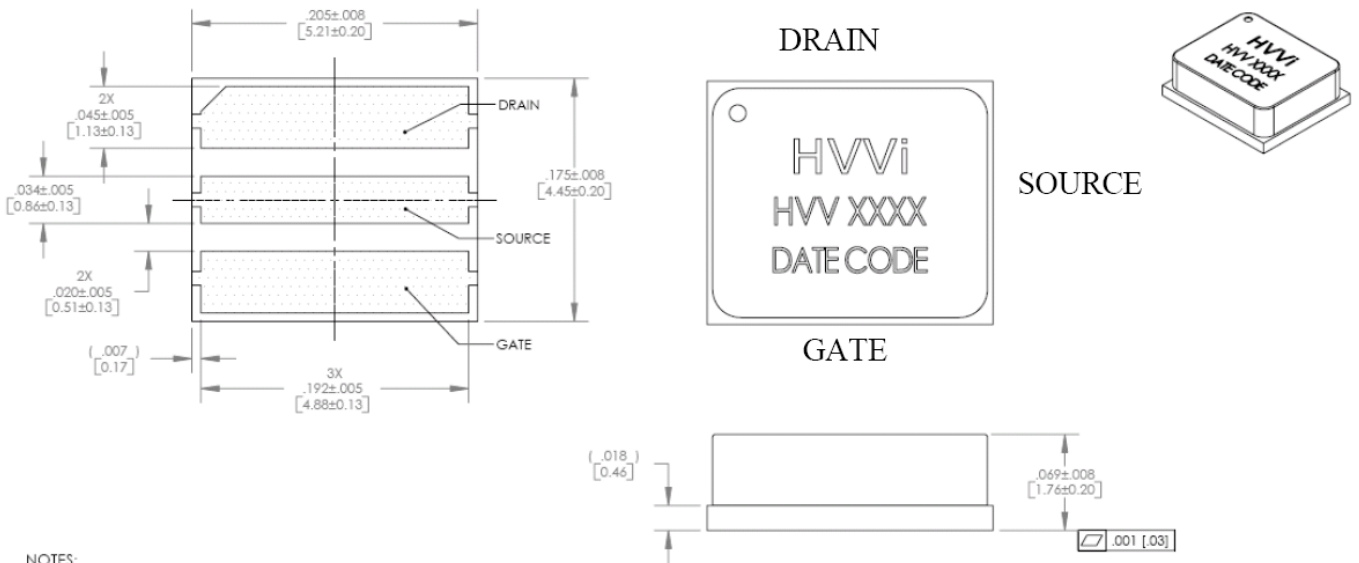
ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V _{BR(DSS)}	Drain-Source Breakdown	VGS=0V, ID=2mA	95	102		V
I _{DSS}	Drain Leakage Current	VGS=0V, VDS=50V		15	50	μA
I _{GSS}	Gate Leakage Current	VGS=5V, VDS=0V		2	10	μA
G _p ¹	Power Gain	P _{OUT} =35W, F=1090 MHz	20	21.5		dB
IRL ¹	Input Return Loss	P _{OUT} =35W, F=1090 MHz		-12	-8	dB
η _D ¹	Drain Efficiency	P _{OUT} =35W, F=1090 MHz	46	48		%
PD ¹	Pulse Droop	P _{OUT} =35W, F=1090 MHz		0.3	0.5	dB
VGS(Q)	Gate Quiescent Voltage	VDD=50V, IDQ=15mA	1.0	1.4	1.7	V
VTH	Threshold Voltage	VDD=5V, ID=300uA	0.7	1.2	1.7	V

¹Under Pulse Conditions: Pulse Width = 50μs, Pulse Duty Cycle = 5% at VDD = 50V, IDQ = 15mA

²Rated at T_{CASE} = 25°C

PACKAGE DIMENSIONS



NOTES:
 1. HATCHED AREA WAS METALIZED AND PLATED.

Note: Drawing is not actual size.

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