

HVV1012-060

60 Watts, 50V, 1025-1500MHz, 10μs, 1% Duty Cycle

DESCRIPTION

The high power HVV1012-060 device is a high voltage silicon enhancement mode RF transistor designed for L-Band pulsed avionics applications operating over the frequency range from 1025MHz to 1150MHz.

FEATURES

High Power Gain Excellent Ruggedness 48V Supply Voltage

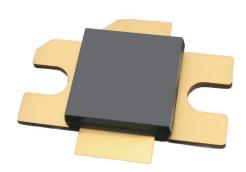
ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter Value		Unit
V_{DSS}	Drain-Source Voltage	95	V
V_{GS}	Gate-Source Voltage	10	V
I_{DSX}	Drain Current	4	Α
P_D^2	Power Dissipation	625	W
T _S	Storage Temperature	-65 to	°C
		+200	
T _J	Junction	200	°C
	Temperature		

THERMAL CHARACTERISTICS

Symbol	Parameter	Max	Unit
θ_{JC}^{1}	Thermal Resistance	0.28	°C/W

PACKAGE



The device resides in a two-lead metal flanged package with liquid crystal polymer lid. The HV400 package style is qualified for gross leak test – MIL-STD-883, Method 1014.

RUGGEDNESS

The HVV1012-060 device is capable of withstanding an output load mismatch corresponding to a 20:1 VSWR at rated output power and operating voltage across thefrequency band of operation.

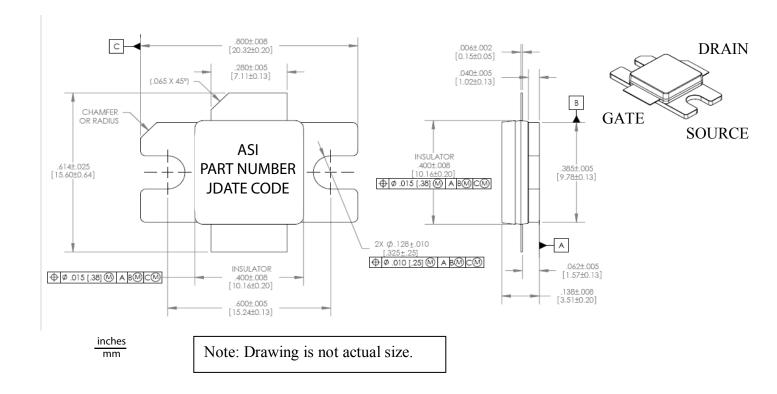
Symb	ol Parameter	Test Condition	Max	Units
LMT ¹	Load	$P_{OUT} = 60W$	20:1	VSWR
	Mismatch Tolerance	F = 1150MHz		

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Conditions	Тур	Units
$V_{BR(DSS)}$	Drain-Source Breakdown	VGS=0V,ID=2mA	102	V
I _{DSS}	Drain Leakage Current	VGS=0V,VDS=48V	<50	μA
I_{GSS}	Gate Leakage Current	VGS=5V,VDS=0V	<1	μA
G_P^1	Power Gain	P _{OUT} =60W,F=1025,1150MHz	23	dB
IRL^1	Input Return Loss	P _{OUT} =60W,F=1025,1150MHz	9	dB
η_{D}^{-1}	Drain Efficiency	P _{OUT} =60W,F=1025,1150MHz	52	%
PD^1	Pulse Droop	P _{OUT} =60W,F=1025,1150MHz	<0.3	dB

 1 Under Pulse Conditions: Pulse Width = 10μ sec, Pulse Duty Cycle = 1% at VDD = 48V, IDQ = 25mA 2 Rated at $T_{CASE} = 25^{\circ}$

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