P1000-1215

960-1215MHz, 1025-1150MHz, 1030-1090MHz

1kWatt, 50V, 50 Ohm RF Pallet

FEATURES

1 kWatt RF Pout (32 Watts Input Power)

48V operation VIMOS^{TM} Technology

High Gain, 15dB at 1 kWatt 1215MHz

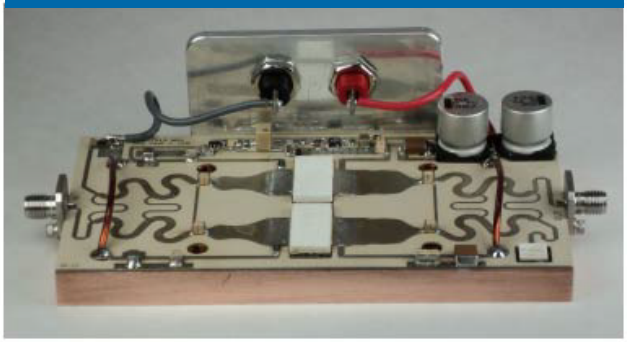
Compact design 2.6 x 4.6 Inches (64 x 117mm)

Efficiency at 1 kWatt 1215MHz > 50%

Excellent Efficiency from 500Watts to 1 kWatt

Input and Output Matched to 50 Ohms

PALLET FORM FACTOR



THERMAL CHARACTERISTICS

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature Range	T_{STG}	+65	+150	°C
Operating Temperature Range	T_J		+230	°C
Thermal Resistance	$R_{TH(JC)}$		.05	°C/W

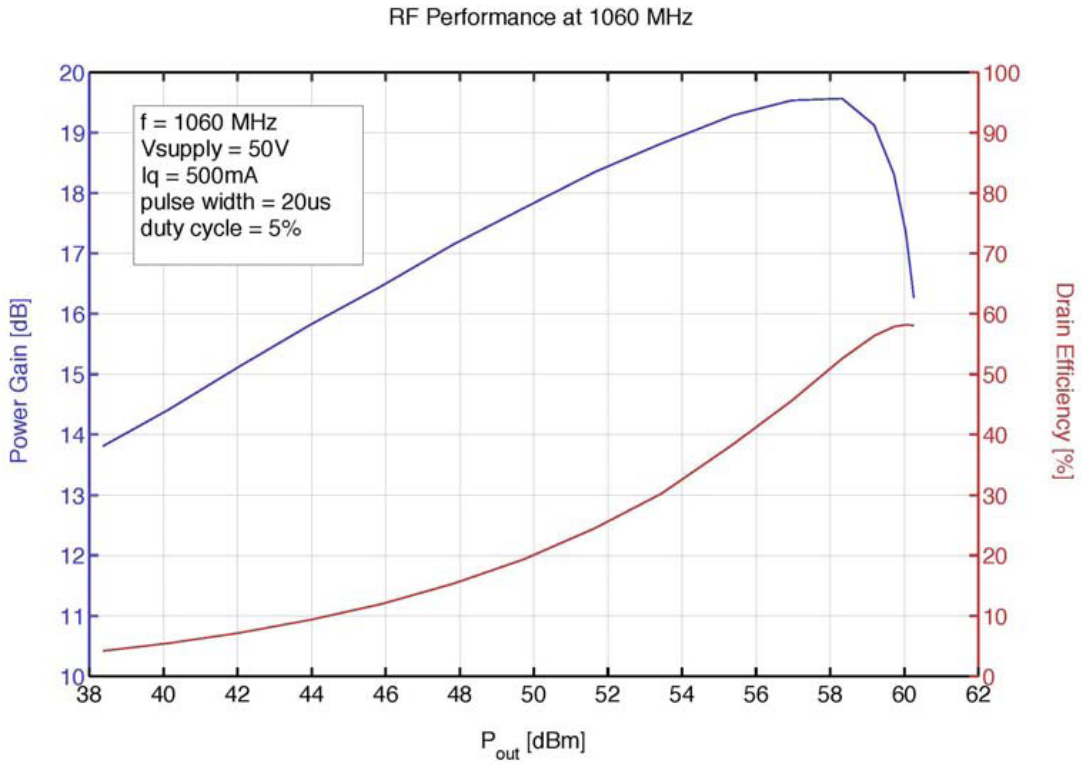
DC CHARACTERISTICS

Parameter	Symbol	Min.	Typ.	Max.
DC Supply Voltage	V_{DD}	28 V	48 V	50 V
Quiescent Current	I_{DQ}	350 mA	400 mA	450 mA
Maximum Current Draw @ 1 kWatt RF output Power	$I_{D(MAX)}$			TBD

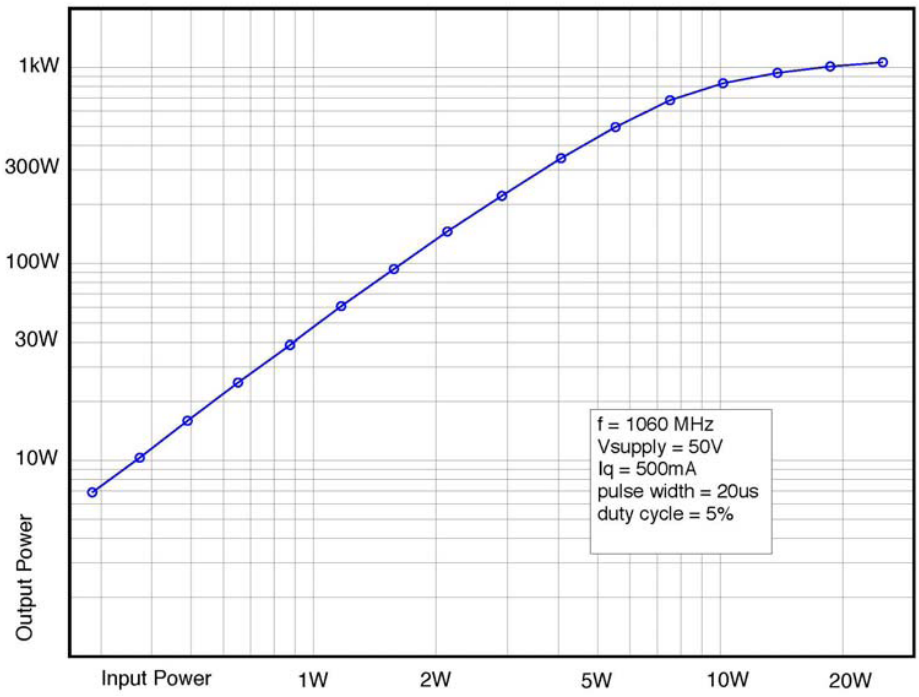
REV. B

RF CHARACTERISTICS

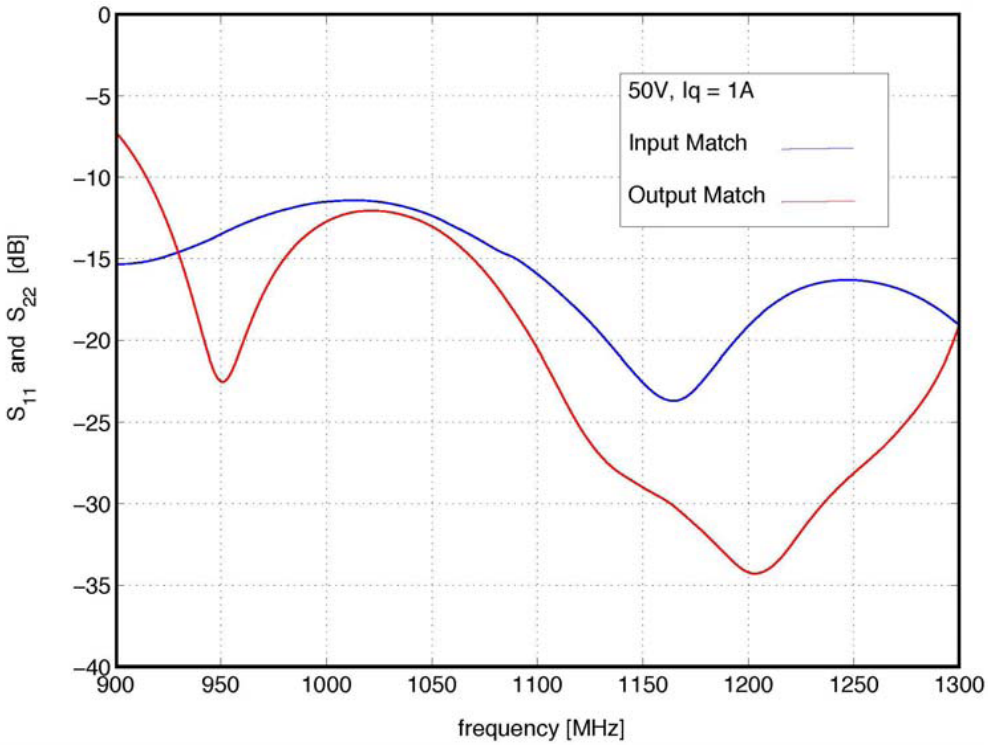
SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
P_{OUT}	V_{DD} = 50 V I_{DQ} = 400 mA f = 960-1215 MHz Pulse Width = 20 µS Duty Cycle = 5 %	950	1000	1100	**W**
G_P Eff	V_{DD} = 50 V I_{DQ} = 400 mA P_{OUT} = 1 kW f = 960-1215 MHz Pulse Width = 20 µS Duty Cycle = 5 %	14 50	15 55		**dB** **%**
G_P Eff	V_{DD} = 50 V I_{DQ} = 400 mA P_{OUT} = 500W f = 960-1215 MHz Pulse Width = 20 µS Duty Cycle = 5 %	15 40	16 43		**dB** **%**
Ruggedness	V_{DD} = 50 V I_{DQ} = 400 mA P_{OUT} = 1kW f = 960-1215 MHz Pulse Width = 20 µS Duty Cycle = 5 %				
R_L	V_{DD} = 50 V I_{DQ} = 1.0 A Input Match Output Match	-5 -5	-15 -20	-20 -35	**dB** **dB**



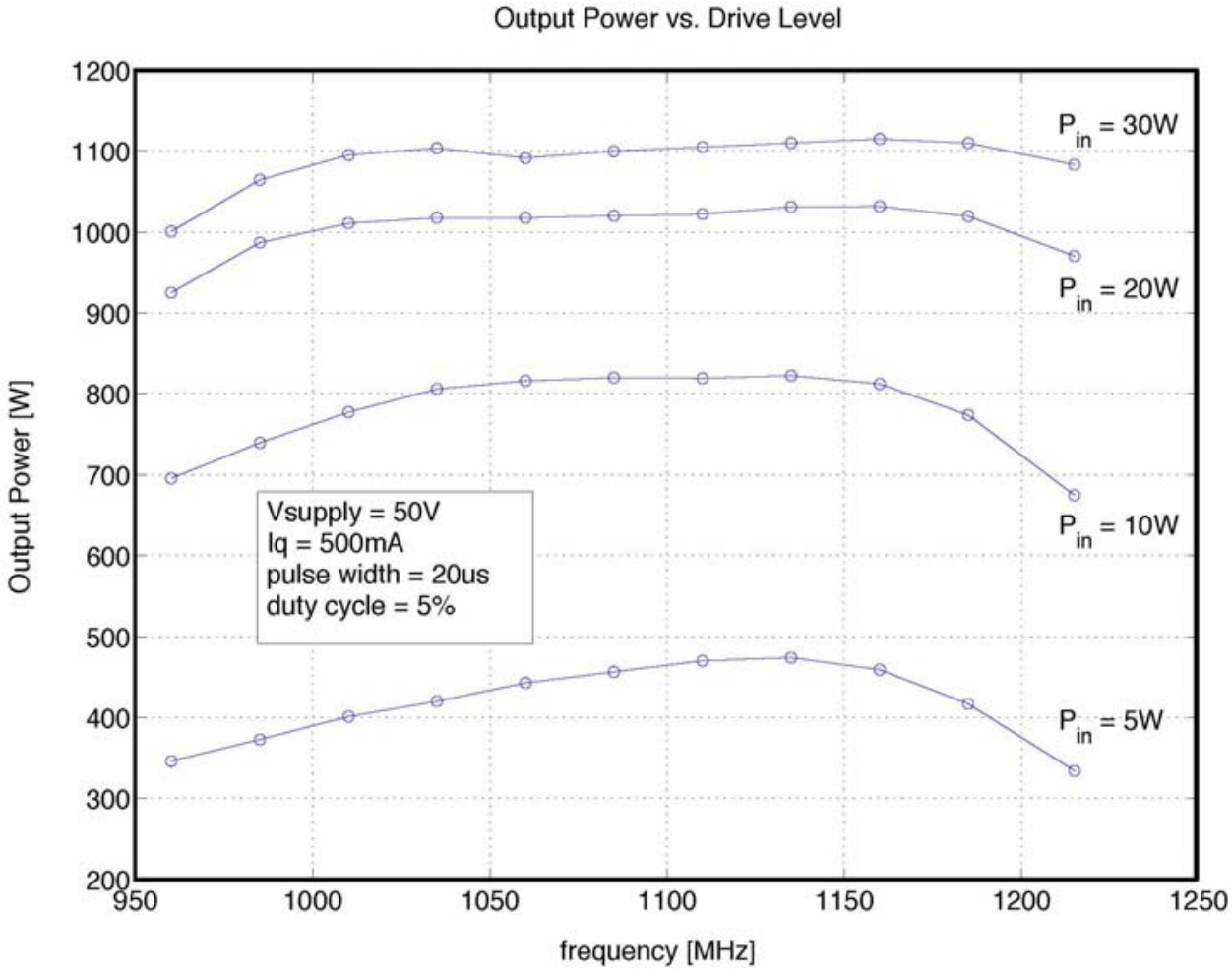
Pin vs Pout at 1060 MHz



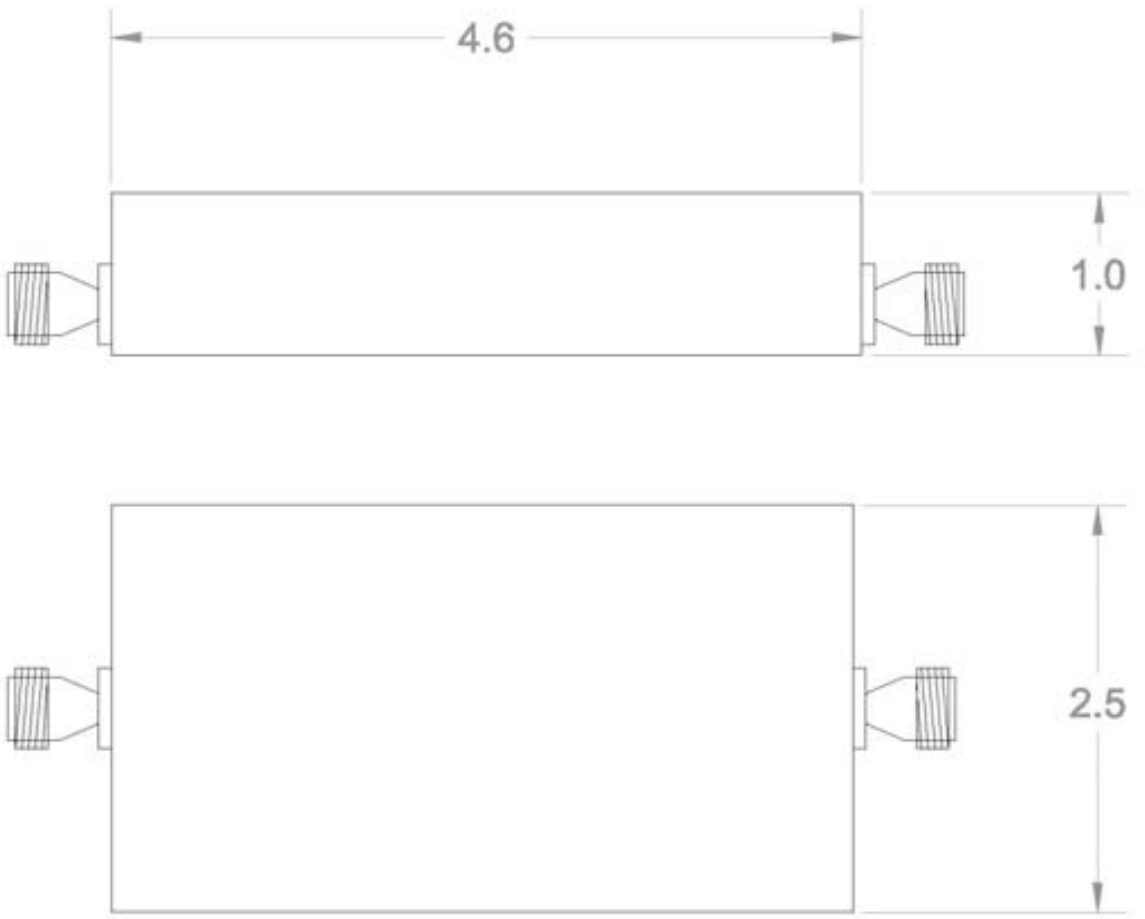
Broadband Pallet Matching



REV. B


Output Power vs. Drive Level
Output Power [W]
frequency [MHz]
1200
1100
1000
900
800
700
600
500
400
300
200
950
1000
1050
1100
1150
1200
1250
P in = 30W
P in = 20W
P in = 10W
P in = 5W
Vsupply = 50V
Iq = 500mA
pulse width = 20us
duty cycle = 5%

DIMENSIONS



DIMENSIONS ARE IN INCHES

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Specifications are subject to change without notice.