100 Watt RF POWER MODULE
960 to 1215 MHZ

DESCRIPTION:

The **ASI P100-1215** is a 100 Watt 960-1215 MHz pallet Amplifier

Features:

- 100 Watt (Pulse Width 20uS, Duty cycle 5%) RF Output Power (10 Watts Input Power)
- LDMOS Technology
- 24-36V operation
- High Gain, 15dB at 100 Watt 1215MHz
- Compact design measuring only 2.6 x 4.6 Inches (64 x 117mm)
- Efficiency at 100 Watt 1215MHz > 50%
- Input and Output Matched to 50 Ohms
- Available in custom configurations: Connectors, Enclosures, and Base Plates

Thermal Characteristics:

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature Range	T_{STG}	+65	+150	°C
Operating Temperature Range	T_J		+230	°C
Thermal Resistance	$R_{TH(JC)}$		0.05	°C/W

DC Characteristics:

Parameter	Symbol	Min.	Typ.	Max.
DC Supply Voltage	V_{DD}	24 V		36 V
Quiescent Current	I_{DQ}		300 mA	600 mA
Maximum Current Draw @ 100 Watt RF output Power	$I_{D(MAX)}$	--- A		

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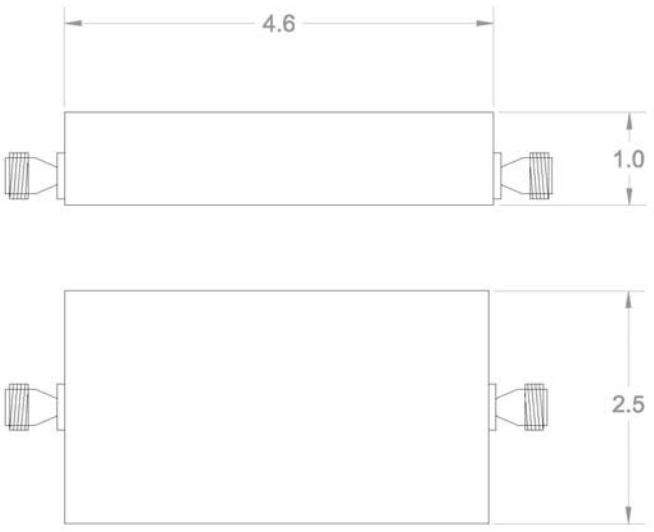
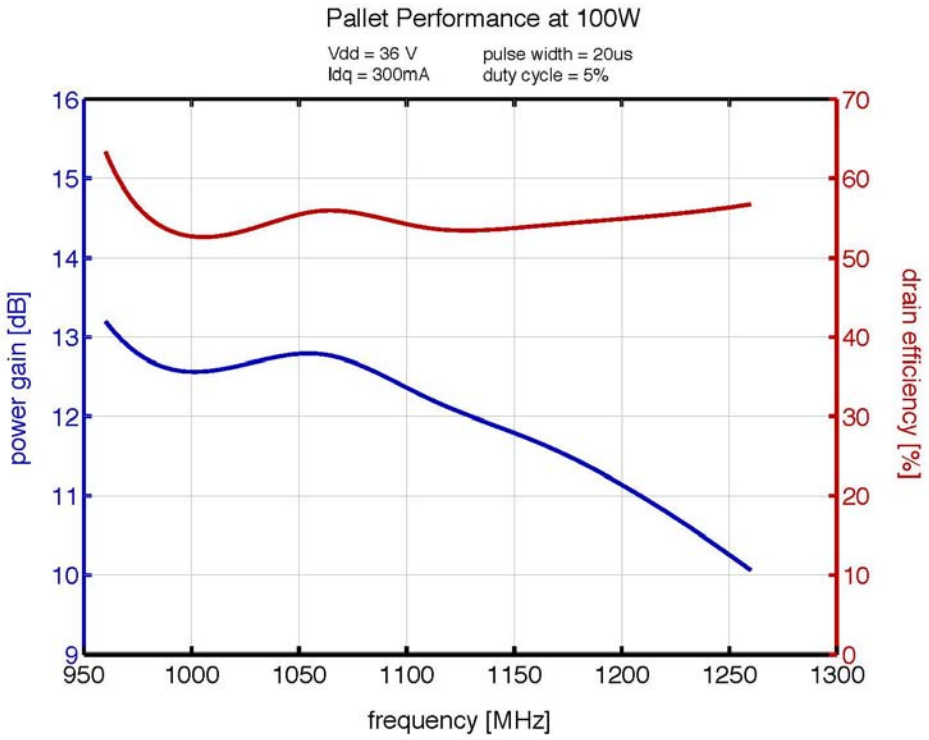
Thermal Characteristics: T_C = 25 °C

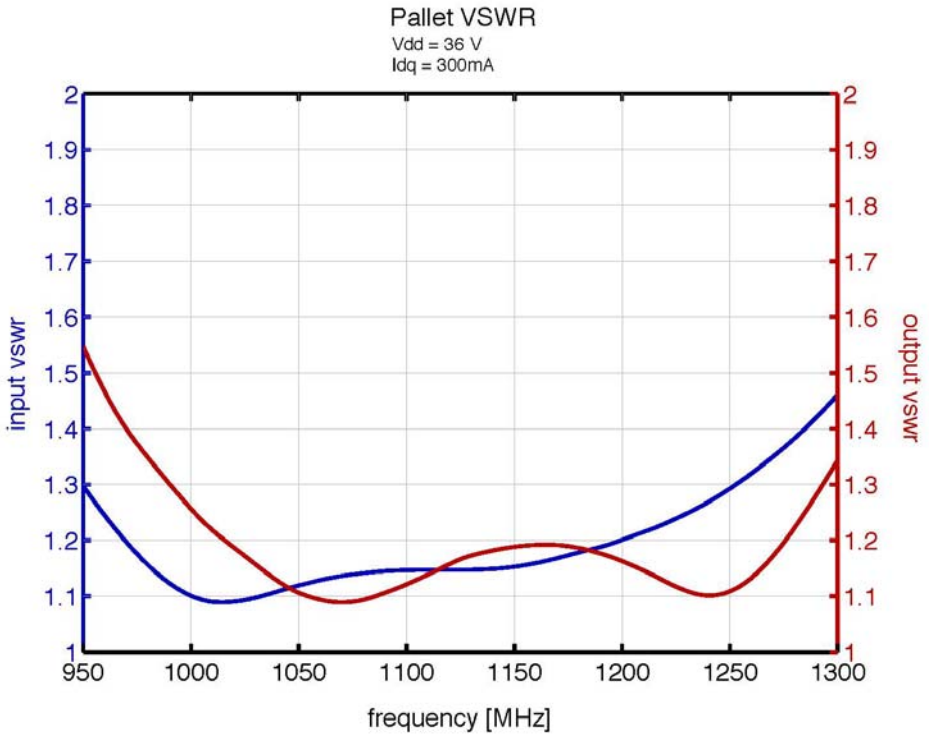
SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
P_{OUT}	V_{DD} = 36 V I_{DQ} = 300 mA f = 960-1215 MHz Pulse Width = 20 µS Duty Cycle = 5 %	100	110	120	**W**
G_P	V_{DD} = 36 V I_{DQ} = 300 mA P_{OUT} = 100 W	11	12	13	**dB**
ηD	f = 960-1215 MHz Pulse Width = 20 µS Duty Cycle = 5 %	50	55		**%**
Ruggedness	V_{DD} = 36 V I_{DQ} = 300 mA P_{OUT} = 100 W f = 960-1215 MHz Pulse Width = 20 µS Duty Cycle = 5 %		TBD		
S_{11}	V_{DD} = TBD I_{DQ} = TBD Input Match		TBD		**dB**
	Output Match				**dB**

PACKAGE STYLE



DIMENSIONS ARE IN INCHES


Pallet Performance at 100W
Vdd = 36 V
Idq = 300mA
pulse width = 20us
duty cycle = 5%
power gain [dB]
drain efficiency [%]
frequency [MHz]
16
15
14
13
12
11
10
9
70
60
50
40
30
20
10
0
950
1000
1050
1100
1150
1200
1250
1300


Pallet VSWR
Vdd = 36 V
Idq = 300mA
input vswr
output vswr
frequency [MHz]
2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
950
1000
1050
1100
1150
1200
1250
1300