Microsemi
POWER PRODUCTS GROUP

1214-550P

550W PSM - PLUG AND PLAY

- For L-Band Pulsed Radar Application

550 Watts - 300µs, 10%, +42V
L-Band Pulsed Radar 1200 - 1400 MHz

- Easy To Use – 50 Ω Plug-and-Play
- Reduce Design Cycle Time
- Improve System Performance
- Reduce System Size and Components

GENERAL DESCRIPTION

The 1214-550P is a 50 ohm matched Power Solution Module (PSM) for L-Band pulsed Radar systems capable of providing 550 Watts of pulsed RF output power at three hundreds microsecond pulse width ten percent duty factor across the band 1200-1400 MHz. This PSM designed with plug-and-play concept which is extremely user friendly and requires no additional tuning and impedance matching from the customer. Mechanical Size is 3.2" x 2" x 0.25"

ELECTRICAL CHARACTERISTICS @ 25 ^{O}C

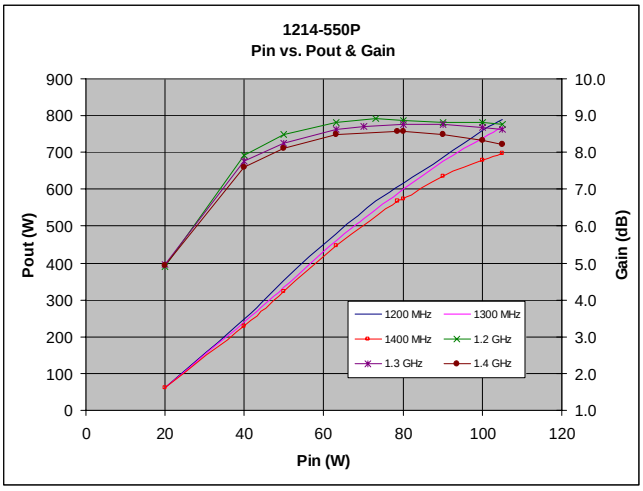
Symbol	Characteristics	Test Conditions	Min	Typ	Max	Units
Pin	Input Power	Vcc=42V, Pout=550W, Freq=1.2 to 1.4 GHz	55	80	87	W
Gp	Power Gain	Vcc=42V, Pout=550W, Freq=1.2 to 1.4 GHz	8.0	8.5	10.0	dB
ηc	Collector Efficiency	Vcc=42V, Pout=550W, Freq=1.2 to 1.4 GHz	50	55		%
Droop	Pulse Droop	Vcc=42V, Pout=550W, Freq=1.2 to 1.4 GHz		0.1	0.5	dB
R/L	Input Return Loss	Vcc=42V, Pout=550W, Freq=1.2 to 1.4 GHz	9			dB
VSWR-T	Load Mismatch Tolerance	Vcc=42V, Pout=550W, Freq=1.2 to 1.4 GHz			2.:1	
Θjc	Thermal Resistance	Pulse Width=300uS, Duty=10%			0.15	°C/W

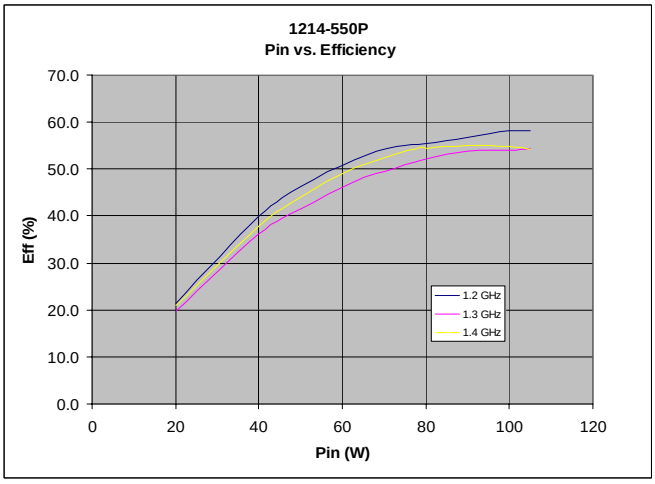
Typical Test Data:

Frequency	Pin (W)	Pout (W)	Ic (A)	RL (dB)	Nc (%)	G (dB)
1200 MHz	**80**	**699**	**2.8**	**-11**	**59**	**9.4**
1300 MHz	**80**	**620**	**2.7**	**-15**	**55**	**8.9**
1400 MHz	**80**	**580**	**2.5**	**-19**	**55**	**8.6**

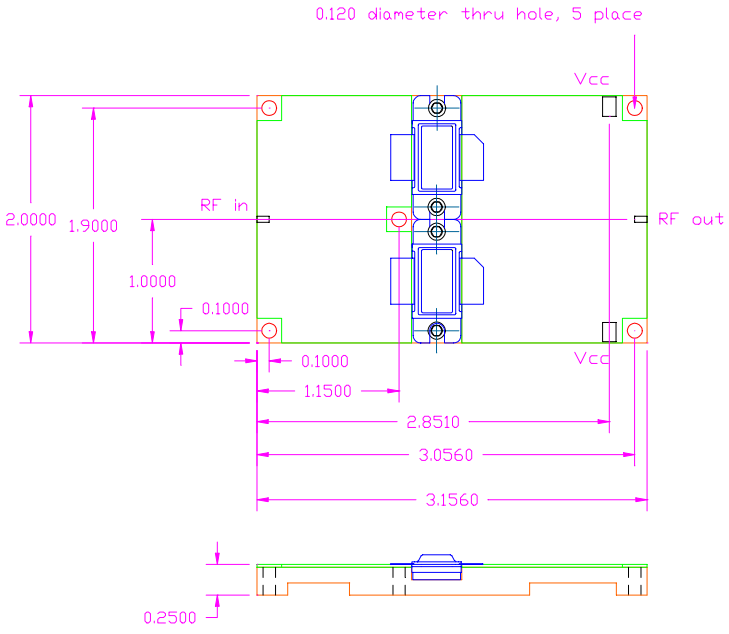
1214-550P

Typical Performance Curves





Pallet Outline Drawing



ALL UNITS ARE IN INCHES