

**Key Features**

- 820 ~ 890 MHz, 50 Ohm Impedance
- 43.5 dBm P<sub>1dB</sub>
- 49.0 dB Gain
- 1.3:1 VSWR
- 2.4 dB Noise Figure
- 54.0 dBm Output IP<sub>3</sub>
- 49% Power Added Efficiency
- Unconditional Stable
- Infinite Load VSWR Protection
- Single DC Power Supply
- Precision Machined Housing
- RoHS Compliant

**Applications**

- Cellular, GSM
- Mobile Infrastructures
- Fixed Wireless Communication

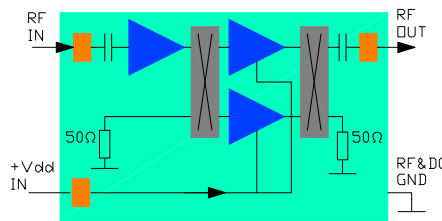
Additional heat sink is required for continuous operation!



**Absolute Maximum Ratings**

DC Power Supply Voltage	30 V
Drain Current, CW	3.0 A
Total Power Dissipation	84 W
RF Input Power, CW	12 dBm
Operating Temperature	-20 ~ +85 °C
Storage Temperature	-40 ~ +85 °C

**Functional Block Diagram**



**Ordering Information**

Model	Connectors
WPA08-49A	SMA Female

**Marking:** WPA08-49A

**Specifications** (Tested at +25°C)

Item	Symbol	Test Constraints	Min	Nom	Max	Unit
Frequency Range	BW	50 Ohm Impedance	820		890	MHz
Small Signal Gain	S <sub>21</sub>	820 – 890 MHz	47	49	52	dB
Input VSWR	SWR <sub>1</sub>	820 – 890 MHz		1.2:1	1.5:1	Ratio
Output VSWR	SWR <sub>2</sub>	820 – 890 MHz		1.3:1	1.5:1	Ratio
Gain Flatness	ΔG	820 – 890 MHz		+/- 0.3	+/- 0.5	dB
Reverse Isolation	S <sub>12</sub>	820 – 890 MHz		70		dB
Noise Figure	NF	820 – 890 MHz		2.4		dB
Output Power 1dB Compression Point	P <sub>1dB</sub>	820 – 890 MHz	42.5	43.5		dBm
Output-Third-Order Interception point	IP <sub>3</sub>	Two-Tone, P <sub>out</sub> = 33 dBm each, 1 MHz separation	52	54		dBm
DC Power Added Efficiency	η	P <sub>o</sub> = 20W	45	49		%
Current Consumption	I <sub>dd</sub>	V <sub>dd</sub> = +28 V, 0.422 A quiescent DC bias			3.0	A
Power Supply Operating Voltage	V <sub>dd</sub>		+26		+30	V
Operating Temperature	T <sub>o</sub>	Base plate	-20		+70	°C
Thermal Resistance	R <sub>th,c</sub>	Junction to case			1.3	°C/W
Maximum CW RF Input Power	P <sub>IN, MAX</sub>	DC – 6 GHz			12	dBm

**Typical Performance**

