

## Features:

- Design for WLAN, WiMAX and MMDS
- 13 dB Typical Gain
- 28.5 dBm Typical P1dB
- EVM < 2.5% at 22 dBm Pout
- Fully Matched to 50 Ohms
- Single Positive Bias
- Surface Mount 82 Package



## Description:

The WPS-242717-82 is a low cost high linearity modular amplifier designed to meet the ultra-linear transmitter driver requirements for 802.16 WiMax linear driver applications and commercial 2G, 2.5G, 3G, GSM, TDMA, EDGE, UMTS, WCDMA, CDMA2000, and TD-SCDMA applications. Key advantages are low EVM performance for 802.16 WiMax applications and low intermodulation performance for multi-carrier and CDMA systems together with exceptionally low input/output return loss for ease of integration.

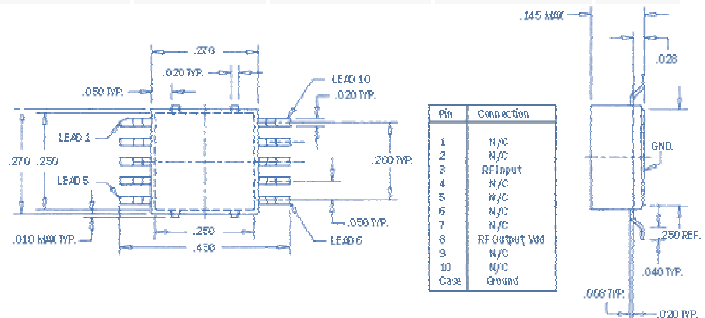
## Electrical Specifications:

- at 25°C, Vdd = 7.5 V, Zo = 50 ohms

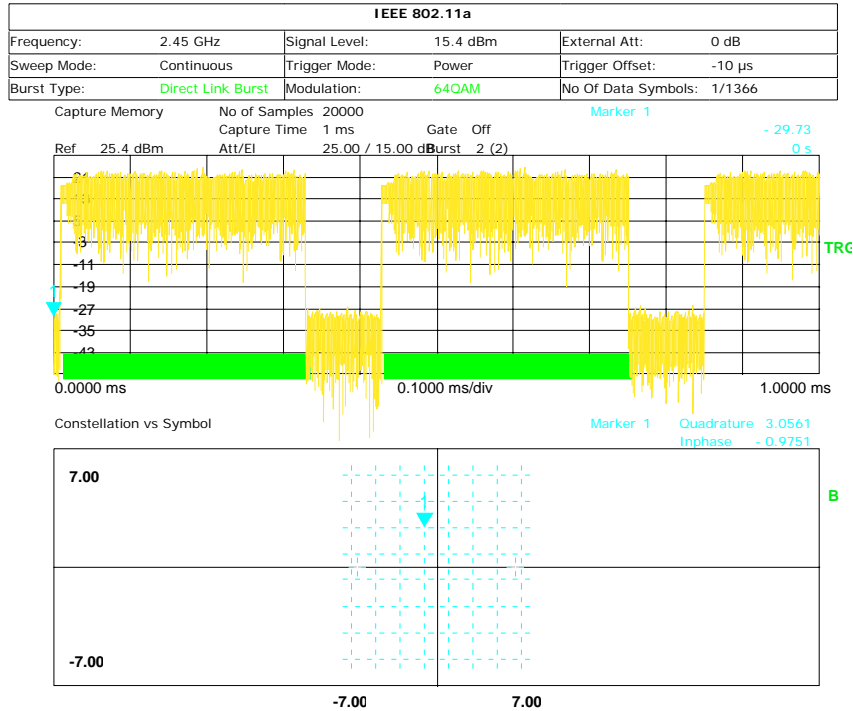
SYMBOL	PARAMETERS	Min	Typical	Max	Unit
Freq.	Frequency Range	2.45		2.7	GHz
SSG	Small Signal Gain		13.0		dB
VSWR	Input and Output		2.0:1		-
P1 dB	Pout at 1 dB Comp Point		+28.5		dBm
EVM	Error Vector Magnitude @ 22 dBm, 256 carrier, 64 QAM		2.5		%
IP3	Third-order Intercept		45		dBm
Ids	DC Current		330		mA
Rth	Thermal Resistance junction to case		28		°C/W

## Absolute Maximum Ratings:

Maximum Bias Voltage	8.0 V
Maximum Continuous RF Input Power	+27 dBm
Maximum Peak Input Power	+30 dBm
Maximum Case Operating Temperature	+70 °C
Maximum Storage Temperature	- 65 to + 150 °C



## Cascaded EVM for 802.11 at 22 dBm



IEEE 802.11a			
Frequency:	2.45 GHz	Signal Level:	15.4 dBm
Sweep Mode:	Continuous	Trigger Mode:	Power
Burst Type:	Direct Link Burst	Modulation:	64QAM
		External Att:	0 dB
		Trigger Offset:	-10 $\mu$ s
		No Of Data Symbols:	1/1366

Result Summary						
No. of Bursts	*					
	Min	Mean	Limit	Max	Limit	Unit
EVM All Carriers	1.91	1.92	5.62	1.92	5.62	%
	-34.37	-34.34	-25.00	-34.32	-25.00	dB
EVM Data Carriers	1.92	1.93	5.62	1.93	5.62	%
	-34.33	-34.30	-25.00	-34.27	-25.00	dB
EVM Pilot Carriers	1.78	1.79	39.81	1.81	39.81	%
	-35.01	-34.92	-8.00	-34.83	-8.00	dB
IQ Offset	-56.89	-56.54	-15.00	-56.21	-15.00	dB
	-0.04	-0.04		-0.04		%
Gain Imbalance	-0.00	-0.00		-0.00		dB
	0.12	0.13		0.13		°
Quadrature Error						
Center Frequency Error	-192.72	-192.85	$\pm$ 42800	-192.99	$\pm$ 42800	Hz
Symbol Clock Error	0.19	0.23	$\pm$ 20	0.26	$\pm$ 20	ppm
Burst Power	15.57	15.57		15.57		dBm
Crest Factor	8.49	8.50		8.50		dB