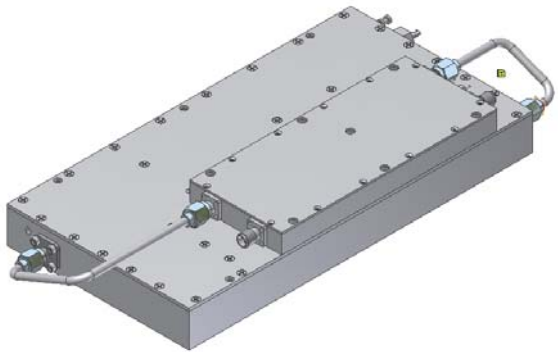
Stealth Microwave
INCORPORATED

Model SMTR2327-44

2.3-2.7 GHz
Bi-Directional WiMAX Power Amplifier

Stealth Microwave's **SMTR2327-44** is a solid state bi-directional amplifier for use in 802.16e TDD products and systems. This compact, high linearity PA can easily be integrated into both BTS or CPE devices, and exhibits excellent uplink and downlink performance. Typical output power for 802.16e is 35-36 dBm meeting EVM and spectral mask requirements.



Features

- Auto (RF Tx Detect) or Manual (TTL) Tx/Rx Switching
- Integral receive filter
- Various RF connector and housing options available

Transmit Path				
Parameter	**Specification**			
	Min	**Typ**	**Max**	**Unit**
Frequency Range	2300	-	2700	MHz
802.16e Power Out	35	36.5		dBm
EVM at 35dBm		-33		dB
Gain		50 ± 1		dB
Gain Flatness		± 0.5		dB
Input Return Loss	-14	-18		dB
DC Input Voltage	10	12	13	V
Current Draw (RMS)		4.5		A
Receive Path				
Gain		20 ± 1		dB
P1dB	5			dBm
Noise Figure		3		dB
Input Return Loss		-14		dB
Current Draw		110		mA

Mechanical Dimensions	9.5 x 4.0 x 1.22 inches
RF Connectors	SMA Female
Weight	1 lb. 4 oz.
Operating Temperature (Baseplate)	-10ºC to +70ºC

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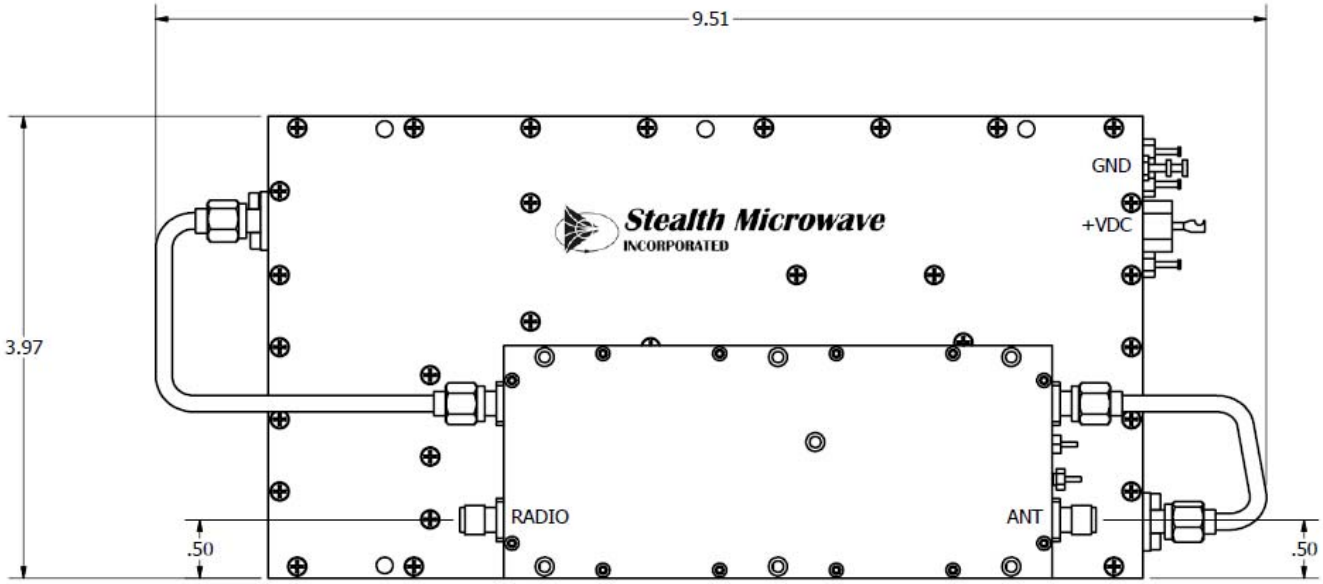
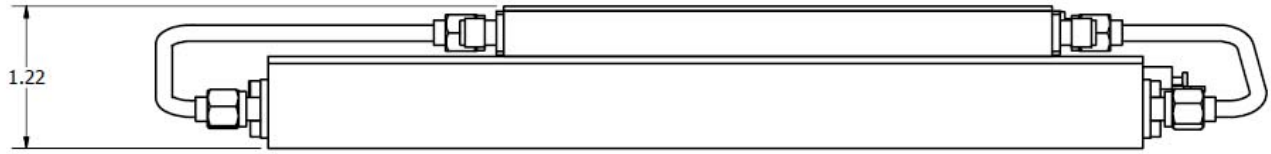
DIMENSIONS IN INCHES





Pin	Description	Values
RADIO	Input Connector (SMA-F)	+ 10 dBm (typical, adjustable per customer requirement)
ANT	Antenna Connector (SMA-F)	+35-37 dBm burst power (802.16e)
+VDC	Supply Voltage	+12V
GND	Ground	--

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WiMAX EVM MEASUREMENT - 35 dBm @ 2.3 GHz

IEEE 802.16-2004 OFDM

Frequency:	2.3 GHz	Signal Level Setting:	0.7 dBm	Ref. Level / Att:	10.7 dBm / 34 dB
Sweep Mode:	Continuous	Trigger Mode:	Free Run	Trigger Offset:	-10 µs
Burst Type:	OFDM DL Burst	Modulation:	64QAM3/4	No Of Data Symbols:	1/2425

Result Summary

No. of Bursts	6					
	Min	Mean	Limit	Max	Limit	Unit
EVM All Carriers	- 31.56	- 31.11	- 31.00	* - 30.63	- 31.00	dB
EVM Data Carriers	- 31.59	- 31.13		- 30.65		dB
EVM Pilot Carriers	- 31.07	- 30.62		- 30.24		dB
IQ Offset	- 38.34	- 38.29	- 15.00	- 38.21	- 15.00	dB
Gain Imbalance	0.00	0.00		0.00		dB
Quadrature Error	0.000	0.000		0.000		°
Center Frequency Error	- 41.63	- 75.93	± 18400	- 98.49	± 18400	Hz
Clock Error	0.00	0.00	± 8	0.00	± 8	ppm
Burst Power	36.49	36.49		36.49		dBm
Crest Factor	8.17	8.18		8.18		dB
RSSI	54.21	54.21		54.29		dBm
RSSI Standard Deviation		- 2.52				dB
CINR	14.41	14.59		14.62		dB
CINR Standard Deviation		13.34				dB

Running ...

SPECTRUM | WIMAX | AUTO LVL | RUN SGL | RUN CONT | REFRESH | SCREEN B

GENERAL SETTINGS | DEMOD SETTINGS | DISPLAY GRAPH | PVT | EVM | SPECTRUM | CONSTELL | STATISTICS | FILE MANAGER

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WiMAX EVM MEASUREMENT - 35 dBm @ 2.7 GHz

IEEE 802.16-2004 OFDM

Frequency: 2.7 GHz	Signal Level Setting: -0.6 dBm	Ref. Level / Att: 9.4 dBm / 34 dB
Sweep Mode: Continuous	Trigger Mode: Free Run	Trigger Offset: -10 µs
Burst Type: OFDM DL Burst	Modulation: 64QAM3/4	No Of Data Symbols: 1/2425

Result Summary

No. of Bursts	6					
	Min	Mean	Limit	Max	Limit	Unit
EVM All Carriers	- 39.34	- 38.58	- 31.00	- 36.69	- 31.00	dB
EVM Data Carriers	- 39.49	- 38.68		- 36.72		dB
EVM Pilot Carriers	- 37.25	- 36.59		- 36.02		dB
IQ Offset	- 36.84	- 36.77	- 15.00	- 36.72	- 15.00	dB
Gain Imbalance	0.00	0.00		0.00		dB
Quadrature Error	- 0.000	0.000		0.000		°
Center Frequency Error	- 121.48	- 147.07	± 21600	- 177.93	± 21600	Hz
Clock Error	0.00	0.00	± 8	0.00	± 8	ppm
Burst Power	35.21	35.21		35.21		dBm
Crest Factor	8.18	8.19		8.20		dB
RSSI	53.05	53.12		53.21		dBm
RSSI Standard Deviation		- 3.57				dB
CINR	15.39	15.57		15.62		dB
CINR Standard Deviation		21.53				dB

Running ...

GENERAL SETTINGS | DEMOD SETTINGS | DISPLAY GRAPH | FULL BURST | START END | BURST SELECTION

SPECTRUM | WIMAX | AUTO LVL | RUN SGL | RUN CONT | REFRESH | SCREEN B

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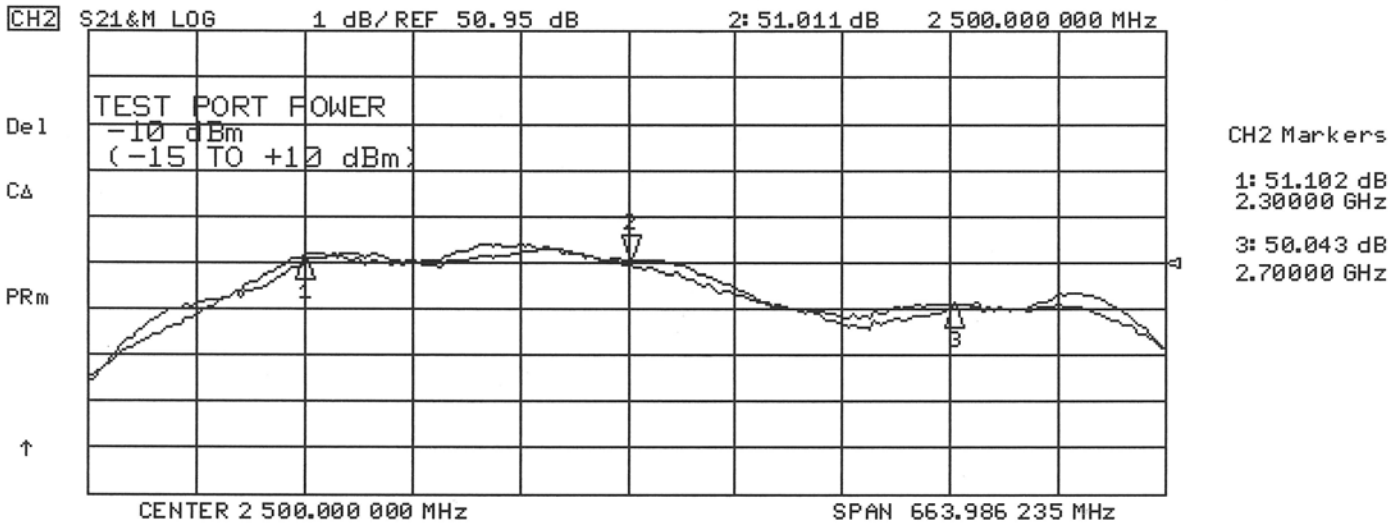
S_{21} PLOT



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