

**Bidirectional Amplifier**  
**UMTS Band, 25 Watts**  
**PART NUMBER: BWBDA-xxxx-36-25**

<b>Parameter</b>	<b>Specifications</b>
DC Input Power	+26.5 V $\pm$ 1V
DC Current @ 28V	5.5 A max at 25W avg RF power
Operating Temperature	-30°C to + 80°C Base Plate Temperature
Cooling	Thru Base Plate
Package	P-8544
Connectors	sma female for RF Hybrid 17W2 for Power and controls
Controls	Enable, temperature, current, fwd pwr, ??
<b>Transmitter</b>	
Pout, average	44 dBm (25 Watts)
RF Gain	36 $\pm$ 0.5 dBm adjustable down to 35 dB
TX turns on	-20 dBm
Frequency, MHz	0881: 869-894 MHz 0942: 925-960 MHz 1842: 1805-1880 MHz 2140: 2110-2170 MHz
RF Gain over freq range	$\pm$ 0.5 dB
RF Gain vs. temp.	$\pm$ 1.0 dB
In Channel Flatness	0.2dB in each 5 MHz
ACPR, WCDMA PAR 7.5 dB 25W watts	<-40 dBc @ 5 MHz <-55dBc @ 10 MHz
Second Harmonic	-45 dBc
Third Harmonic	-60 dBc
Input/Output Return Loss	18 dB min. (50 ohms)
Output Protection	Isolator
<b>Receiver</b>	
Gain	0 dB +- .5 dB
Noise Figure	2 dB?
Transmit Band Rejection	40 dB

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### I/O Interfaces

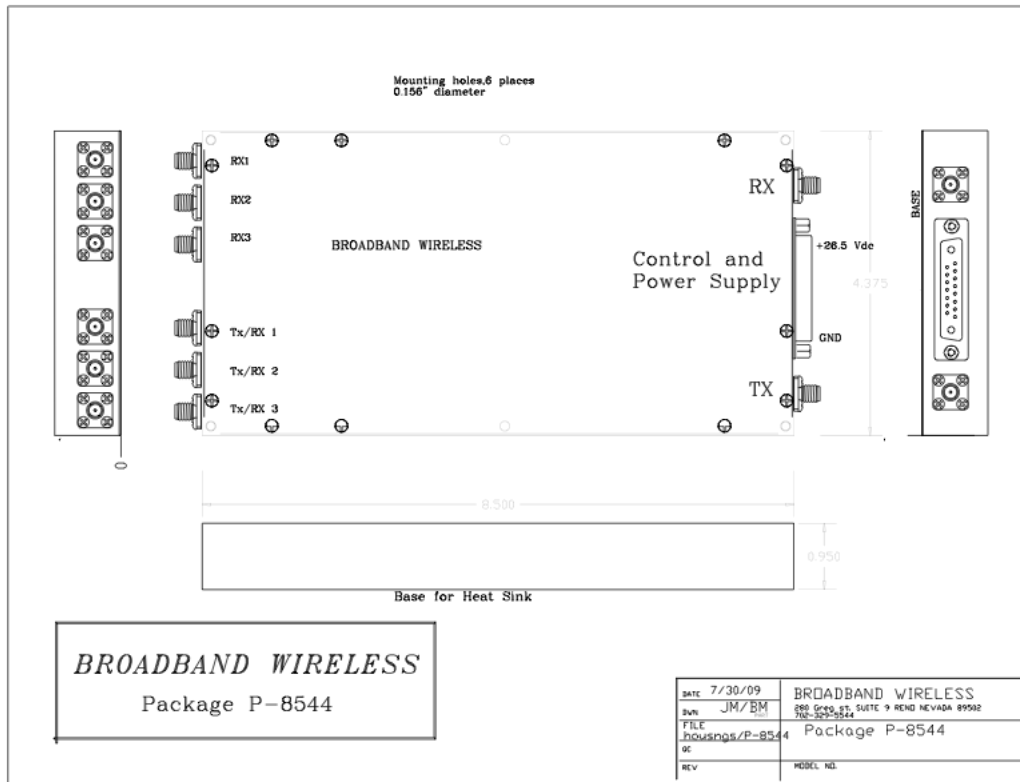
#### Control & Alarm (17W2 Pin Hybrid D-sub Male Connector)

Pin Number	Function	Description	Remarks
A1	Return.Ground		
A2	+26.5 Volts		
1	TX On/Off	When TTL High (2.4V - 5.0V) enters into this Pin, TX path is off. When TTL Low (0V - 0.8V) enters into this Pin, TX amp is on. see note 1	
2	High Temperature Alarm Output	If heat sink temperature exceeds 85°C, the High Temperature Alarm will occur and HPA will disable automatically. The HPA will re-start after temperature drops to 70°C.	Normal: TTL Low (0V)  Alarm: TTL High (5V)
3	VSWR Alarm Output	If Reverse Power > 1 Watt, the VSWR Alarm will occur, but HPA will not be disabled.	
4	Summary Alarm	TTL Low when HPA is enabled and there are no faults. TTL High when any fault occurs	
5	Over Power Alarm Output	If Output exceeds 46± 0.5 dBm, the Over Power Alarm will occur and HPA will disable automatically. . The HPA will re-start automatically after 2-3 seconds.	
8,9	GND	Ground	
12	Output Power Detection	1 - 4 Vdc (0.12 V/dB step) analog detector voltage for power levels of 20 dBm - 45 dBm (1V = 20dBm, 4V = 45 dBm).	
14	Output Power Detection	1 - 4 Vdc (0.12 V/dB step) analog detector voltage for power levels of 20 dBm - 45 dBm (1V = 20dBm, 4V = 45 dBm).	

**Note:1 Receive path always on**

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### PACKAGE P-8544



36020

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