

Features:

- Broadband, high gain and high power output
- Low VSWR, unconditional stable
- Small size, low cost
- SMA female connector I/O
- Operating temperature -40~+75°C, storage temperature -55~+85°C



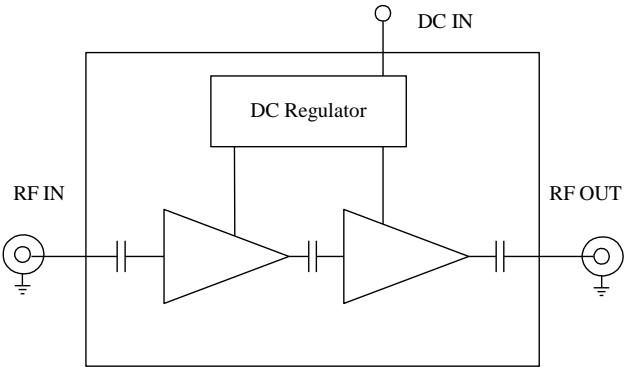
General Description

ABP1800-03-2723 is a two stage MMIC broadband power amplifier module operating in the frequency of 500MHz to 18GHz. The amplifier provides 27dB of small signal gain, +23dBm of minimum output power at 1dB gain compression. It has excellent gain flatness and good VSWR at both input and output. The amplifier requires only a single positive DC power supply, its built-in DC voltage regulator and internal sequencing circuitry makes the application more robust.

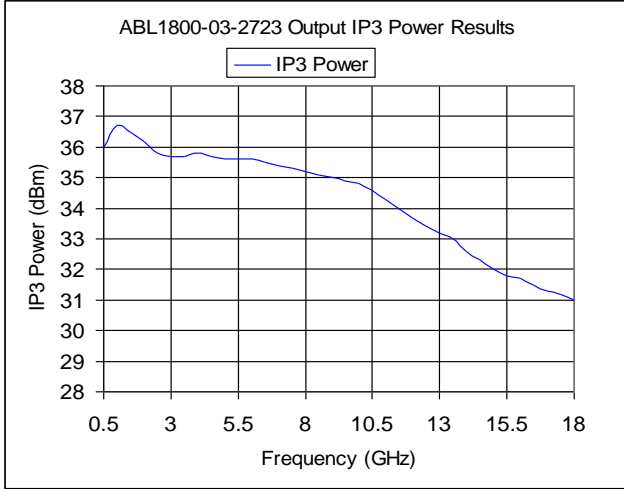
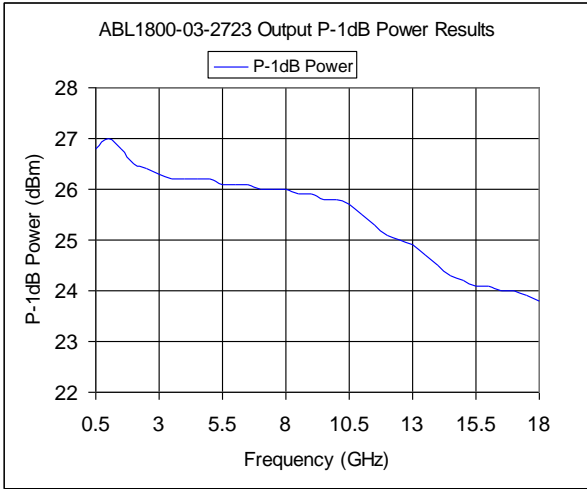
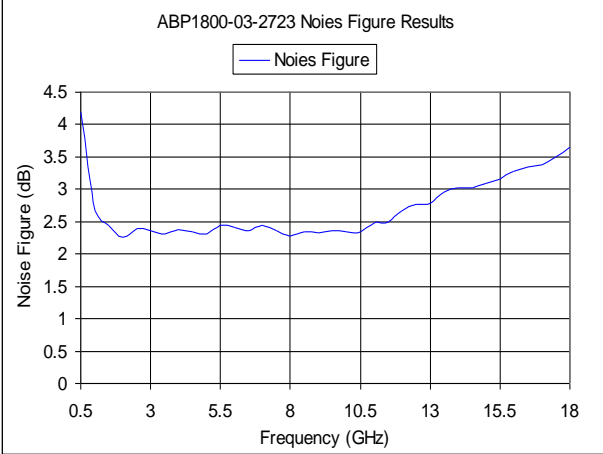
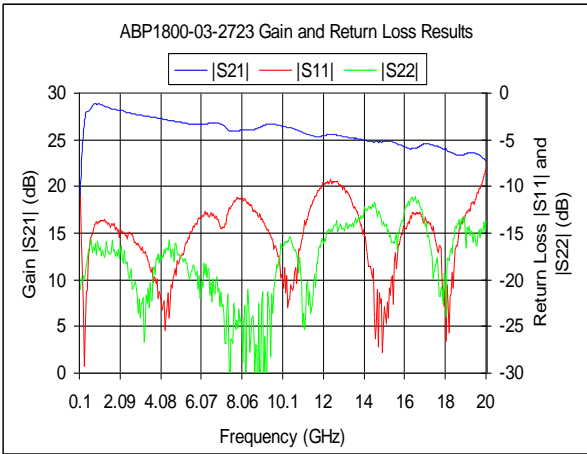
Electrical Specifications

Parameters	Units	Specifications		
		Minimum	Typical	Maximum
Frequency Range	GHz	0.5		18.0
P-1dB Compression Point	dBm	+23.0	+25.0	
Output IP3	dBm	+30.0	+35.0	
Output IP2	dBm	+43.0	+45.0	
Nominal Gain @25°C	dB	23.0	27.0	30.5
Gain flatness over frequency	dB		+/-2.5	+/-2.75
Gain Variation over Temperature	dB		+/-2.0	+/-2.5
Noise Figure at 25 degree C 0.5~0.7GHz 0.7~18.0GHz	dB		4.0 2.5	4.5 3.5
Input VSWR			1.8:1	2.5:1
Output VSWR			1.5:1	2.0:1
Spurious	dBc			-60.0
Operating Temperature	°C	-40.0		+75.0
Survival Temperature	°C	-45.0		+125.0
DC Power Supply Voltage	V		+12.0	
DC Power Supply Current	mA	300	330	500
In/Out connectors		SMA female		
Outline dimension for ABP1800-03-2723 without heatsink	inches	1.50×1.00×0.40		
Outline dimension for ABP1800-03-2723-X with heatsink	inches	1.50×4.75×1.25		

Functional Diagram



Test Results



Housing Material and Surface Finish:

- Body and cover material: aluminum
- Surface finish: Gold plated
- Connector material: Stainless steel
- Connector surface finish: passivated
- Heatsink material: Aluminum, surface finish: Black anodized

Absolute Maximum Ratings

DC Voltage	+13V
RF Input Power	15 dBm
Storage Temperature	-55~+125°C
Operating Temperature	-40~+75°C

Revision History:

Revision	Date	Description	Comments
A00	09/26/2014	Initial Release	
A01	02/28/2015	Added picture and test plots, changed gain range	



WARNING: This device is electrostatic sensitive, please observe precautions for safe handling this amplifier.

WARNING: This product can expose you to chemicals including Nickel (Metallic) and Gallium Arsenide which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65warnings.ca.gov.