

# ASC2813C

## Features: (typical values)

- Low Noise Figure ..... 1.3 dB.
- Power Out ..... 17 dBm.
- Gain ..... 53 dB.
- No external components required

**12-18 GHz  
Low Noise Amplifier**



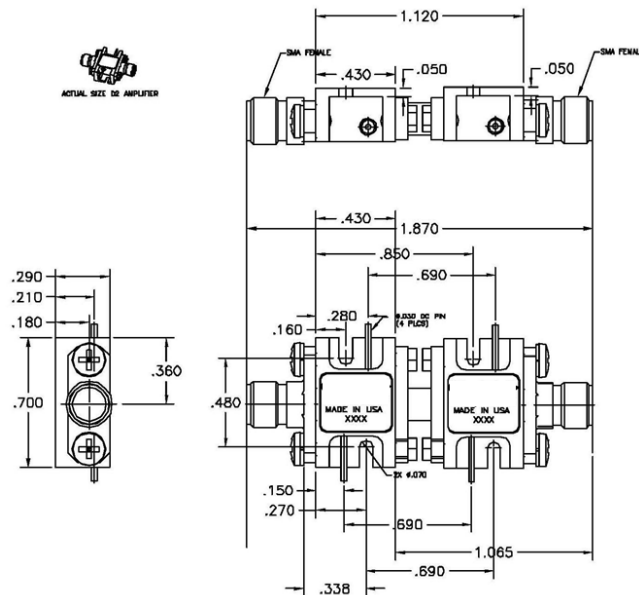
## Maximum Ratings

Operating Temperature ..... -20°C to +60°C  
 Storage Temperature ..... -20°C to +125°C  
 DC Voltage ..... +15 volts  
 RF Input Power ..... -25 dBm.  
 Case Temperature ..... +100°C

Specifications (Referenced to 50 ohms)

Parameter	Typical Conditions	Min Value	Max Value	Units
Frequency		12	18	GHz.
Gain	53	46		dB.
Gain Flatness	±2.5		±3.0	dB.
Pout @ 1dB Comp	+17	+15		dBm.
Noise Figure	1.3		1.5	dB.
VSWR In/Out	1.8:1		2.0:1	Ratio
Impedance, Input/Output	50 Ohm			
Supply Required	+15/250		+15/260	v/mA.

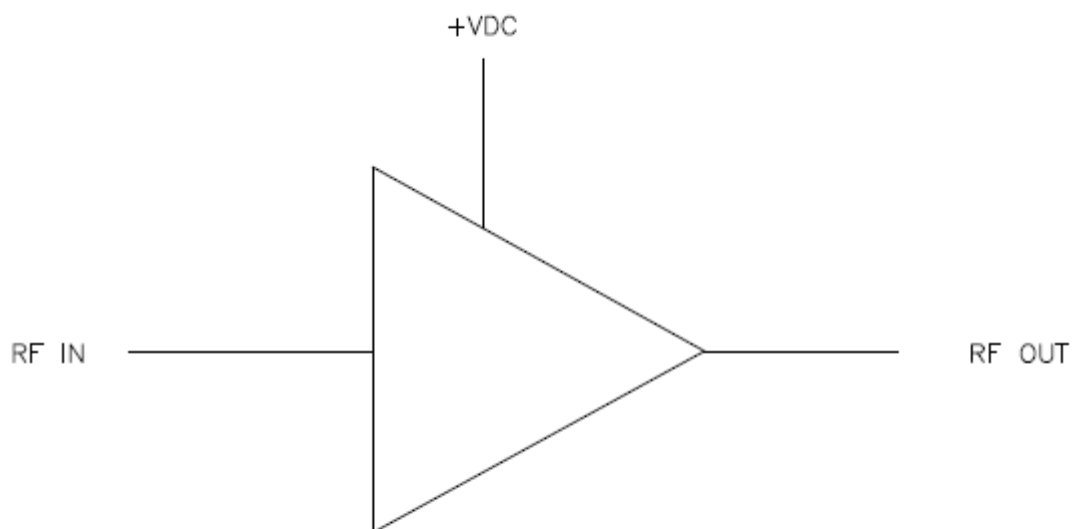
## OUTLINE



**FINAL ELECTRICAL TEST REPORT**  
**RECORD DATA @ +25°C ONLY**

<b>TEST</b> Vdc +15V	<b>LIMITS</b> -20°C/+25°C/+60°C	<b>ACTUAL</b> <b>DATA</b>
Gain 12 GHz to 18 GHz	46.0 dB min 53.0 dB typ	52.0 57.0
Gain Flatness 12 GHz to 18 GHz	6.0 dB max	4.0
Spurious Response	Accept/Reject	Accept.
DC Current at +15 Vdc	260 mA max	250
Input VSWR 12 GHz to 18 GHz	2.0 : 1 max	1.64
Output VSWR 12 GHz to 18 GHz	2.0 : 1 max	1.96
Noise Figure 12 GHz to 18 GHz	1.5 dB max 1.3 dB typ.	1.27
P 1.0 dB Compression 12 GHz to 18 GHz	15.0 dBm min 17.0 dBm typ	19
Stability Test. For all frequency range where $ S_{21}  > 0\text{dB}$	0 dB max	<0

FUNCTIONAL BLOCK DIAGRAM



NO EXTERNAL COMPONENT REQUIRED