

ASC800C

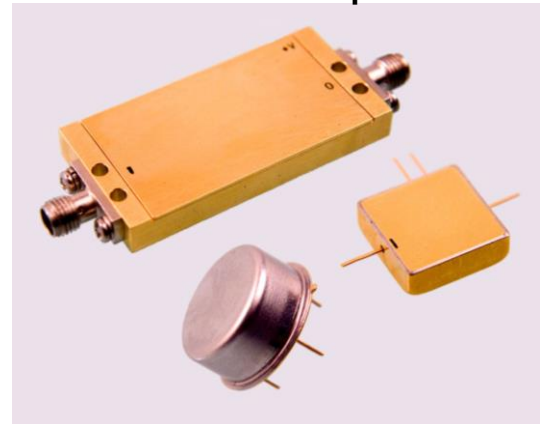
Features: (typical values)

- Wide Band 20-500 MHz.
- Noise Figure 1.6 dB.
- High Gain 60 dB.
- No external components required

Maximum Ratings

Storage Temperature -62°C to +125°C
 DC Voltage +17 volts
 RF Input Power +0.0 dBm.
 Case Temperature +100°C

20-500 MHz Cascadable Amplifier

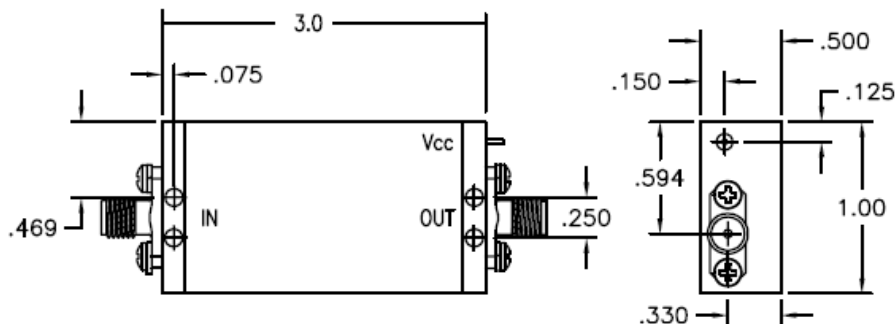


Specifications (Referenced to 50 ohms)

Parameter	Typical Conditions	Min Value	Max Value	Units
Frequency		20	500	MHz.
Gain	60	57		dB.
Gain Flatness	±0.5		±1.5	dB.
Gain Var. over temp	0.6			ΔdB.
Pout @ 1dB Comp	+27	+25		dBm.
Noise Figure	1.6		2.5	dB.
Reverse Isolation	70			dB.
IP ₃ /IP ₂ (two-tone)*	40/44	35/40		dBm.
HIP2 (2 nd harm.)	50			dBm.
VSWR In/Out	1.7:1		2.0:1	
Supply Required	+15/450		+15/480	v/mA.

Min. and max. values are from -55°C to +85°C

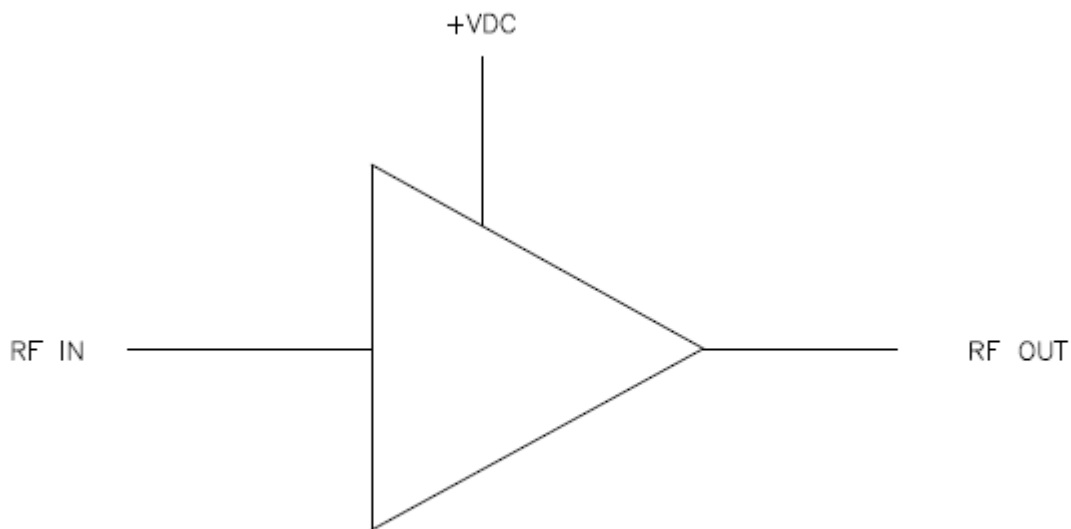
*IP₃ and IP₂ are in band output intercept points



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

TEST Vdc +15V	LIMITS -55°C/+25°C/+85°C	ACTUAL DATA
Gain 20 MHz to 500 MHz	57.0 dB min	59.6 59.8
Gain Flatness 20 MHz to 500 MHz	± 1.5 dB max	±0.1
Gain Var. over temp	0.6 dB Typ	/
DC Current at +15 Vdc	480 mA max	452
Input VSWR 20 MHz to 500 MHz	2.0 : 1 max	1.3
Output VSWR 20 MHz to 500 MHz	2.0 : 1 max	1.6
Noise Figure 20 MHz to 500 MHz	2.5 dB max	1.6
P 1.0 dB Compression: @20, 250 &500 MHz	+25.0 dB min	27.0
IP3: Pout @ +15 dBm each tone 1) F1/F2 = 21 & 22 MHz, Fc = 20 & 23 MHz 2) F1/F2 = 251 & 252 MHz, Fc = 250 & 253 MHz 3) F1/F2 = 498 & 499 MHz, Fc = 497 & 500 MHz	+35 dBm min	43 47 47
IP2: Pout @ +15 dBm each tone 1) F1-F2 = 500-480 MHz, Fc = 20 MHz 2) F1+F2 = 20+480 MHz, Fc = 500 MHz	+40 dBm min	50 51
HIP2 (2 nd harm.)	50 dB Typ	50
Stability Test For all frequency range Where $ S_{21} > 0\text{dB}$	0 dB max	<0

FUNCTIONAL BLOCK DIAGRAM



NO EXTERNAL COMPONENT REQUIRED