

Features: (typical values)

- Output Power+31.5 dbm. @ 1dB. Compression
- NF 4.0 dB
- Gain 21.9 dB
- IP3 50 dBm
- IP2 93 dBm
- Unconditional Stability
- No external components required

**0.5 – 35 MHz
High Linear Amplifier**

Maximum Ratings

Storage temperature -55°C to +125°C
 DC Operating Voltage +26.0 volts
 RF Input Signal +20 dBm. Max.
 Operating Base Temp. -20 to +75°C

Product Description:

ASC3090C is a Push-Pull configure of two Power Doubler modules. It contains GaAs pHEMT die driving GaN die and is operating from 0.5MHz to 35MHz, can also extend from 1MHz to 100Mhz. It has excellent linearity with very low Noise Figure and optimal reliability.

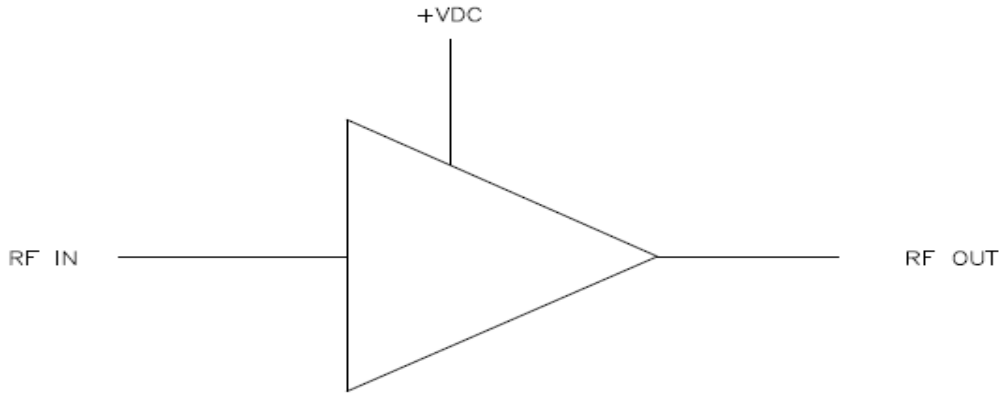
Specifications @ Tcase = 25°C, Vcc = 24V, 50-ohm systems unless otherwise noted.

Parameter	Typical Conditions	Min Value	Max Value	Units
Frequency Range		0.5	35	MHz.
Power Gain	21.9	21.2	22.6	dB.
Gain Flatness	±0.2		±0.4	dB.
Reverse Isolation	27	26		dB.
Noise Figure	4.0		5.0	dB.
Power Output- 1dB Compression	31.5	31		dBm.
Third Order Intercept (IP3) @ 25dbm per tone	50	49		dBm.
Second Order Intercept (IP2) @ 25dbm per tone	93	90		dBm.
VSWR in/out	1.3:1		1.5:1	Ratio
Supply Current @ 24 Volts	410		420	mA.
Operating Temperature -20C to +75C				
CONNECTORS	SMA-F			

FINAL ELECTRICAL TEST REPORT @ +25°C

TEST	LIMITS / SN	ACTUAL DATA
GAIN 0.5 MHz TO 35 MHz	21.2 dB min	21.8
	22.6 dB max	22.1
GAIN FLATNESS 0.5 MHz TO 35 MHz	0.8 dB max	0.3
REVERSE ISOLATION	26 dB min	26.8
DC CURRENT AT +24 Vdc	420 mA max	390
INPUT VSWR 0.5 MHz TO 35 MHz	1.5: 1 max	1.33
OUTPUT VSWR 0.5 MHz TO 35 MHz	1.5: 1 max	1.24
NOISE FIGURE 0.5 MHz TO 35 MHz	5.0 dB max	4.33
P1.0 dB COMPRESSION 0.5 MHz TO 35 MHz	+31.0 dBm min	31.8
IP3 WITH POUT= +15 dBm EACH TONE 1) F1/F2=16 / 18 MHz, Fc= 14 / 20 MHz	49 dBm min	50.0
IP2 WITH POUT= +15 dBm EACH TONE 1) F1+F2 = 18 MHz + 16 MHz, Fc= 34 MHz 2) F1- F2 = 18 MHz - 16 MHz, Fc= 2 MHz	90 dBm min	94.0
STABILITY TEST FOR ALL FREQUENCY RANGE WHERE [S21] > 0 dB	0 dB max	<0

FUNCTIONAL BLOCK DIAGRAM



NO EXTERNAL COMPONENT REQUIRED

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