

RF Amplifier

FEATURES:

- * Operating Frequency : 50-500 MHz.
- * High Output Power +34 dbm.
- * High IP3 +52 dbm.
- * High IP2 +85 dbm.
- * NF 3.0 dB.
- * No external components required

ELECTRICAL SPECIFICATION @ VDD= + 28 VDC; Temp. = 25°C, 50Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	50		500	MHz.
Gain	G	30	32	34	dB.
Gain Flatness P-P	Δ G		±0.5	±1.0	dB.
Noise Figure	NF		3	4	dB.
Output Power	P1dB	33	34		dBm.
3rd Order Intercept	IP3	49	52		dBm.
2nd Order Intercept	IP2	80	85		dBm.
Input Return Loss	S11	-9.54	-13		dB.
Output Return Loss	S22	-9.54	-11		dB.
Operating Voltage	Vdc		28		Volt
Operating Current	Id		650	820	mA.

MECHANICAL SPECIFICATION

Parameter	Description	Limits	Units
Dimension	3.75 x 2.01 x 1.60		inches
RF Connectors IN/OUT	SMA-F		
DC Connector	Filtercon		
Cooling	Heat Sink		
Monitor Connector	None		

PROTECTIONS

RF Input Power	30 dBm.	Max	
Reverse Polarity Protection	Option		
Load VSWR	Infinite up to 1W		
Stability	100% Tested		

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min.	Typ.	Max.	Units
Operating Case Temperature	Tc	-20°C		65°C	°C
Storage Temperature	Tstg	- 40C		100°C	°C

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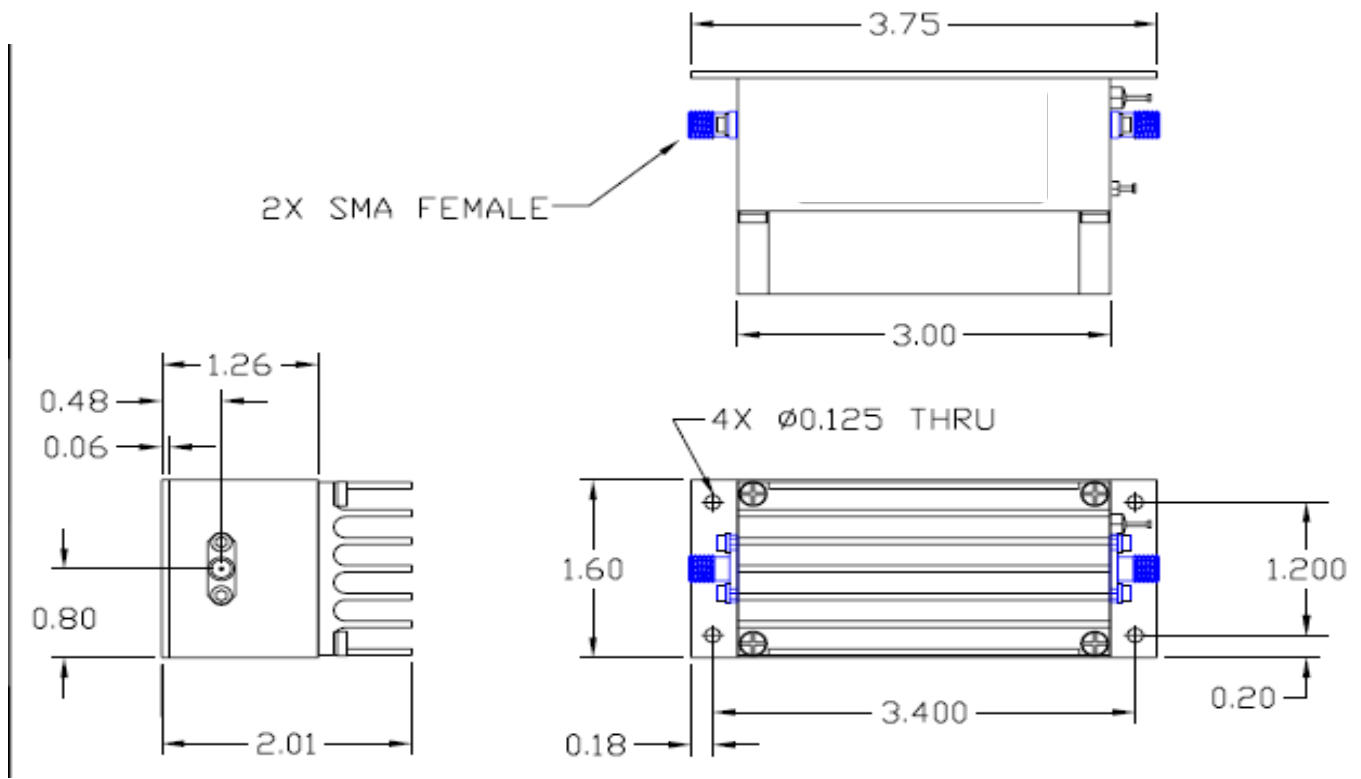
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DESCRIPTION: ASC2525C

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

TEST Vdc +28V	LIMITS -20°C/+25°C/+65°C	ACTUAL DATA
Gain 50 MHz to 500 MHz	30 dB min 34 dB max	32.6 32.9
Gain Flatness 50 MHz to 500 MHz	±1.0 dB max	±0.15
Gain Variation vs. Temp	±1.25 dB max	Pass
DC Current at +28 Vdc	820 mA max	535
Input VSWR 50 MHz to 500 MHz	2.0: 1 max	1.72
Output VSWR 50 MHz to 500 MHz	2.0: 1 max	1.58
Noise Figure 50 MHz to 500 MHz	4.0 dB max	2.52
P 1.0 dB Compression 50 MHz to 500 MHz	33 dBm min	>34.0
IP3 with Pout = +15 dBm each tone 1) F1 / F2 = 50 / 51 MHz Fc = 49 / 52 MHz 2) F1 / F2= 498/499 MHZ Fc= 497/500 MHZ	49 dBm min	51.0
IP2 with Pout = +15 dBm each tone 1) F1+F2 = 55+445 MHz Fc = 500 MHz 2) F1-F2 = 495-445 MHz Fc = 50 MHz	80 dBm Min	85.0
Stability Test for all frequency range where S21 > 0 dB	0 dB max	<0
Max Pin: No Change in NF with Pin @ +30 dBm, 100/200 mhz for 1 min	Accept / Reject	AC

Outline Drawing

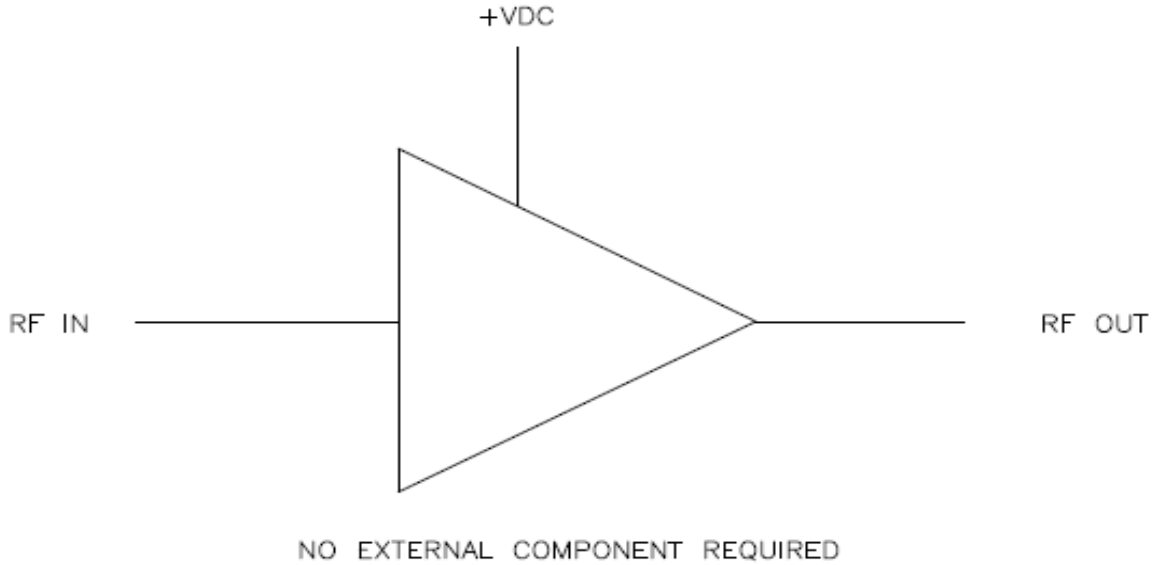


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FUNCTIONAL BLOCK DIAGRAM



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