

THANK YOU FOR YOUR PURCHASE!



RFL-1

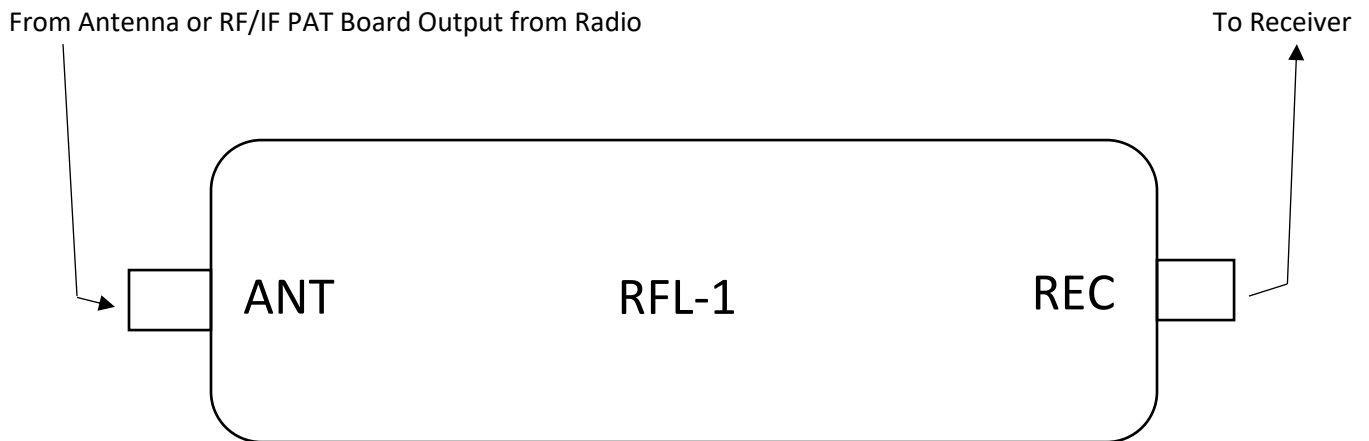
(THE RFL-1 IS FOR RECEIVE ONLY, DO NOT ATTEMPT TO TRANSMIT THROUGH THIS DEVICE)

The RFL-1 is an RF limiter designed to prevent high RF signal levels from damaging the input of your SDR receiver. The RFL-1 incorporates “No Arc” 1kV components, gas discharge tube and a special circuit designed to reduce RF signals levels as high as +32dBm and limit them to 9dBm and below. The RFL-1 is also designed to eliminate static buildup on your antenna.

If using a “bias T” arrangement to power a preamp, make sure the bias T is located on the “ANT” side of the RFL-1. Placing the bias T on the “REC” side will damage the RFL-1 as it is not power passive.

- Impedance: 50 Ohms
- Frequency Range: .5 kHz – 500 MHz
- Insertion Loss: .33 dB max @ 500MHz @ -10dBm
- Case: Diecast Aluminum Alloy
- Connectors: SMA, BNC, or RCA

Connect the RFL-1 between your antenna and receiver as indicated. The RFL-1 should be placed as close to the receiver as possible.



THE RFL-1 WILL NOT PROTECT YOUR RECEIVER FROM DIRECT OR NEAR BY LIGHTNING STRIKES. A SEPARATE LIGHTNING ARRESTING DEVICE SHOULD BE INSTALLED AHEAD OF THE RFL-1. IT IS RECOMMENDED YOU DISCONNECT YOUR ANTENNA IF THUNDER STORMS ARE APPROCHING YOUR AREA.

The seller is not responsible for equipment damage due to misuse or lightning damage.

Electrical Specifications

Parameter	Condition	Min.	Typ.	Max.	Units
Frequency Range		0.5	—	520	MHz
Linear Range					
Max Input Power	less than 0.1 dB compression	—	—	-10	dBm
Insertion Loss	less than -10 dBm input power	—	0.2	0.7	dB
VSWR	less than -10 dBm input power	—	1.2	1.78	:1
Limiting Range					
Input Power	>1dB compression filtered signal frequency	+9	—	+32	dBm
Output Power		—	+7	—	dBm
Δ Output/ Δ 1dB Input	Input Power Range (dBm)				
	9 to 20	—	0.2	—	dB/dB
	20 to 25	—	0.3	—	
	25 to 30	—	0.3	—	
30 to 32	—	0.3	—		
Recovery Time	1 watt pulse 50 μ sec pw 1kHz duty cycle recovery to within 90% of final value.	—	3.7	—	nsec
Response Time	-30 to +30 dBm input 50 μ sec PW 1 kHz duty cycle	—	5.8	—	nsec

Typical Performance Data

Freq. (MHz)	I. Loss (dB) in Linear Range at -10 dBm	VSWR (:1) in Linear Range at -10 dBm	Power Output (dBm)					Δ Output / Δ 1dB Input			
			+9 dBm Input	+20 dBm Input	+25 dBm Input	+30 dBm Input	+32dBm Input	+9 to +20 dBm Input	+20 to +25 dBm Input	+25 to +30 dBm Input	+30 to +33 dBm Input
0.50	0.08	1.15	-0.14	2.93	4.33	6.54	7.67	0.28	0.28	0.44	0.57
0.60	0.07	1.12	-0.11	2.73	4.12	6.05	7.02	0.26	0.28	0.39	0.49
0.70	0.08	1.10	-0.08	2.61	3.97	5.76	6.67	0.24	0.27	0.36	0.46
0.80	0.07	1.07	-0.07	2.53	3.88	5.58	6.47	0.24	0.27	0.34	0.45
0.90	0.06	1.02	-0.06	2.50	3.81	5.46	6.34	0.23	0.26	0.33	0.44
1.00	0.05	1.02	-0.05	2.45	3.80	5.37	6.22	0.23	0.27	0.31	0.43
3.00	0.05	1.02	0.35	2.36	3.66	5.07	5.87	0.18	0.26	0.28	0.40
5.00	0.07	1.04	0.59	2.39	3.70	5.18	5.98	0.16	0.26	0.30	0.40
7.00	0.10	1.07	0.73	2.46	3.79	5.35	6.18	0.16	0.27	0.31	0.42
10.00	0.10	1.08	0.81	2.59	4.02	5.79	6.69	0.16	0.29	0.35	0.45
60.00	0.13	1.12	0.65	2.26	3.54	4.68	5.42	0.19	0.26	0.23	0.37
100.00	0.17	1.17	0.75	2.70	4.16	6.70	7.83	0.14	0.29	0.51	0.57
250.00	0.20	1.22	0.59	2.78	4.23	5.64	6.33	0.18	0.29	0.28	0.35
300.00	0.24	1.27	0.58	2.40	3.66	5.03	5.60	0.15	0.25	0.27	0.29
400.00	0.28	1.33	0.53	2.75	4.06	5.29	5.70	0.22	0.26	0.25	0.21
500.00	0.33	1.39	0.53	2.97	4.31	5.25	5.50	0.19	0.27	0.19	0.13
520.00	0.38	1.45	0.48	2.99	4.25	5.19	5.35	0.22	0.26	0.19	0.08