AARONIA AG®

WWW.AARONIA.DE

TECHNICAL DATASHEET

Aaronia SMA-Limiter 10MHz - 8GHz

ES France - Département RF & Hyperfréquences
127 rue de Buzenval BP 26 - 92380 Garches

Tél. 01 47 95 99 60

e-mail : hyper@es-france.com
Site Web : www.es-france.com

AARONIA AG
WWW.AARONIA.DE

Aaronia SMA-Limiter

Aaronia SMA-Limiter 10 MHz to 8 GHz SKU 502/024

Introduction

Protect your RF systems with our premium RF Limiter, encased in a robust shielded housing with SMA male/female connectors for seamless integration. Operating across an ultra-wide frequency range of 10 MHz to 8 GHz, this limiter ensures reliable signal protection and performance in diverse applications.

Highly recommended! Protects sensitive electronics from damage caused by excessive input signals, reliably attenuates strong high-frequency interference and pulses up to +30dBm to a maximum of +17dBm.

Key Features:

- Frequency Range: 10 MHz to 8 GHz, ideal for broad-spectrum applications.
- Shielded Housing: Minimizes interference for clean signal processing.
- SMA Connectors: Male/Female configuration for easy connectivity.
- High Power Handling: Safeguards sensitive equipment from power surges.

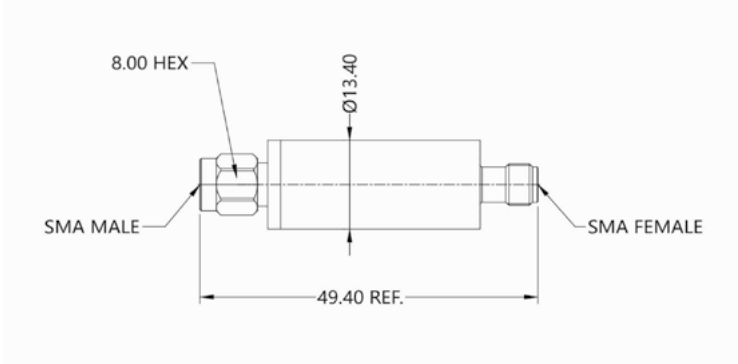
Use Cases by Frequency Range:

- 1 MHz - 30 MHz (HF Band): Perfect for amateur radio and shortwave communications, protecting receivers from strong local signals.
- 30 MHz - 500 MHz (VHF/UHF): Ideal for FM broadcasting, two-way radios, and TV signal chains, ensuring clean signal paths in crowded spectrum environments.
- 500 MHz - 2 GHz (L-Band): Suited for GPS, satellite communications, and cellular networks, shielding receivers from high-power transients.
- 2 GHz - 8 GHz (S/C-Band): Essential for Wi-Fi (incl. Wi-Fi 6E or Wi-Fi 7) radar systems, and microwave links, preventing damage from high-power RF signals in advanced wireless applications.

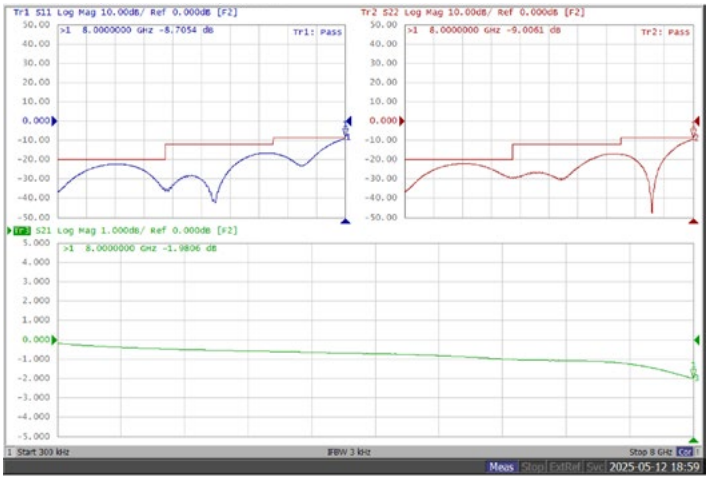
Why Choose Our RF Limiter?

Engineered for durability and precision, this RF limiter is a must-have for RF engineers, telecom professionals, and hobbyists. Whether you're managing complex radar systems or optimizing a ham radio setup, our limiter delivers unmatched protection and performance across the 1 MHz to 8 GHz spectrum.

Technical Drawing



Exemplary Measurement Curves



ES France - Département RF & Hyperfréquences
127 rue de Buzenval BP 26 - 92380 Garches
Tél. 01 47 95 99 60
e-mail : hyper@es-france.com
Site Web : www.es-france.com

Aaronia SMA-Limiter 10 MHz to 8 GHz SKU 502/024

Specifications

Parameter	Condition	Min	Typ	Max	Unit
Operating Frequency	-	10	-	8000	MHz
Power Limiting Mode					
Insertion Loss	10 MHz - 3000 MHz 3001 MHz - 6000 MHz 6001 MHz - 8000 MHz	-	0.40 0.95 1.32	0.50 1.20 1.70	dB
Return Loss	10 MHz - 3000 MHz 3001 MHz - 6000 MHz 6001 MHz - 8000 MHz	-	22 12 9.5	-	dB
P1dB/Limiting Threshold	915 MHz	-	13	-	dBm
	8 GHz	-	9	-	dBm
Leakage Power	915 MHz, P_{CW} = 30 dBm	-	16	16.8	dBm
Input IP2	915 MHz 6 GHz 8 GHz	-	88 70 70	-	dBm
Input IP3	915 MHz 6 GHz 8 GHz	-	37 31 30	-	dBm
Response Time	1 GHz	-	1	-	ns
Recovery Time	1 GHz, P_{IN}, pulse = 30 dBm	-	1	-	ns
Power Reflecting Mode					
Switching Time	State Change to 10% RF	-	3	-	µs