



Surge Arrestor - 1KW

Broadband 50 Ω RF Surge Protection Device for Communication Systems

Product Overview

The TT-RF-SA-018 RF Surge Arrestor is a broadband coaxial surge protection device engineered for high-frequency RF systems requiring reliable transient suppression and electromagnetic surge immunity. The unit is designed for inline coaxial integration, providing low insertion loss, stable impedance characteristics, and effective transient voltage diversion to ground. It is optimized for amateur radio installations, RF laboratories, communication infrastructure, and sensitive RF front-end protection in both fixed and portable systems.

Application Domains

Amateur (HAM) radio systems, VHF/UHF communication infrastructure, RF base stations, radar and RF protection systems, RF laboratories, and coaxial feeder line surge protection installations.

Product Identification

Part Number	TT-RF-SA-018
Description	RF Surge Arrestor, 50 Ω, Broadband RF Surge Protection Device
Device Category	Inline Coaxial RF Surge Protection Module

Electrical Specifications

Characteristic Impedance	50 Ω	
Frequency Range	Broadband RF operation (HF to UHF band support)	
Insertion Loss	Low-loss RF path (typical < 0.1 dB)	
VSWR	1.0 - 1.6	
Surge Protection Mechanism	Gas discharge tube / transient diversion topology	
Response Time	< 25ns transient suppression	
Max Capacitance	< 1pF	
Voltage Protection level	<= 1000V	
Impulse Spark Over Voltage	1400V	
Impulse Discharge Current	1000A	
Power Handling	SWR	Max Power
	1.0 - 2.0	1.20 KW
	2.1 - 3.0	900 W
	3.1 - 4.0	800 W
	>4.1	500 W

Environmental and Mechanical Characteristics

Connector Type	SO-239 (M-Female) to SO-239 (M-Female)
Housing Material	Al(6061)
Mounting Configuration	Inline coaxial installation
Environmental Protection	Corrosion resistant
Operating Temperature	-40°C to +80°C
Ingress Protection	IP 69

Standard Status

Surge Immunity	IEC 61000-4-5 Compliant
Declaration of Conformity	ROHS, CE

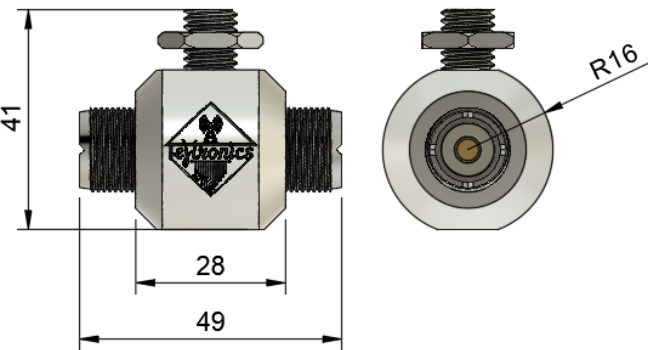
Product Visuals



Figure 1: Front View



Figure 2: Side View



All Dimensions are in mm

Figure 3: Dimension Drawing

RF Performance



Figure 4: Insertion Loss vs Frequency



Figure 5: Standing Wave Ratio (SWR) vs Frequency

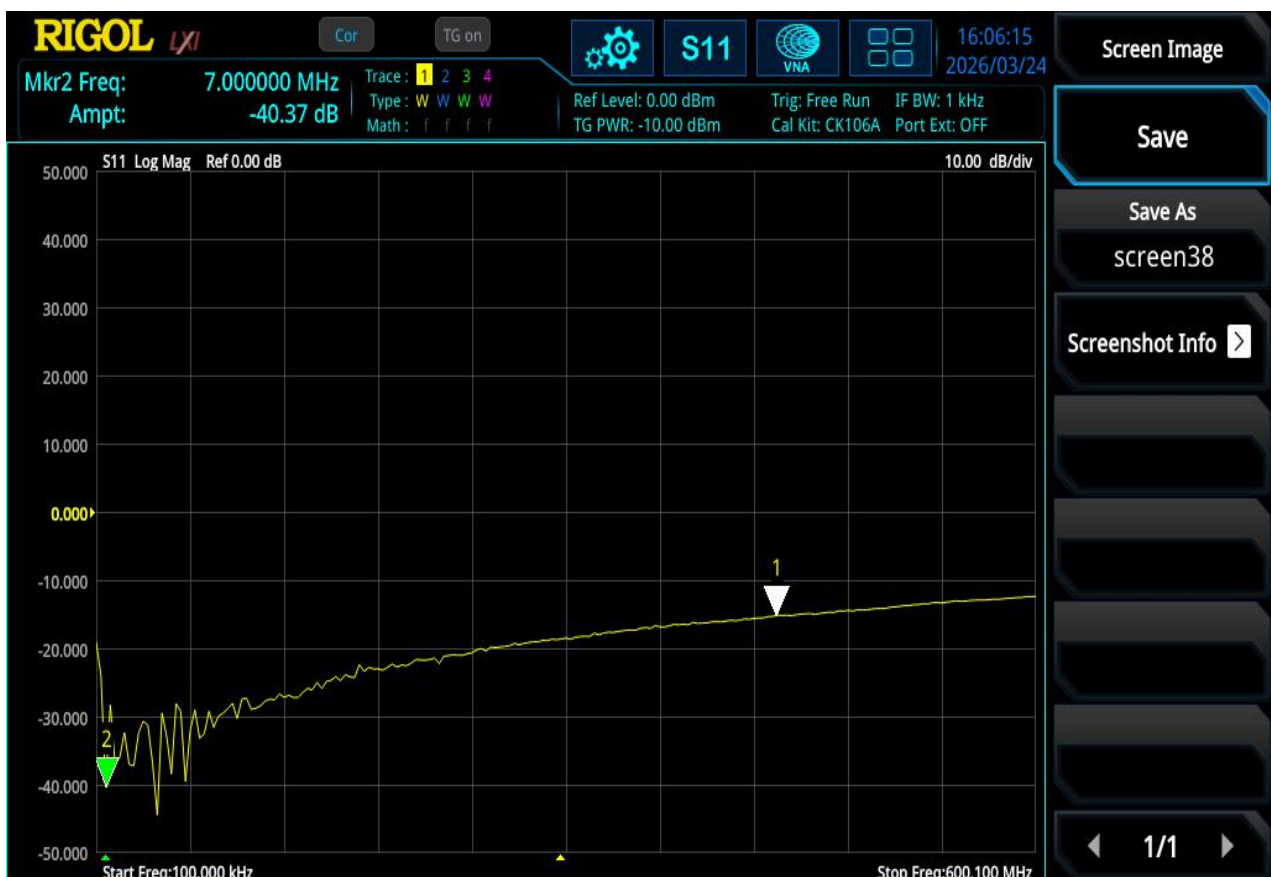


Figure 6: Return Loss vs Frequency