

# Transient Limiter EM5010

## Instruction Manual



Shenzhen Zhiyong Electronics Co., Ltd.

## Introduction

First of all, thank you for purchasing our products, this instruction manual is the description about the function, usage, operation attention points, etc. Before use, please read the instructions carefully and use correctly.

Manual annotation will use the following symbols to distinguish.



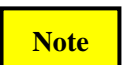
**This symbol means it is harmful to the machine and human body; you must strictly follow the instruction manual to operate.**



**In the case of wrong operation, the user risk injury. The content under this mark records the relevant matters needing attention to avoid such dangers.**



**The user may have suffered minor injuries and material damage while with the wrong operation, to avoid such situation, note the matters needing attention.**



**Record of important notes using the machine.**

To the safely use the machine, you must abide by the following safety precautions strictly. The violation against the manual is likely to damage the protective function of the machine. In addition, the company is not responsible for any safety problem caused by the violation of matters needing attention in operation.



- Pay attention to the Maximum input level
- Do not operate in wet/damp or combustible conditions.
- To ensure that the surface of the instrument is dry and clean before use.

## 1. Summary

Transient Limiter is an accessory that protects input circuitry of instrument from transients and accidental overloads. The EM5010 Transient Limiter is a unidirectional, solid-state, passive device whose frequency range is 9kHz to 200MHz. It consists of a diode limiter, a 10dB attenuator, and a high-pass filter.

## 2. Specifications

Frequency range		9kHz-200MHz
Limiting threshold		50mW (+17dBm)
Impedance		50Ω
Connectors	Input	BNC (female)
	Output	N (male)
Maximum input level		Continuous: 2.5W (+34dBm)
		Pulse: 10kW (10uS)
		DC voltage: ±12V
Insertion loss	<2kHz	>30dB
	9kHz-50MHz	10dB ±0.5dB
	50MHz-200MHz	10dB+2.2dB/-0.5dB
	<6kHz, >400MHz	13dB
Typical insertion loss VS frequency		Figure 1
Typical limiting characteristics		Figure 2
Working temperature		0°C-55°C
Storage temperature		-40°C-80°C

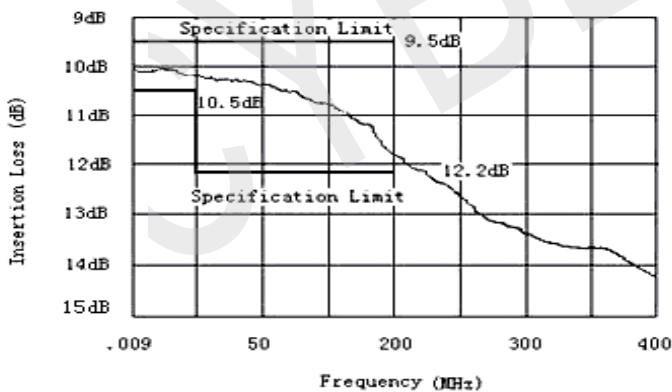


Fig.1 Typical Insertion Loss VS Frequency

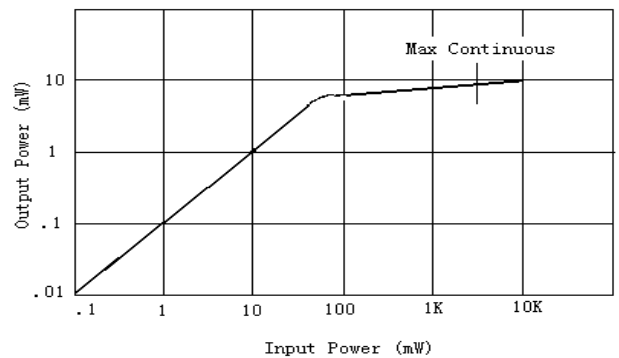
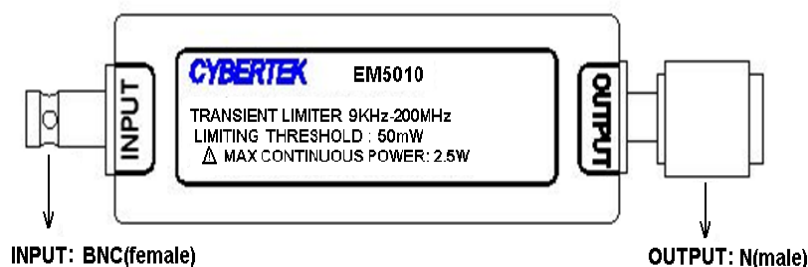


Fig.2 Typical Limiting Characteristics

## 3. Products Description



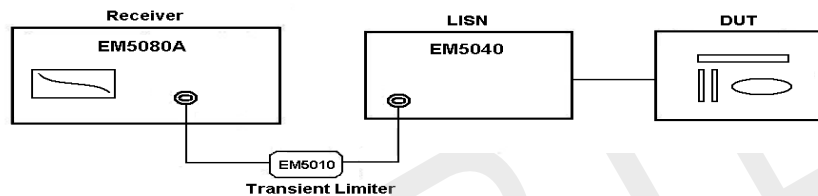
**Note**

- ✧ Do not apply more than 2.5W average power or 10kW pulse power to the limiter. Apply  $< \pm 12\text{Vdc}$ . Exceeding these levels could result in permanent damage to the limiter.
- ✧ Do not reverse the polarity of the limiter. Doing so can destroy the limiter.

**4. Mechanical Specification**

Size (L*W*H)	142*37*20mm
weight	310g

**5. Application Diagram**



**6. List of goods**

List of goods	
Name	Quantity
EM5010	1 PCS
User manual	1 book
Warranty card	1 unit
Testing report	1 PCS

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