

# Coaxial Voltage Variable Attenuator ZX73-123+

50Ω 0 to 20 dB 6 to 12 GHz Single Control Voltage

## The Big Deal

- Full octave bandwidth, 6 to 12 GHz
- Low insertion loss, 0.8 dB (@ 0 dB attenuation setting)
- Single control voltage
- Low DC current Consumption, 40mA max.



CASE STYLE: BY2911

## Product Overview

Mini-Circuits' ZX73-123+ is a 50Ω reflective voltage variable attenuator which provides adjustable attenuation from 0 to 20 dB with continuous change. This model covers a wide frequency range from 6 to 12 GHz and operates on a single positive voltage with no extra supply voltage needed.

## Key Features

Feature	Advantages
Wideband operation, specified from 6 to 12 GHz	Can be used in multiple applications such as communications, satellite and defense, reducing part count
Variable attenuation from 0 to 20 dB with continuous change	Compared to digital step attenuators with minimum, discrete attenuation steps, this product can provide an arbitrarily small change in attenuation by changing the control voltage, without introducing any phase perturbations.
Single positive control voltage	Many similar devices require both supply voltage and control voltage. ZX73-123+ only needs a single positive control voltage for operation. No additional supply voltage needed, greatly simplifying system design.

### Notes

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Coaxial

# Voltage Variable Attenuator

ZX73-123+

50Ω 0 to 20 dB 6 to 12 GHz Single Control Voltage

## Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 85°C
Absolute Max. Control Voltage(Vctrl)	1 V
Absolute Max.RF Input Level	+20dBm

Permanent damage may occur if any of these limits are exceeded

## Features

- wideband, from 6 to 12 GHz
- adjustable attenuation from 0 to 20 dB
- low insertion loss, 0.8 dB typ.
- single control voltage
- low DC current consumption, 40mA max.

## Applications

- variable gain amplifier
- power level control
- feed-forward amplifiers
- testing



Generic photo used for illustration purposes only

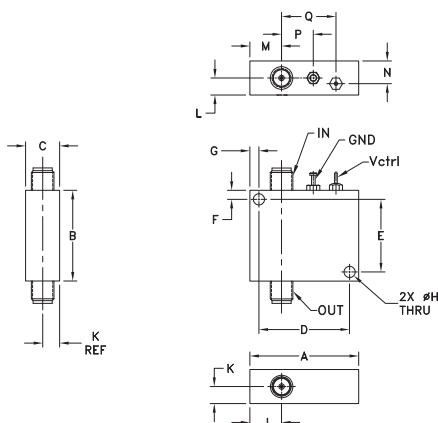
CASE STYLE: BY2911

Connectors            Model  
SMA                    ZX73-123+

**+RoHS Compliant**

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

## Outline Drawing



## Outline Dimensions (inch/mm)

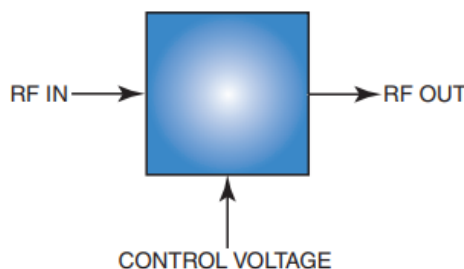
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30.48	25.40	9.65	25.40	20.32	2.54	2.54	3.18
J	K	L	M	N	P	Q	wt
.35	.19	.19	.35	.25	.350	.600	grams
8.89	4.83	4.83	8.89	6.35	8.89	15.24	75

## Electrical Specifications at 25°C

Parameter	Frequency (GHz)	Conditions	Min.	Typ.	Max.	Units
Frequency range			6	—	12	GHz
Insertion Loss	6 - 12	Vctrl = 0V	—	0.8	1.6	dB
Return Loss	6 - 12	Vctrl = 0V	8.5	15	—	dB
Attenuation Range <sup>(1)</sup>	6 - 12	Vctrl = 0 - 0.85V	—	—	20	dB
Control Voltage	6 - 12	@20dB attenuation	—	—	0.85	V
Control Current	6 - 12	@20dB attenuation	—	—	40	mA

1. Attenuation is the relative insertion loss with reference to the insertion loss at Vctrl=0V.

## Electrical Schematic



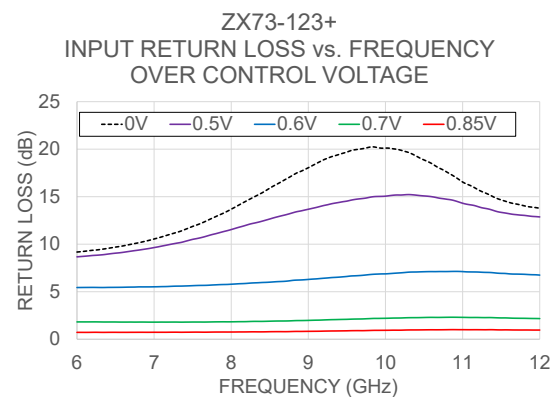
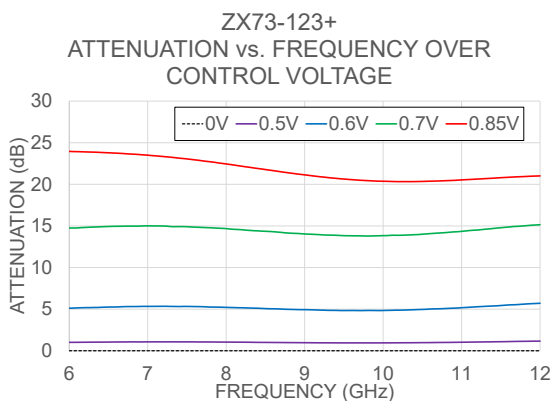
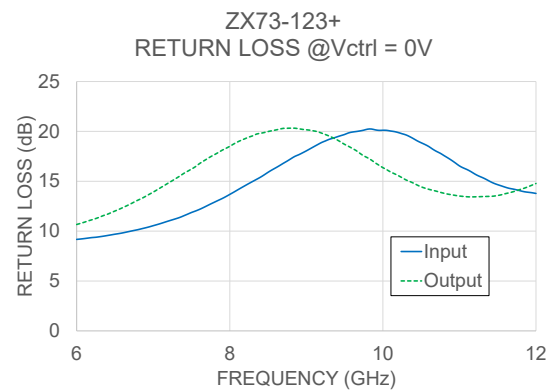
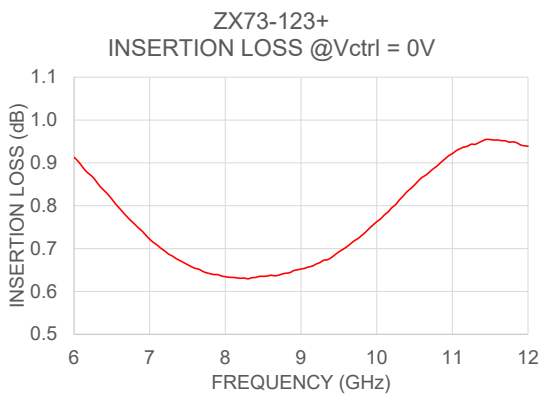
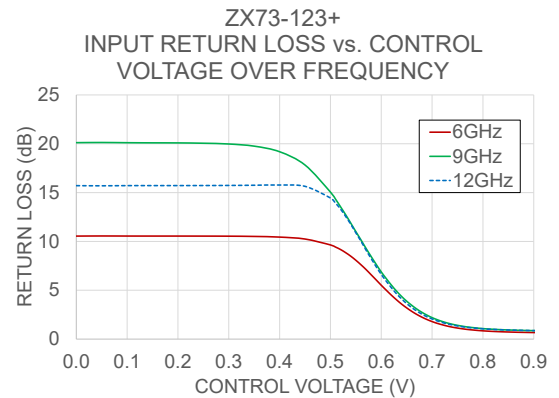
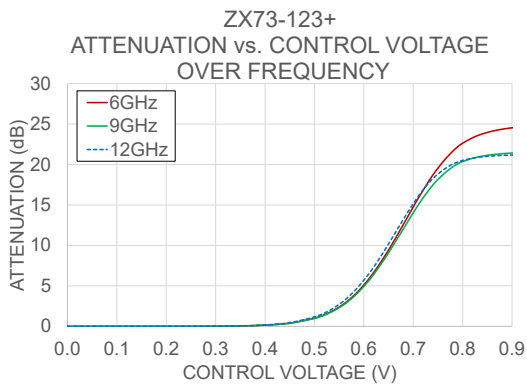
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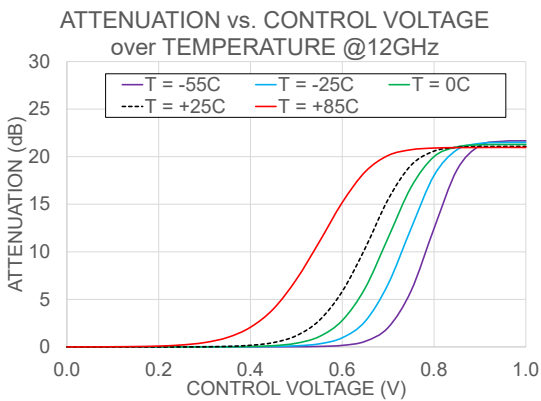
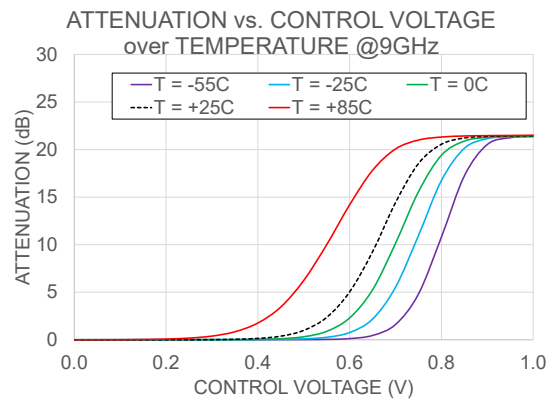
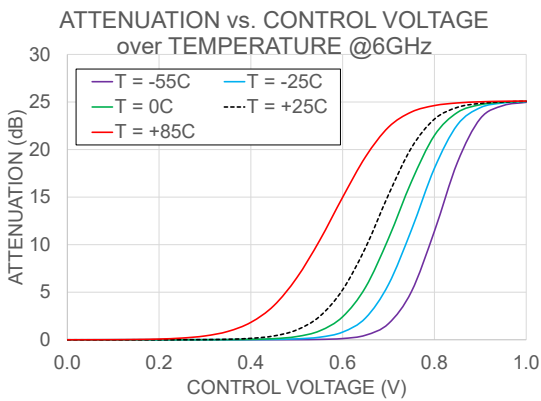
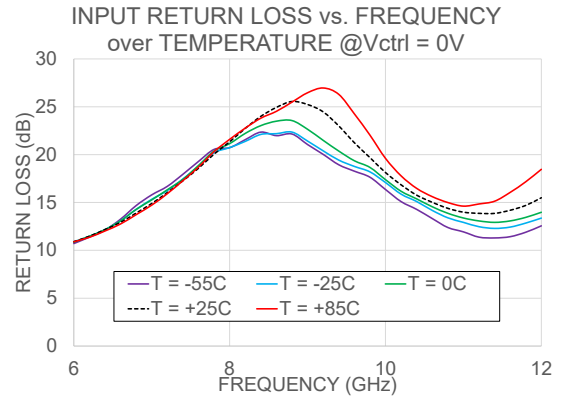
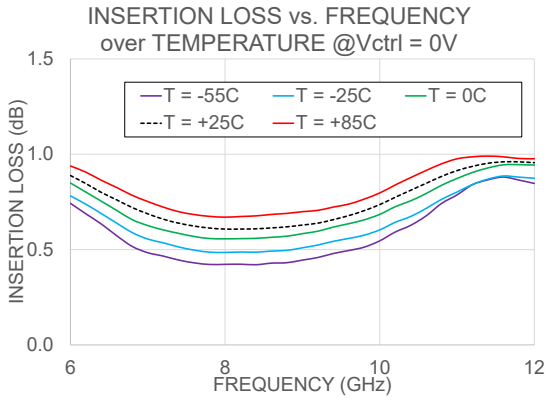
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