

High Performance Impedance Transformers



Products:

DEV 8131/option - L-Band Impedance Transformer, 75/50 Ohm

DEV 8132/option - CATV-Band Impedance Transformer, 75/50 Ohm

Features:

- /// Impedance Transformer for CATV-Band or L-Band Applications
- /// Low Loss Impedance Transformation
- /// Various Connector Combinations available
- /// Solid Metal Housing in 2 Sizes

Application Areas:

- /// Satellite Ground Stations
- /// Cable Head End Stations
- /// ... all Applications where 75/50 Ohm Transformation (or vice versa) is required



DEV 813x (standard) (Precision F (f) to SMA (f))



DEV 813x/05m03 (N (m) to N (f))

The Situation

In professional RF applications the combination of devices with different impedances is increasing. Low loss impedance transformation between 75 Ohm and 50 Ohm impedance and vice versa is essential.

DEV worked out a Solution

DEV Systemtechnik developed the impedance transformer DEV 8131 for applications in the frequency range up to 2,2 GHz, the impedance transformer DEV 8132 is especially designed for applications in the CATV-Band.

Particularly, the development aimed towards low loss transformation and versatility of combining different connectors on both ports of the impedance transformer.

The Technical Concept

In the standard configuration, the impedance transformers are equipped with a female Precision F connector on the 75 Ohm port and with a female SMA connector on the 50 Ohm port.

But additionally, there are various options available to select the appropriate connector type for the specific application, please refer to the Order Information page of this data sheet.

The impedance transformer is delivered in one of two solid metal housing models; which type is dependant on the selected connector combination.

Technical Data

DEV 8131 / DEV 8132 High Performance Impedance Transformers

RF Specifications

Frequency range	47...862 MHz	(DEV 8132)
	DC, 900...2200 MHz	(DEV 8131)
	900...2200 MHz	(DEV 8131 with Option 15)
Impedance, connectors	75 Ohm, Precision F (f)	(standard, no option code)
	75 Ohm, BNC (f)	(option code: 04)
	75 Ohm, N (f)	(option code: 05)
	75 Ohm, N (m)	(option code: 05m)
	50 Ohm, SMA (f)	(standard, no option code)
	50 Ohm, SMA (m)	(option code: 02m)
	50 Ohm, BNC (f)	(option code: 01)
	50 Ohm, BNC (m)	(option code: 01m)
	50 Ohm, N (f)	(option code: 02)
	50 Ohm, N (m)	(option code: 03m)
Return loss	>15 dB	(DEV 8132, 75 Ohm port)
	>16 dB	(DEV 8131, 50 Ohm & 75 Ohm port)
		(DEV 8132, 50 Ohm port)
Insertion loss	<1 dB	

General Specifications

Housing	“Small” housing: ~0,8“ (20 mm) x ~0,7“ (18 mm), ~2“ (50 mm) depth “Large” housing: 1“ (25,4 mm) x 1“ (25,4 mm), 1,5“ (38 mm) depth
Weight	~0,3 kg
Environmental conditions	ETS 300019 Part 1-3 Class 3.1

DEV 8131 / DEV 8132



Order Information

DEV 8131/ option	L-Band Impedance Transformer, 75/50 Ohm
DEV 8132/ option	CATV-Band Impedance Transformer, 75/50 Ohm

Additional Options

Option 15	DC blocked (for DEV 8131 only)
DEV 71-0110	Adaptor Precision F (m) - Precision F (m)

Remarks

If no **/option** is specified, the impedance transformer DEV 813x will be delivered in the “small” housing (20 x 18 x 50 mm) with a Precision F (f) connector on the 75 Ohm port and a SMA (f) connector on the 50 Ohm port.

If other connectors are required, please select a connector combination from the following matrix:

- Empty fields denote connector combinations which are not available as a standard product. Please contact DEV Systemtechnik.
- Impedance transformers with connector combinations which are located in **grey coloured fields** will be delivered in the “large” housing (25,4 x 25,4 x 36 mm)., otherwise in the “small” housing.

50 Ohm Port \ 75 Ohm Port		75 Ohm Port					
		SMA (f) [-]	SMA (m) [02m]	BNC (f) [01]	BNC (m) [01m]	N (f) [03]	N (m) [03m]
Precision F (f)	[-]	(standard)	02m	01	01m	03	03m
BNC (f)	[04]	04	0402m	0401	0401m	0403	0403m
N (f)	[05]			0501	0501m	0503	0503m
N (m)	[05m]			05m01	05m01m	05m03	05m03m

Order Examples

DEV 8131	(standard) L-Band Impedance Transformer, with a female Precision F connector on the 75 Ohm port and a female SMA connector on the 50 Ohm port, delivered in the “small” housing.
DEV 8132/0401m	CATV-Band Impedance Transformer, with a female BNC connector on the 75 Ohm port and a male BNC connector on the 50 Ohm port, delivered in the “small” housing.
DEV 8131/0503 with Option 15	DC-blocked L-Band Impedance Transformer, with a female N connector on the 75 Ohm port and a female N connector on the 50 Ohm port, delivered in the “large” housing.

Contact

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