PT-8CLR

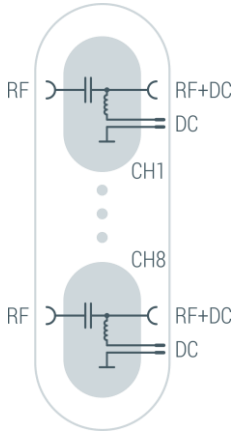
8 Channel DC Load, 100 kHz…8500 MHz

Features

- selectable DC load in each channel
- currents up to 400 mA
- optical indication of phantom voltage
- compact 1 U device

Applications

- broadcast radio
- cellular radio
- wireless communication
- infotainment test
- product validation
- R&D
- production



Scope

The PT-8CLR is specially designed for phantom supply test of infotainment components. Each channels of the PT-8CLR is equipped with ultra-wideband BIAS-Ts which are useable for DC currents up to 400 mA.
The presence of phantom voltages for each channel is indicated by LEDs on the front side of the device.

Compact

The PT-8CLR contains eight independent RF-channels, each with a DC current load capability of up to 400 mA in only 1 U.

Wideband

The RF path of each channel is designed for the frequency range 100 kHz to 8500 MHz. Thereby the PT-8CLR is suitable for all common broadcast, cellular radio and wireless standards.

Flexibility

The eight DC outputs of the ultra-wideband BIAS-Ts are presented on connectors at the rear side of the PT-8CLR. The desired current load for each channel can be set by resistors.

Specifications

Parameter	Symbol	Min	Typ	Max	Unit	Condition
impedance	Z		50		Ohm	
number of channels	n		8			CH1…CH8
low frequency	f_{min}		50	100	kHz	
high frequency	f_{max}	8000	8500		MHz	
return loss	S_{11}, S_{22}		-25	-14	dB	f ≤ 5 GHz
	S_{11}, S_{22}		-18		dB	f > 5 GHz
insertion loss	S_{21}		-0.6	-1.0	dB	f ≤ 4 GHz
	S_{21}		-1.5		dB	f > 4 GHz
channel isolation	S_{12}		-105	-80	dB	f ≤ 6 GHz
	S_{12}		-90		dB	f > 6 GHz
RF power	P_{in}			+30	dBm	
DC voltage	U_{DC}			20	V	at RF ports
ESD discharge resistor	R_{ESD}		4.7		kΩ	
connectors	X1n/X2n	SMA female				

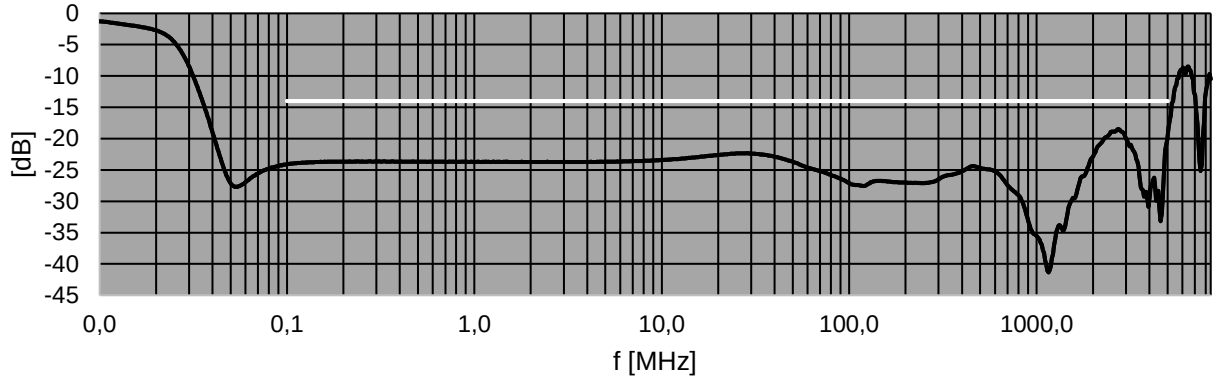
Current Outputs

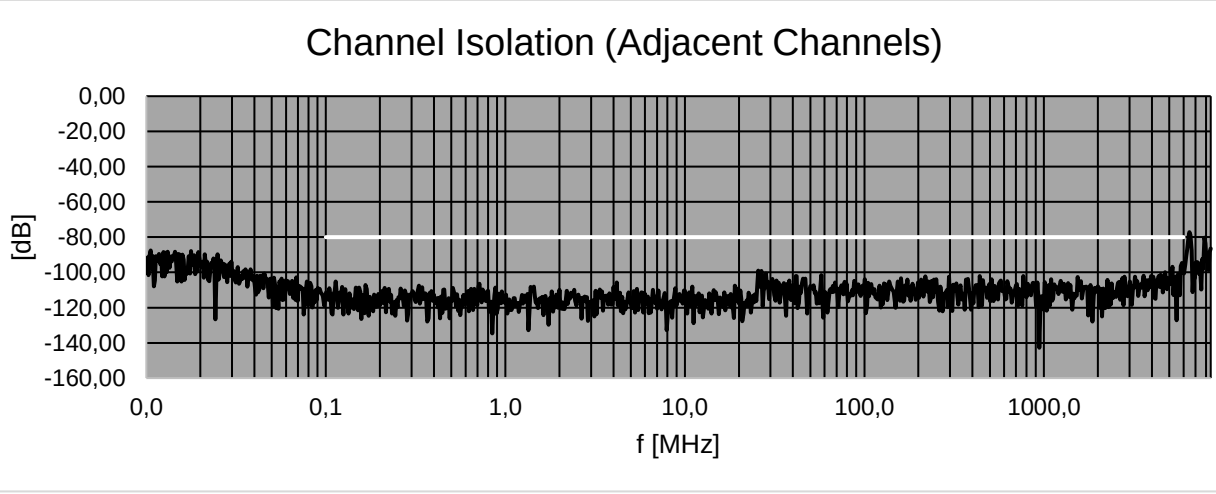
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
voltage range	U_{PH}	0		18	V	at RF+DC ports
current	I_{PH}	0		400	mA	
phantom voltage LED	U_{ID}	2			V	indication of phantom voltage
DC resistance	R_{BIAS}		2		Ω	of BIAS-T coils
DC connectors	X7n	Würth WR-TBL3641-2-3.5				8 pcs included in delivery

Common Specifications

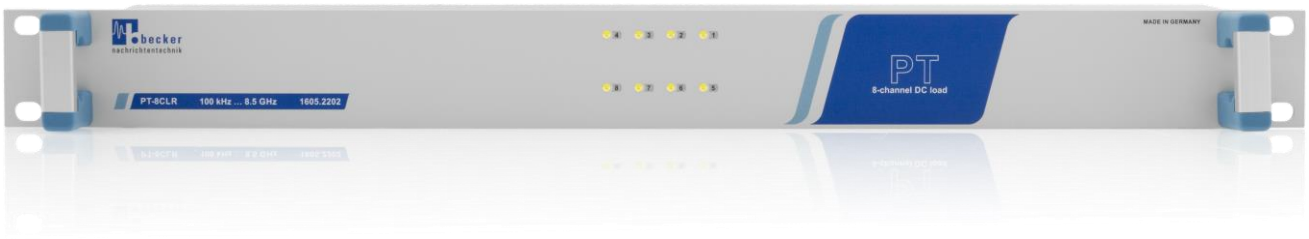
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
dimensions	W x H x D	approx. 482 x 44 x 180			mm	19”, 1 U
weight	m		2.6		kg	
operating temp. range	T_o	+5		+40	°C	
storage temp. range	T_s	-40		+70	°C	
ordering information		PT-8CLR		1605.2202.1		8 Channel DC Current Load

S-Parameters (typical responses)

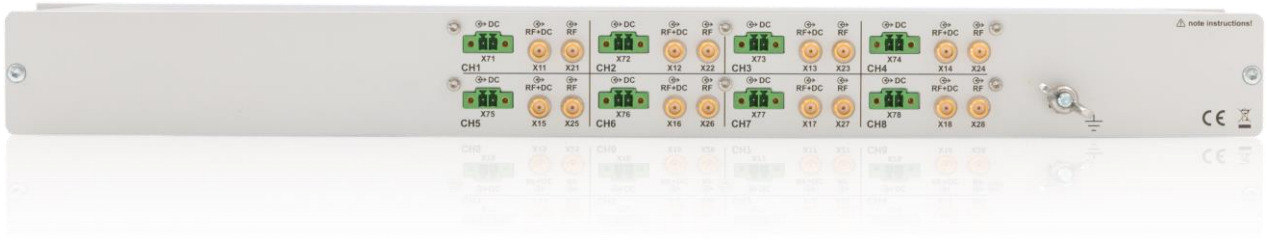




Front View

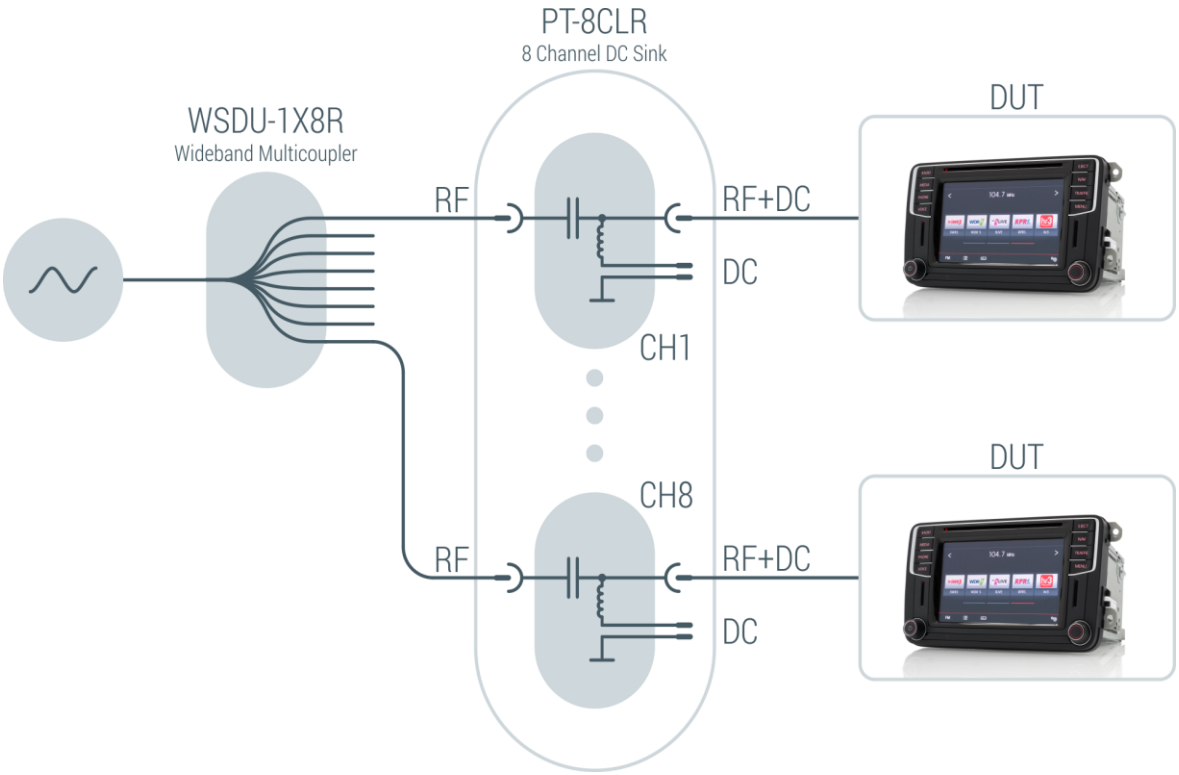


Rear View



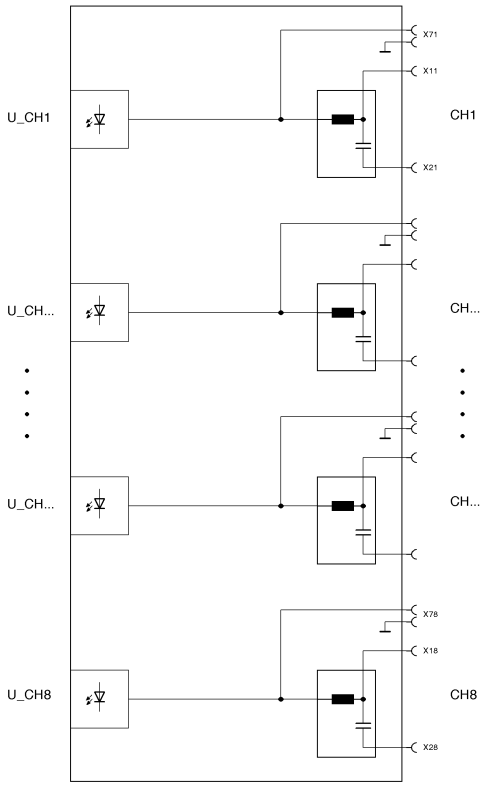
Application Example

Test of Car Infotainment Equipment



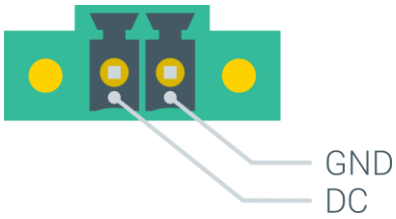
The block diagram shows an eight channel test setup.

Block Diagram



Pin assignment

Pin configuration of X71 … X78 (DC Connector):



Related Products

Product	Description	P/N
SR6-11C	System Platform with 11 Slots	1409.1202.1
PT-4CL	4 Channel DC Load, 0…400 mA, 100 kHz…8500 MHz	1605.2040.1
PT-4CS	4 Channel Programmable DC Current Sink 0…400 mA, 100 kHz…8500 MHz	1605.2020.1
SR6-CU	Controller Unit with LAN and USB	1409.3000.1
WSDU1X8	High Dynamic 1X8 Multicoupler Slot-In Module 100 kHz … 4000 MHz	1202.6100.1
WSDU-2X4E+	Two Channel 1X4 plus One Channel 1X2 Multicoupler Module 20... 8000 MHz	1502.6200.1
WSDU-1X8S	8 Way Multicoupler for the Short Wave Range 1.7 … 30 MHz	1502.6100.1
RSWU-8SPSTS	8 Channel Non-reflective SPST Switch 100 kHz … 8500 MHz	1408.4000.1
RSWU-4SPDTS	4 Channel Non-reflective SPDT Switch 100 kHz … 8500 MHz	1408.4020.1
RSWU-2SP4TS+	2 Channel SP4T plus 1 CH SP2T Switches 100 kHz … 8500 MHz	1408.4040.1
FDMX	Frequency De-Multiplexer for Broadcast and Navigation Signals	1310.6003.1
FDMX-PT	Frequency De-Multiplexer for Broadcast and Navigation Signals with programmable current sinks	1310.6003.2