PT-HCL

High Current BIAS-T, 10 MHz …10 GHz, 2.5 A

Features

- Compact design
- High current capability
- Extremely wideband

Applications

- Camera infotainment validation
- EOL testing

At a Glance

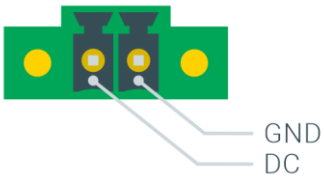
Modern product validation systems have to be designed for the increasing number of peripheral devices. Due to the very high data rates and the small amount of space available, sensors and cameras are often supplied with voltage via phantom power.

PT-HCL is a high current BIAS-T module offering an extremely wide frequency range.

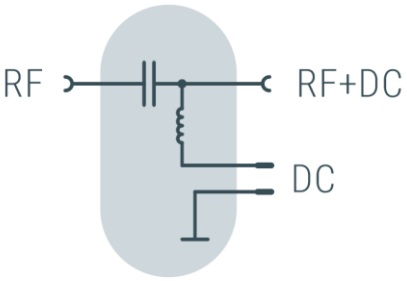
High Current Capability

Due to its extremely high current capability, the module is able to test peripheral devices that consume much power, such as video cameras.

DC connector assignment



Principle Circuit



RF Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
impedance	Z_{in} / Z_{out}		50		Ohm	
low frequency	f_{min}		3*1	10	MHz	
high frequency	f_{max}	10	12		GHz	
insertion loss	S_{21}	-2	-1		dB	f ≤ 4 GHz
		-3	-2			f > 4 GHz
return loss	S_{11}		-15	-10	dB	20 MHz ≤ f ≤ 10 GHz
RF power	P_{CWTR}			+23	dBm	CW, f > 10 MHz
	$P_{PULSETR}$			+33*2	dBm	pulse, f > 10 MHz
DC voltage	U_{DC}		20	24	V	DUT ports
DC current	I_{DC}			± 2500	mA	DUT ports
internal DC resistance	R_{DC}		80	150	mΩ	SHORT to GND
DC capacitance			100		nF	
ESD discharge resistor	R_{ESD}		4.7		kΩ	RF Port only
RF connectors	X_{RF}	SMA female				
DC connectors	X_{DC}	2 pole				
connector type	X_{DC}	Würth WR-TBL3641-2-3.5-W				
counter part	X_{DC}	Würth WR-TBL3641-2-3.5				1 pce is part of delivery

*1 -3dB Bandwidth

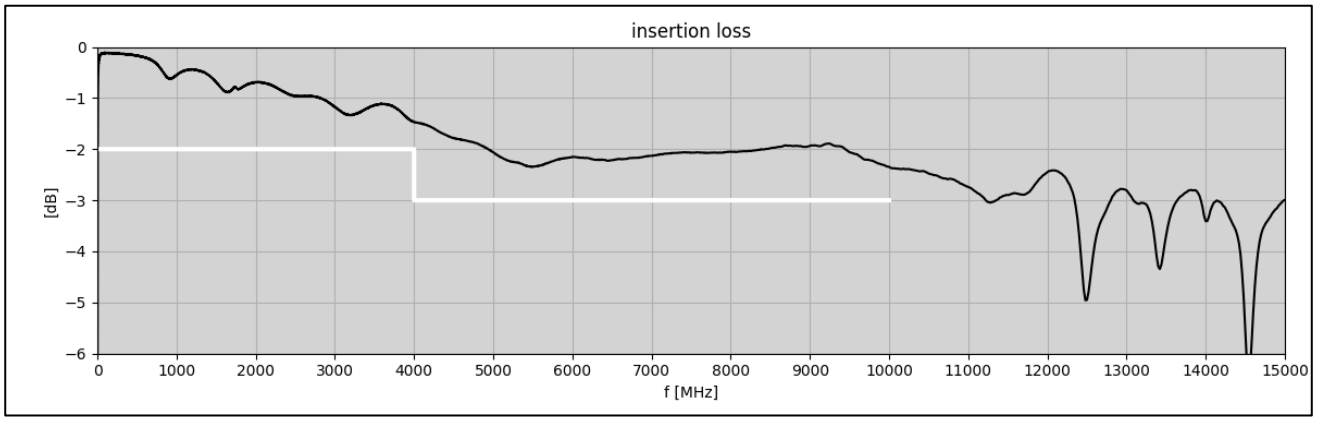
*2 burst < 0.1 s, repetition rate > 1 s

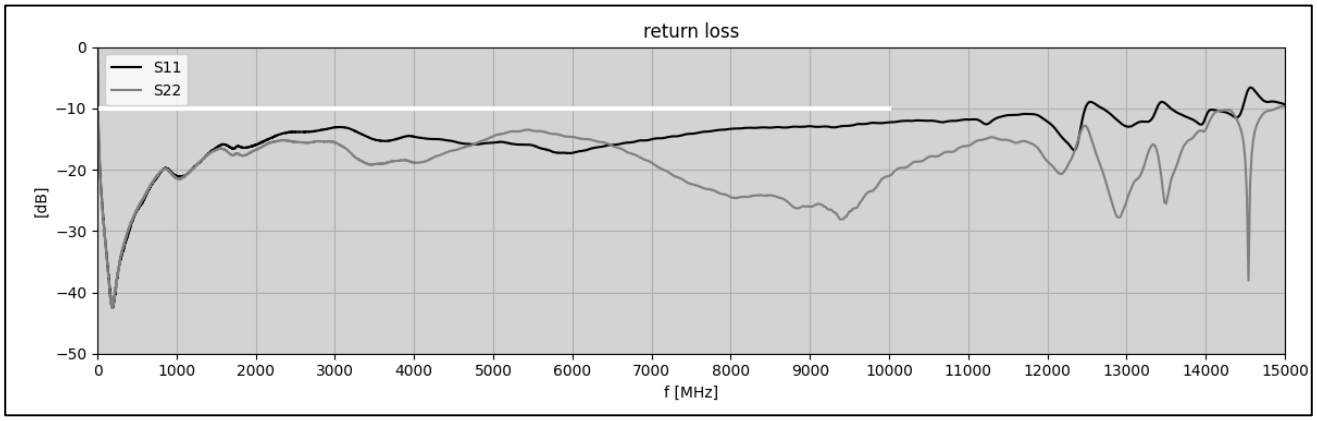
Common Specifications

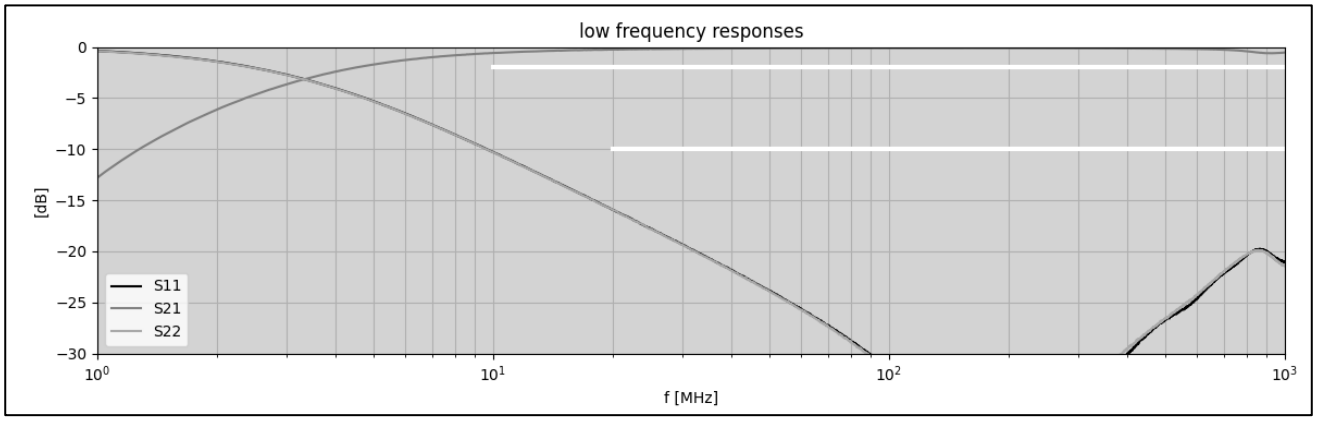
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
dimensions	W x H x D	approx. 35 x 32 x 17			mm	
weight	m		40		g	
operating temp. range	T_o	+5		+60	°C	
storage temp. range	T_s	-40		+70	°C	

Ordering information	Designation	P/N:	Remarks
High Current BIAS-T 10 MHz …10 GHz, 2.5 A	PT-HCL	2309.2101.1	

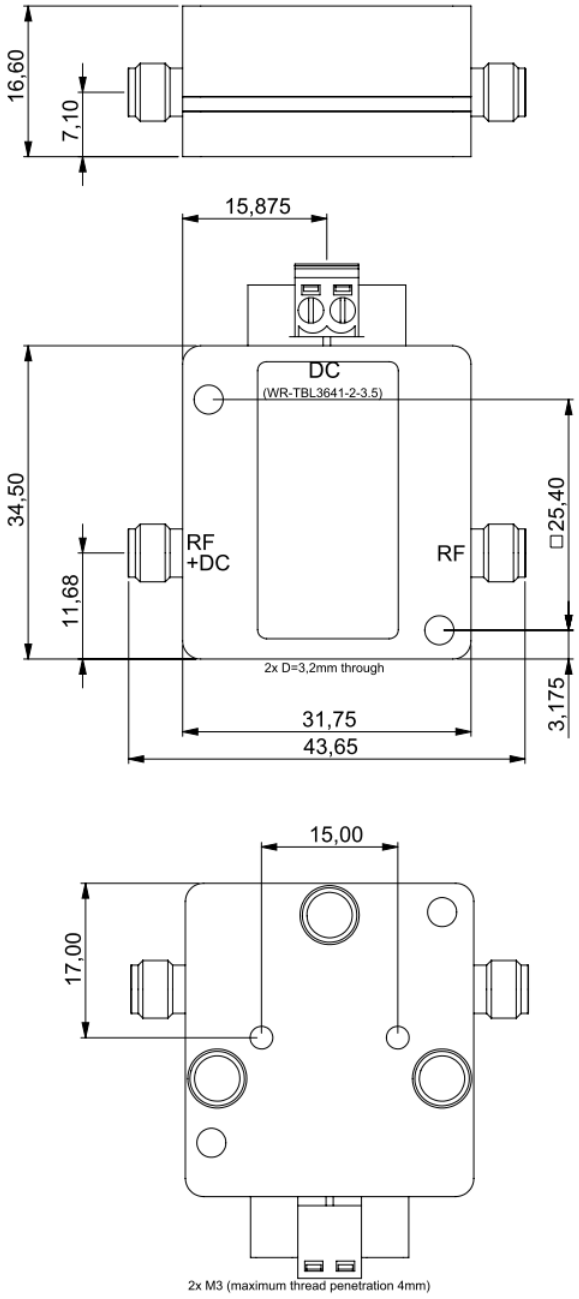
S-Paramters (typical responses)







Dimensions


16,60
7,10
15,875
DC
(WR-TBL3641-2-3.5)
34,50
11,68
RF
+DC
RF
□25,40
2x D=3,2mm through
31,75
43,65
3,175
15,00
17,00
2x M3 (maximum thread penetration 4mm)