



## Test Data Sheet

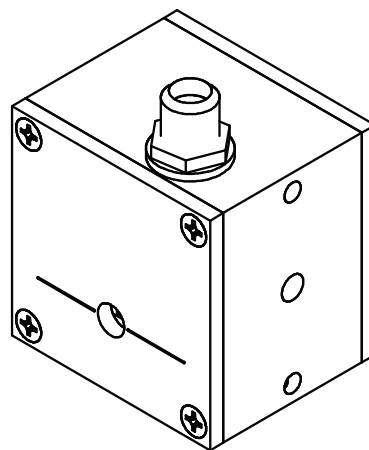
**EO-DC3L-IR**

S/N:

### Non-Resonant electro-optic phase modulator

with

- thermal crystal mount
- temperature sensor (NTC)



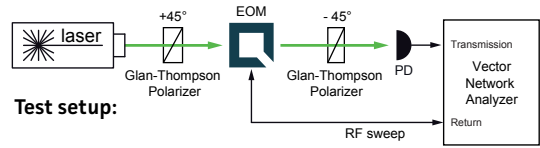
RF properties	Value	Unit
Bandwidth (3dB): $\Delta\nu$	DC ... >400	MHz
$V\pi$ (DC) @ 1550 nm <sup>2)</sup>	1.0	kV
max. Voltage (DC)	500	V
Capacitive load (DC)	~6	pF

Optical properties		
EO crystal	LN	
Aperture	3x3	mm <sup>2</sup>
Wavefront distortion (633nm)	$\lambda/6$	nm
max. optical intensity (1550nm)	<1	W/mm <sup>2</sup>
AR coating (R<1%)	1.0 - 1.7	um
Transmission (1550nm)	>95	%

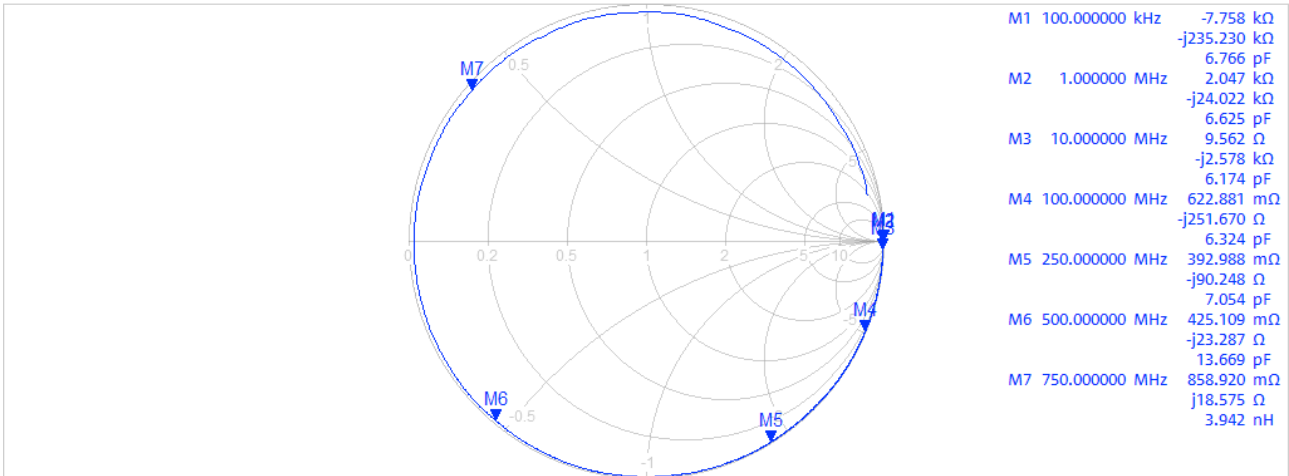
<sup>1)</sup> at 24.3°C <sup>2)</sup> with 50Ω termination <sup>3)</sup> no damage with  $RF_{in} < 5W$

# RF characteristics

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1328.5170K92-100178-XI

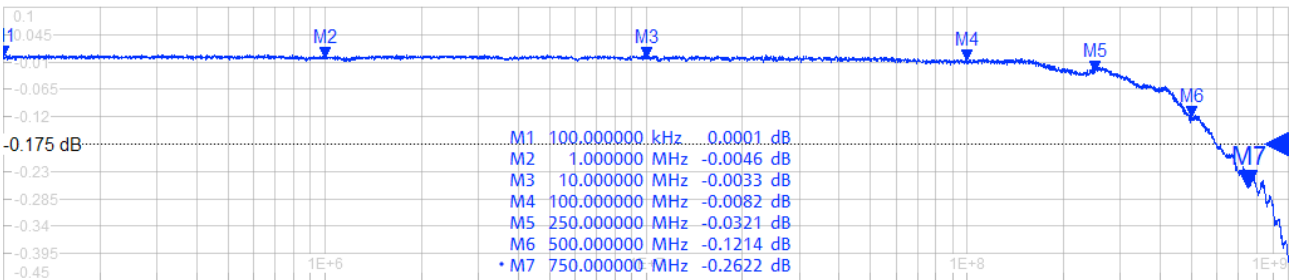


Trc4 — S11 Smith 200 mU/ Ref 1 U Cal



Ch1 Start 100 kHz Pwr -10 dBm Bw 10 kHz Stop 1 GHz

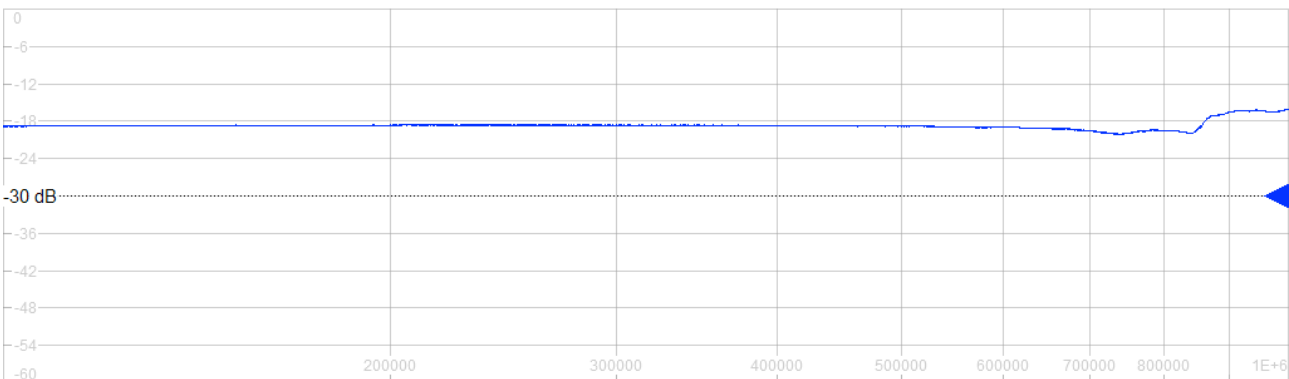
Trc5 — S11 dB Mag 0.055 dB/ Ref -0.175 dB Cal



Ch1 Start 100 kHz Pwr -10 dBm Bw 10 kHz Stop 1 GHz

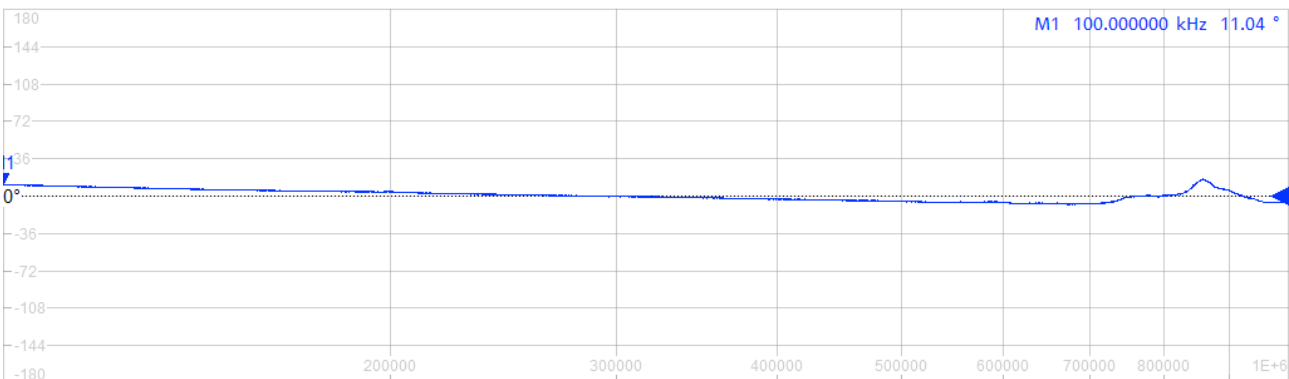
8/6/2015 9:40:34 AM  
1328.5170K92-100178-XI

Trc1 — S21 dB Mag 6 dB/ Ref -30 dB



Ch1 Start 100 kHz Pwr -10 dBm Bw 10 kHz Stop 1 MHz

Trc2 — S21 Phase 36°/ Ref 0°

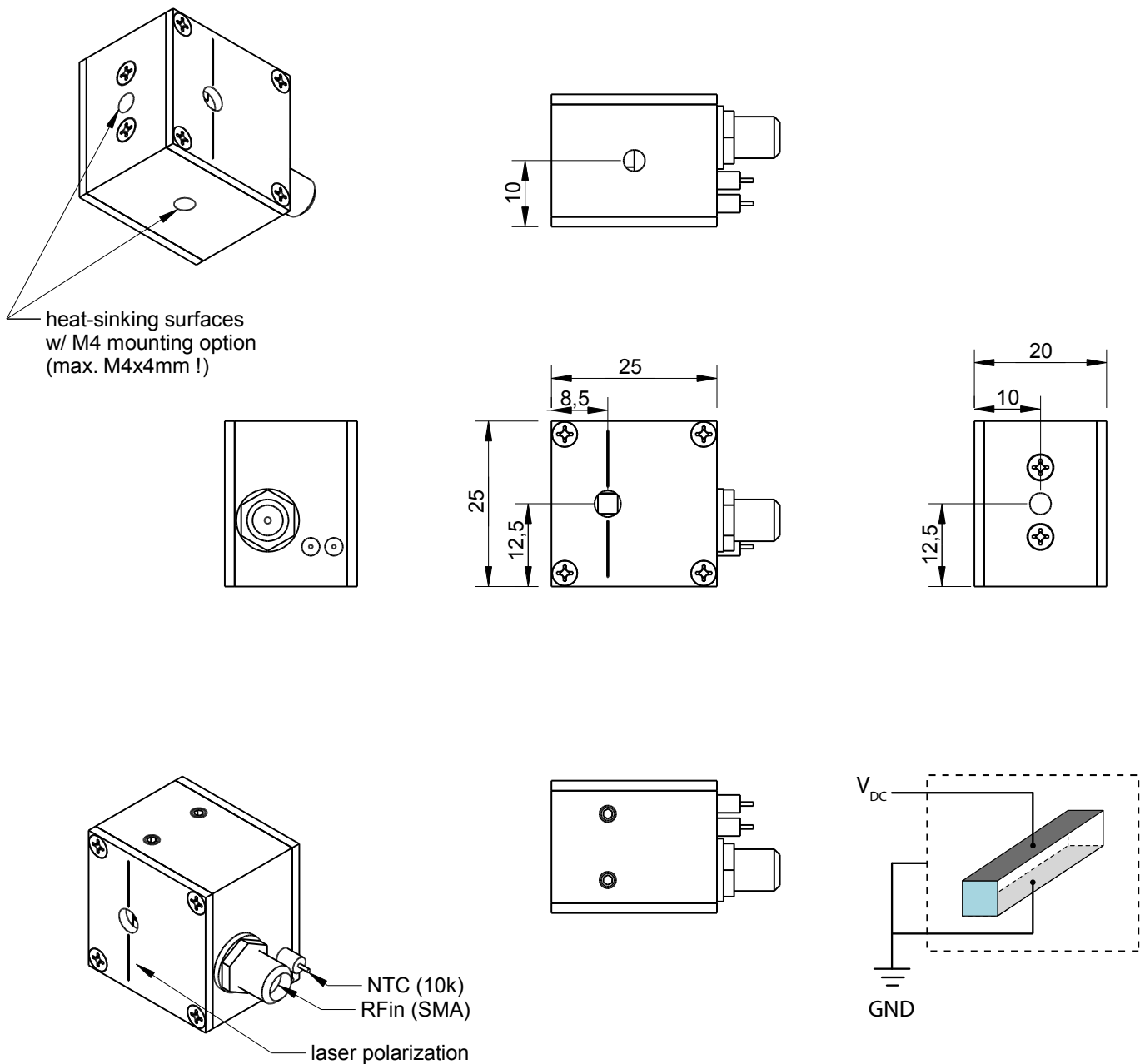


Ch1 Start 100 kHz Pwr -10 dBm Bw 10 kHz Stop 1 MHz

## Handling instructions

- Input laser polarization must be aligned with respect to the white markers on the housing
- Please handle device carefully. Avoid shock. Don't drop.
- After turn on the resonance frequency might drift slightly with applied rf power. Please compensate by tuning the rf drive frequency until steady-state (~min).

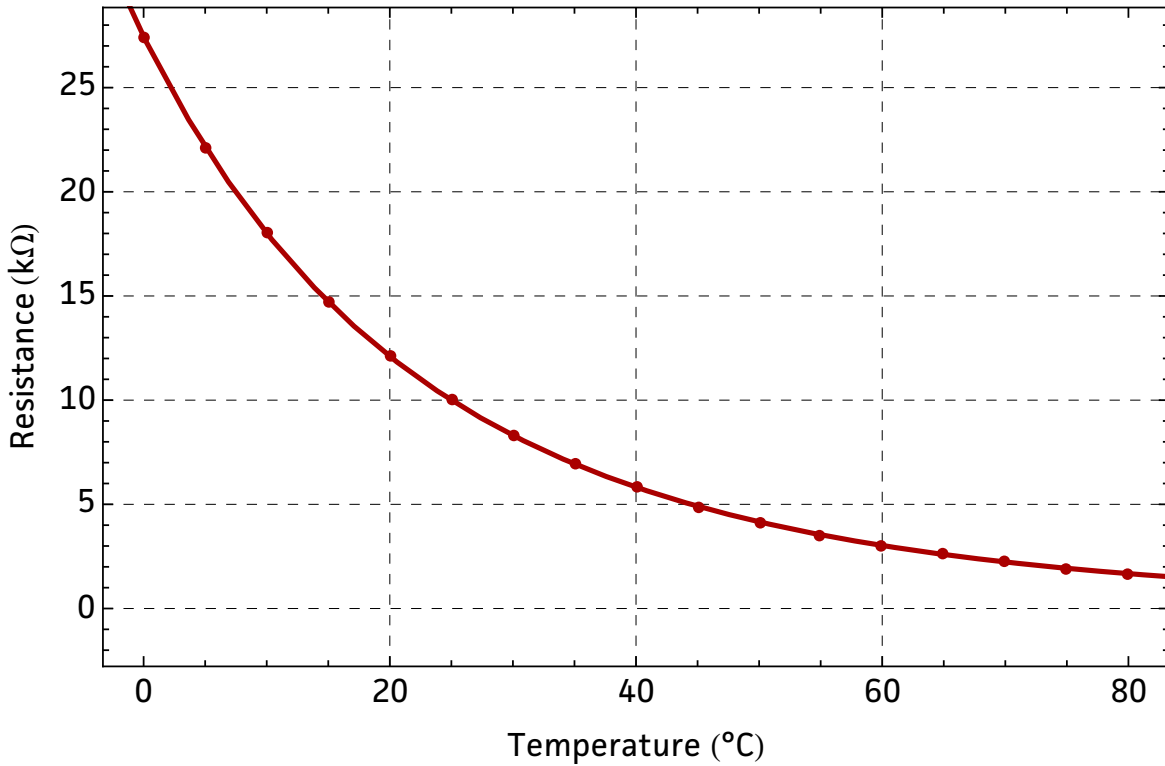
## Package drawing



## Temperature sensor characteristics

NTC part number	Resistance (25°C) (ohm)	B-Constant (25-50°C) (K)	Operating Current for Sensor (25°C) (mA)	Rated Electric Power (25°C) (mW)	Typical Dissipation Constant (25°C) (mW/°C)	Thermal Time Constant (25°C) (s)
NXFT15XH103FA2B050	10k +/- 1%	3380 +/- 1%	0.12	7.5	1.5	4

Part Number	NXFT15XH103
Resistance	10kΩ
B-Constant	3380K
Temp. (°C)	Resistance (kΩ)
-40	197.388
-35	149.395
-30	114.345
-25	88.381
-20	68.915
-15	54.166
-10	42.889
-5	34.196
0	27.445
5	22.165
10	18.010
15	14.720
20	12.099
25	10.000
30	8.309
35	6.939
40	5.824
45	4.911
50	4.160
55	3.539
60	3.024
65	2.593
70	2.233
75	1.929
80	1.673
85	1.455
90	1.270
95	1.112
100	0.976
105	0.860
110	0.759
115	0.673
120	0.598
125	0.532



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