

1. Specification

Frequency range:	2,048 MHz ... 16.384 MHz	
Standard frequencies (1) :	4.096; 5.0; 5.120; 6.4; 8.192; 10.0; 10.23; 10.24; 10.368 MHz	
Standard frequencies (2), multiplied frequencies :	12.0; 12.8; 13.0; 14.4; 16.384 MHz	
Type:	B	C
Frequency stability in the temperature range - 20°C to + 70°C:	$< \pm 2.5 \times 10^{-8}$ (1) $< \pm 5 \times 10^{-8}$ (2) $< \pm 1 \times 10^{-7}$ (3)	$< \pm 5 \times 10^{-9}$ (1) $< \pm 1 \times 10^{-8}$ (2) $< \pm 2 \times 10^{-8}$ (3)
vs. supply voltage changes $U_B \pm 5 \%$ vs. load changes 50 Ohm $\pm 10 \%$:	$< \pm 2 \times 10^{-9}$ $< \pm 2 \times 10^{-9}$	$< \pm 1 \times 10^{-9}$ $< \pm 1 \times 10^{-9}$
Long term stability after 30 days of operation:	$< \pm 3 \times 10^{-9}$ per day $< \pm 1 \times 10^{-7}$ per year	$< \pm 5 \times 10^{-10}$ per day $< \pm 5 \times 10^{-8}$ per year
Short term stability:	$< \pm 1 \times 10^{-11}$	
Frequency control range with ext. trimmer 20 kOhm or external voltage 1 ... 5 V:	$\geq \pm 4 \times 10^{-7}$	$\geq \pm 3 \times 10^{-7}$
Supply voltage U_B :	12 V $\pm 10 \%$	
Current consumption at steady state @ - 20°C: @ + 25°C:	< 50 mA < 40 mA	< 120 mA < 95 mA
Peak Current consumption during warm-up:	< 400 mA	< 600 mA
Warm-up time within $\leq \pm 1 \times 10^{-7}$: within $\leq \pm 5 \times 10^{-8}$:	< 7 min. @ -20°C < 5 min. @ +25°C < 8.5 min. @ -20°C < 7.0 min. @ +25°C	
Temperature ranges Operating: Storage:	-20°C ... + 70°C -55°C ... + 85°C	
Output voltage : load : duty cycle :	HCMOS Low < 1.0 V; High > 4.0 V 1 kOhm // 15 pF max. 2TTL or 10HCMOS 45 / 55 %	

Phase noise:

Frequencies (1):

1 Hz

10 Hz

100 Hz

1000 Hz

10000 Hz

- 85 dBc/Hz

-120 dBc/Hz

-130 dBc/Hz

-140 dBc/Hz

-150 dBc/Hz

Frequencies (2):

1 Hz

10 Hz

100 Hz

1000 Hz

10000 Hz

- 80 dBc/Hz

-115 dBc/Hz

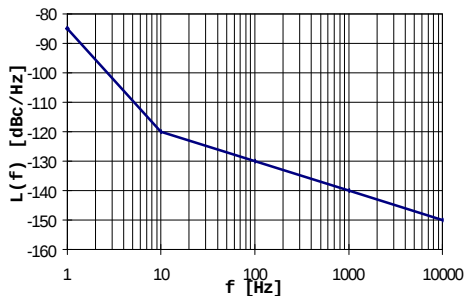
-130 dBc/Hz

-140 dBc/Hz

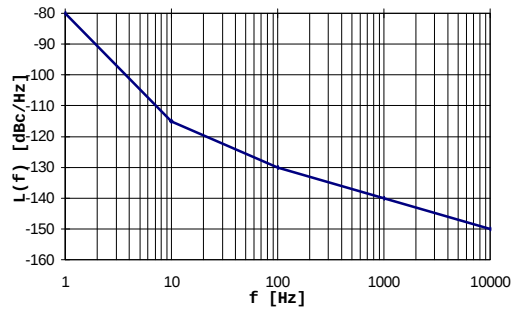
-150 dBc/Hz

Phase noise:

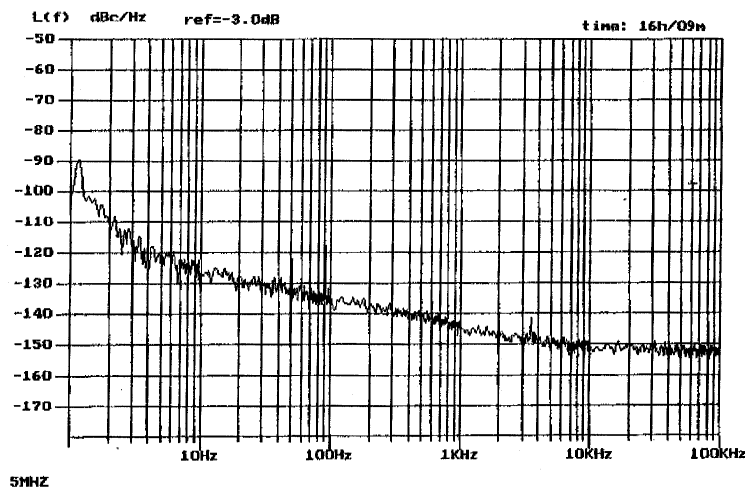
phase noise freq.1



phase noise freq.2



Typical phase noise for type OCXO-DELTA C1X , 5 MHz:



Ordering data:

e.g. OCXO-DELTA 16,384 MHz,

Version C

temperature stability: $\leq \pm 1 \times 10^{-8}$:

Case: BF-131 code Z :

C
2

Z $\Rightarrow$ OCXO-DELTA C2Z, 16,384 MHz



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2. Environmental conditions

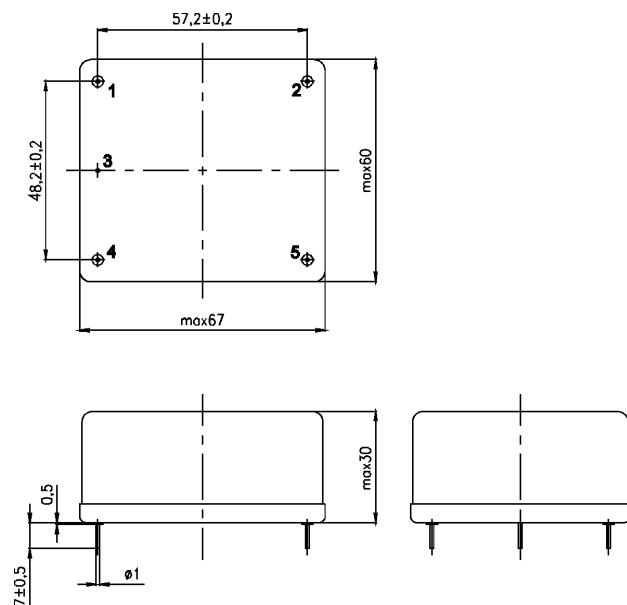
Shock:	DIN IEC 68-2-27, Test Ea, 100 g, 6ms Half-sine, 3 bumps in 3 main directions
Vibration:	DIN IEC 68-2-6, Test Fc, 10-500Hz, 10g, 2 h in 3 main directions
Humidity:	DIN IEC 68-2-3, 40°C/93%RH, 21 days
Solderability:	DIN IEC 68-2-20 only for wire leads, Methode 3: Solder globule at + 235°C

3. Marking

Manufacturer's name, date code(week/year)
Specification
Center frequency

4. Case

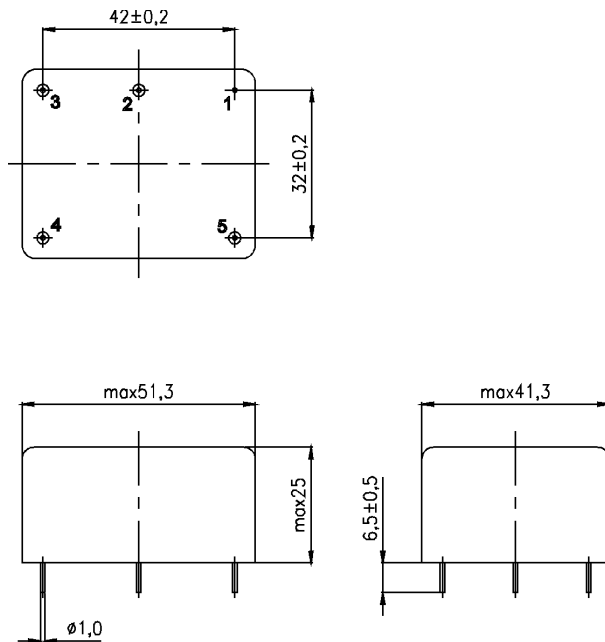
Case style: BF-133 67 x 60 x 30 mm (X)



Pin configuration

1. RF-output
2. Potentiometer (Vref out)
3. Ground, case, potentiometer
4. Potentiometer SL (VC in)
5. Supply voltage

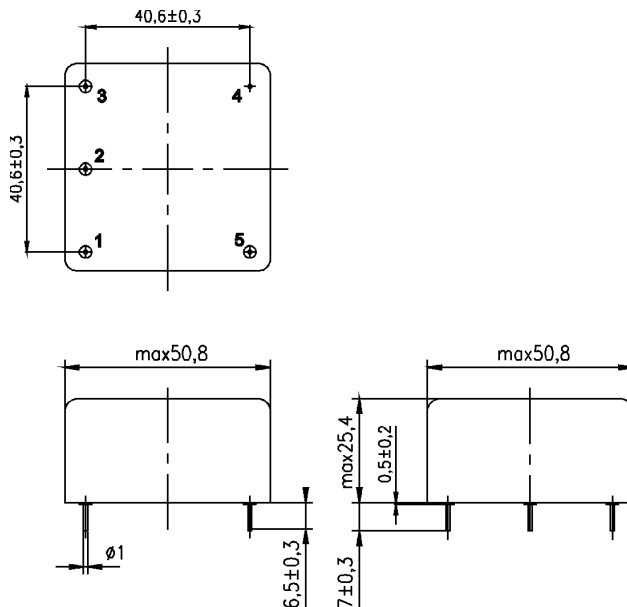
Case style: BF-138 51,3 x 41,3 x 25 mm (Y)



Pin configuration

1. Ground, case, potentiometer
2. Potentiometer SL (VC in)
3. Potentiometer (Vref out)
4. Supply voltage
5. RF-output

Case style: BF-131 50 x 50 x 25,4 mm (Z)



1.Pin configuration

1. Potentiometer SL (VC in)
2. Potentiometer (Vref out)
3. RF-output
4. Ground, case, potentiometer
5. Supply voltage

5. Test circuits



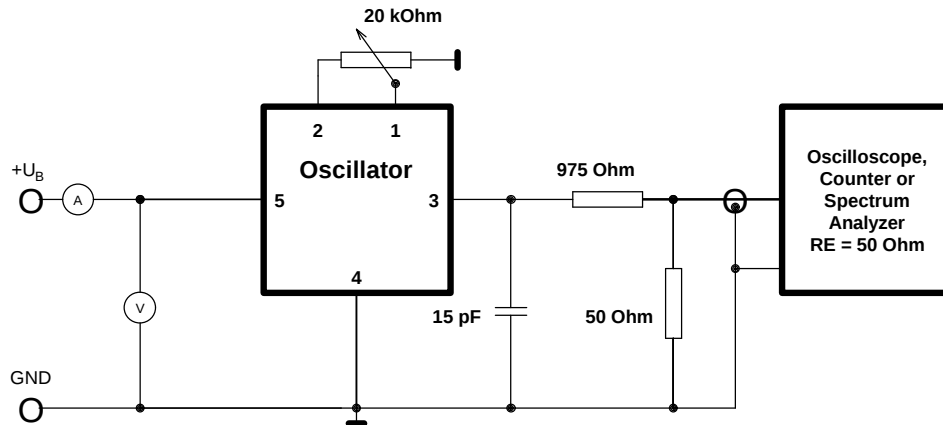
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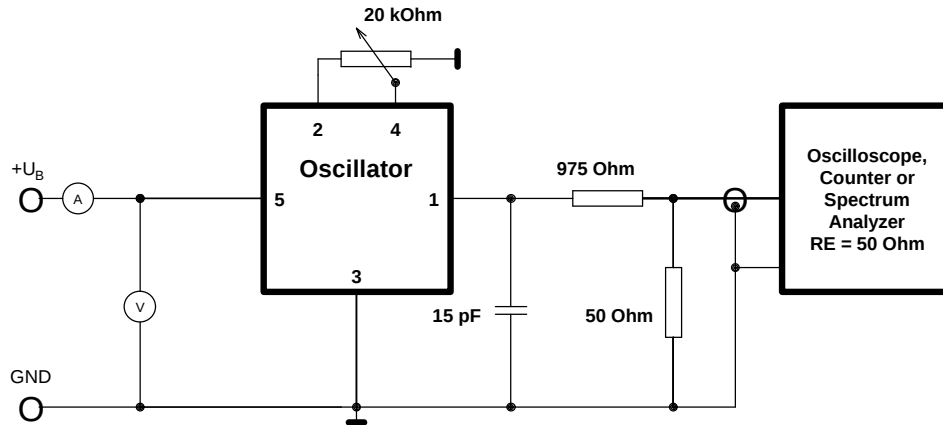
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OCXO-DELTA

Test circuit BF-131



Test circuit BF-133



Test circuit BF-138

