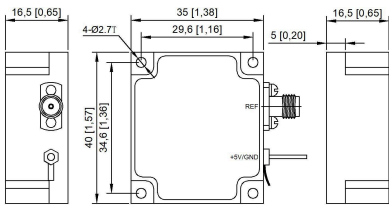


100 MHz OCXO with ±50 ppb Temperature Stability

Sine-wave reference with 8 dBm typical output, 4.8–5.2 V supply range and specified output characteristics from –55 to +85 °C.



Electrical specifications

Parameter	Value	Unit	Notes
Output frequency	100	MHz	Typical: 100 MHz.
Initial frequency accuracy	±0.2	ppm	Stated signed tolerance; not a scalar minimum limit. At +25 °C, 15 minutes after power-on, within 90 days of shipment.
Waveform	Sine wave	-	-
Output level	+6 / +8	dBm	Typical: 8 dBm. Minimum: 6 dBm.
Load impedance	50	Ω	Minimum: 50 Ω.
Harmonic level	≤-40	dBc	Maximum: -40 dBc.
Output spurious	≤-120	dBc	Offset from nominal frequency ±2 MHz. Maximum: -120 dBc.
Supply voltage	4.8 / 5.0 / 5.2	VDC	Typical: 5 VDC.
Startup current	600 / 700	mA	Typical: 700 mA. Minimum: 600 mA.
Steady-state power at +25 °C	1.0 / 1.3	W	Temperature: +25 °C. Typical: 1.3 W. Minimum: 1 W.
Steady-state power at -40 °C	2.0 / 2.3	W	Temperature: -40 °C. Typical: 2.3 W. Minimum: 2 W.

Frequency stability

Parameter	Value	Unit	Notes
Frequency stability with temperature	±50	ppb	Stated signed tolerance; not a scalar minimum limit. From –55 to +85 °C, relative to +25 °C.
Daily aging before shipment	±1	ppb	Stated signed tolerance; not a scalar minimum limit. Daily aging.
Daily aging	±1	ppb	Stated signed tolerance; not a scalar minimum limit. After 14 days of operation.
Yearly aging	±0.1	ppm	Maximum absolute aging magnitude; source display retains ±. Maximum: 0.1 ppm.

Frequency stability

Parameter	Value	Unit	Notes
Ten-year aging	±0.5	ppm	Maximum absolute aging magnitude; source display retains ±. Maximum: 0.5 ppm.
Supply-voltage sensitivity	±50	ppb	Stated signed tolerance; not a scalar minimum limit. Supply voltage variation ±5%.
Load sensitivity	±50	ppb	Stated signed tolerance; not a scalar minimum limit. Load variation ±5%.
Short-term frequency stability	0.05	ppb/s	Allan deviation retains the source unit ppb/s; averaging time is unspecified. Typical: 0.05 ppb/s.
Power-on frequency stability	±50	ppb	Stated signed tolerance; not a scalar minimum limit. At +25 °C, 5 minutes after power-on.
Acceleration sensitivity	≤0.5	ppb/g	All three axes. Maximum: 0.5 ppb/g.

Phase noise

Parameter	Value	Unit	Notes
Phase noise at 10 Hz	≤-100	dBc/Hz	Offset: 10 Hz. Maximum: -100 dBc/Hz.
Phase noise at 100 Hz	≤-130	dBc/Hz	Offset: 100 Hz. Maximum: -130 dBc/Hz.
Phase noise at 1 kHz	≤-160	dBc/Hz	Offset: 1 kHz. Maximum: -160 dBc/Hz.
Phase noise at 10 kHz	≤-175	dBc/Hz	Offset: 10 kHz. Maximum: -175 dBc/Hz.
Phase noise at 100 kHz	≤-178	dBc/Hz	Offset: 100 kHz. Maximum: -178 dBc/Hz.
Phase noise at 1 MHz	≤-178	dBc/Hz	Offset: 1 MHz. Maximum: -178 dBc/Hz.

Environmental limits

Parameter	Value	Unit
Temperature range for specified characteristics	−55–+85	°C
Extreme operating temperature	−55–+90 (Specified characteristics apply from −55 to +85 °C; operation outside that interval may fall outside specifications.)	°C
Storage temperature	−55–+105	°C

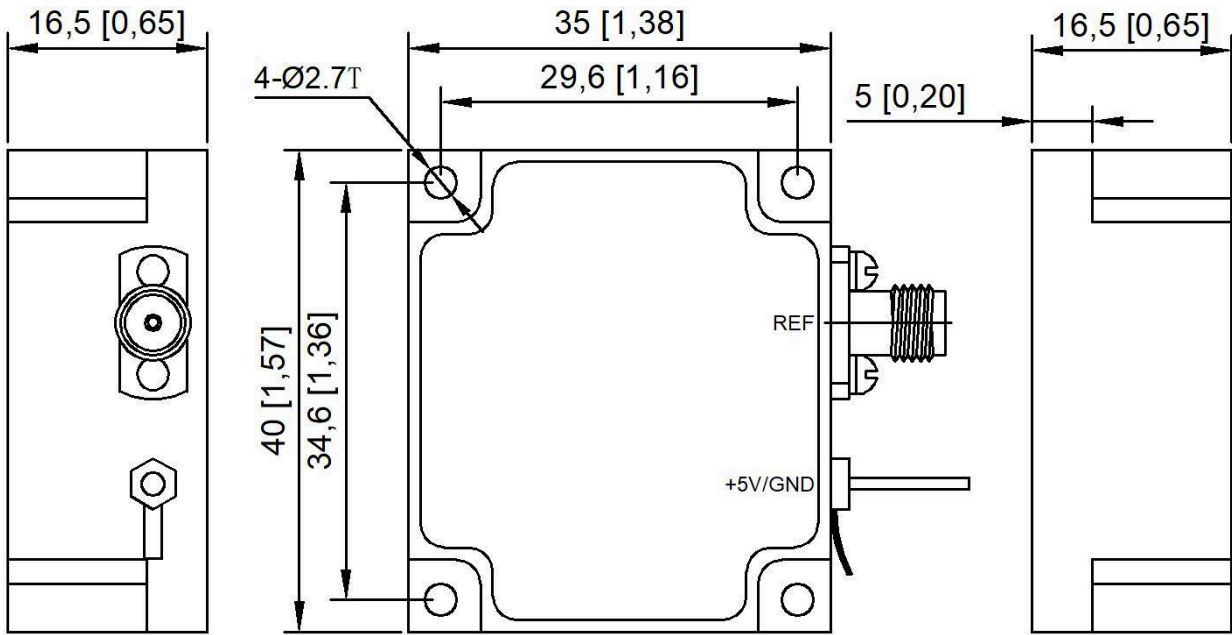
Interfaces and contacts

Parameter	Value	Unit
Power interface	+5 V / GND	-
RF output connector	REF (Source port label is retained; connector type is not specified.)	-

Mechanical specifications

Parameter	Value	Unit
Outline dimensions	35 × 40 × 16.5	mm
Mounting-hole center spacing	29.6 × 34.6	mm
Mounting holes	4 × Φ2.7	mm

Mechanical Outline



All dimensions are in mm [in].

Integration guidance

Parameter	Value	Unit
Control-pin state	Floating	-

Specified test conditions

Parameter	Value	Unit	Notes
Humidity test conditions	95% RH; +40 °C; 240 h	-	Specified test conditions; completed qualification is not established. GJB360A-96, method 103.

Specified test conditions

Parameter	Value	Unit	Notes
Nonoperating vibration test conditions	0.75 mm; 10–55 Hz	-	Specified test conditions; completed qualification is not established. GJB360A-96, method 201; nonoperating.
Nonoperating shock test conditions	30 g; 11 ms	-	Specified test conditions; completed qualification is not established. GJB360A-96, method 213; nonoperating, half-sine pulse.

Document notice

Specifications are subject to revision. Before design release, confirm the current document revision and product-specific requirements with LCRF. The approved quotation and order documentation define the supplied configuration.