

CRYSTAL OSCILLATORS

OVEN CONTROLLED CRYSTAL OSCILLATORS 9100 SERIES

■ Model 9161A • 9150A
9150B • 9140A

■ Main applications : Communications equipment,
Measuring instruments

■ Features • Excellent aging characteristics

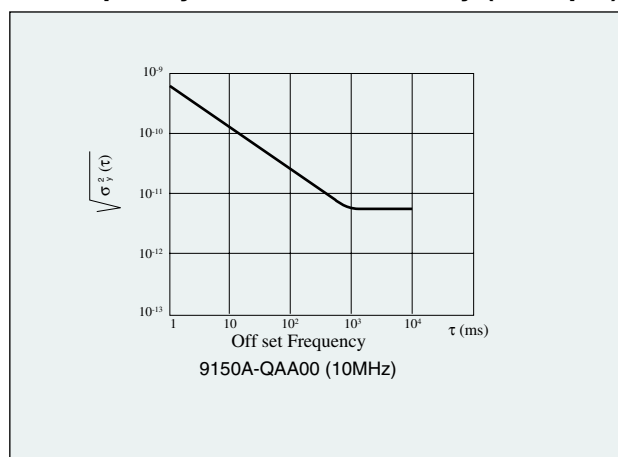
■ Specification

Model			9161A		9150A	9150B		9140A
Item	Measuring Condition	Spec. Code	CGQ00	CFQ00	QAA00	BEE40	BDE40	CFA00
Standard Nominal Frequency (MHz)			10					25
Supply Voltage			+30VDC		+24VDC	+12VDC		
Power Consumption			45W max		8.5W max	5W max		1.4W max
Output Level			10 ~ 16mW (+10~+12dBm)		1 ~ 1.58mW (0~+2dBm)	1V min		0.8 ~ 1.26mW (0dBm±1dB)
Load			50Ω			1kΩ		50Ω
Operating Temp. Range			-55~+85°C		0~+50°C	-10~+60°C		0~+50°C
Operable Temp. Range			-62~+95°C		-10~+60°C	-20~+70°C		-10~+70°C
Frequency Stability	Short-term Stability	Δ f/f (2, τ) 1 s	1×10 ⁻¹⁰ max		5×10 ⁻¹¹ max	5×10 ⁻¹⁰ max	1×10 ⁻¹⁰ max	—
	Aging	After 24H (* 1) or 48H (* 2) or 240H (* 3) operation	±1×10 ⁻⁹ max/day (* 2)		±5×10 ⁻¹⁰ max /day (* 2)	±2×10 ⁻⁸ max /day (* 1)	±2×10 ⁻⁹ max /day (* 1)	±5×10 ⁻⁹ max /day (* 2)
			±5×10 ⁻⁸ max/year (* 2)		±2×10 ⁻⁸ max /year (* 2)	±1×10 ⁻⁷ max /year (* 1)	±5×10 ⁻⁸ max /year (* 1)	±5×10 ⁻⁸ max /year (* 3)
	Temp. Charact.	Temp. Range	-55~+85°C		0~+50°C	-10~+60°C		0~+50°C
		Tolerance	±1×10 ⁻⁷ max	±5×10 ⁻⁸ max	±2×10 ⁻⁹ max	±3×10 ⁻⁸ max	±1×10 ⁻⁸ max	±5×10 ⁻⁸ max
	Supply Volt Change	Condition	+30V±5%		+24V±10%	+12V±10%		±12V±5%
		Specification	±5×10 ⁻⁹ max	±3×10 ⁻⁹ max	±1×10 ⁻⁹ max	±2×10 ⁻⁸ max	±5×10 ⁻⁹ max	±2×10 ⁻⁸ max
	Vibration	Tot amp. 1.5mm Freq. 10~55 Hz 3planes/30minutes each	±5×10 ⁻⁹ max			±5×10 ⁻⁸ max	±3×10 ⁻⁸ max	±5×10 ⁻⁸ max
	Shock	Natural Drop from 5cm height, 3planes/3times each	±5×10 ⁻⁹ max			±5×10 ⁻⁸ max	±3×10 ⁻⁸ max	±5×10 ⁻⁸ max
Frequency Trim Range		By Internal trimmer	±3×10 ⁻⁷ min			±1×10 ⁻⁶ min		
Case Code			61A		50A	50B		40A-1

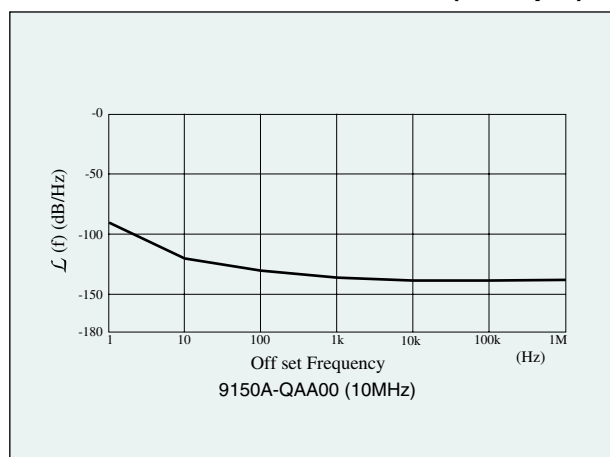
If you need NON-standard spec., please contact us.

* 1 → 24hour, * 2 → 48hour, * 3 → 240hour

■ Frequency Short-term Stability (example)

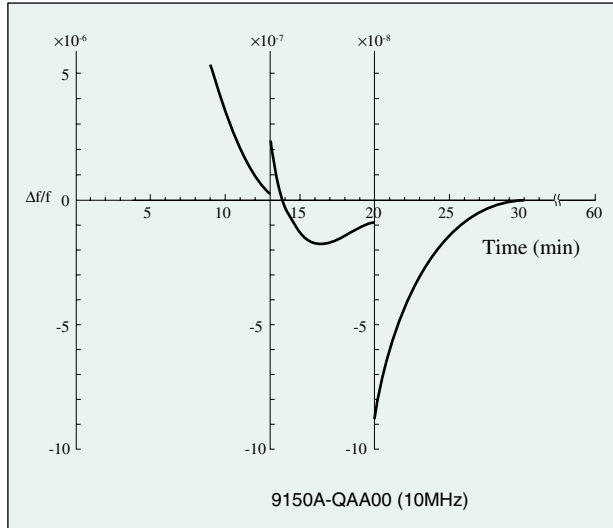


■ Phase Noise Characteristics (example)

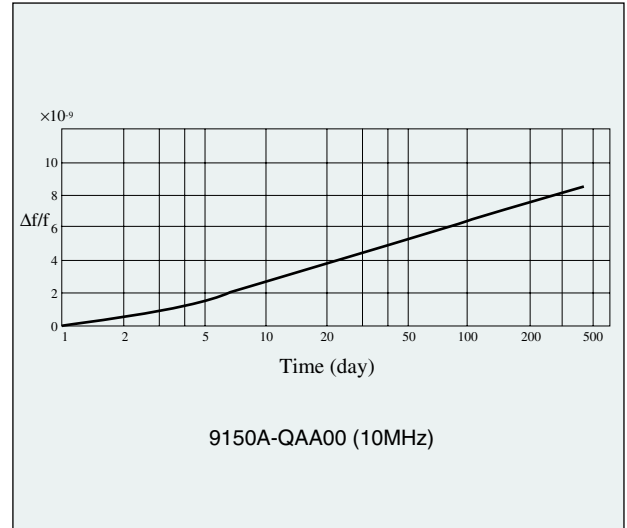


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■ Warm-up Characteristics (example)



■ Frequency Aging (example)



■ Dimensions

