

CRYSTAL OSCILLATORS

OVEN CONTROLLED CRYSTAL OSCILLATORS 9100 SERIES

Model 9140A

- Main applications: Communications equipment, Measuring instruments.
- Features
 - Excellent aging characteristics
 - Anti-microphonic noise (9140A-BGE71, 9140A-CEE70)

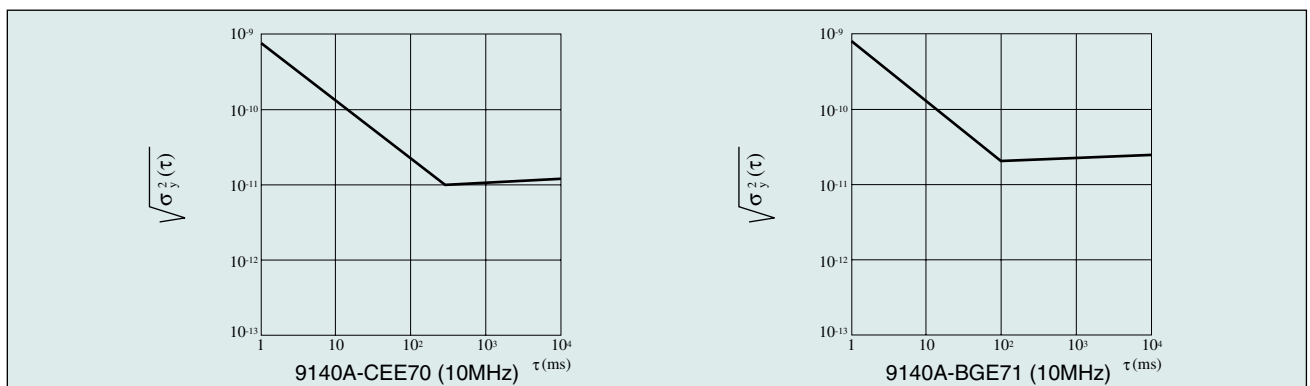
Specification

Item	Measuring Condition	Spec. Code	Model 9140A			
			BGE71	CEE70	BGE70	BFE70
Nominal Frequency (MHz)			10			
Supply Voltage			+12VDC			
Power Consumption			4.5W max		1.4W max	
Output Level			V _{OL} : 0.4V max, V _{OH} : 2.4 min			
Fanout (gate)			N-TTL2			
Duty Cycle (+1.4 V)			40~60%			
Operating Temp. Range			-10~+60°C			
Operable Temp. Range			-20~+70°C			
Frequency Stability	Short-term Stability	Δ f/f (2, τ) 1 sec.	1×10 ⁻⁹ max	1×10 ⁻¹⁰ max	1×10 ⁻⁹ max	5×10 ⁻¹⁰ max
	Aging	After 24H (* 1) or 48H (* 2) operation	±2×10 ⁻⁸ max/day (* 1)	±1×10 ⁻⁹ max/day (* 2)	±2×10 ⁻⁸ max/day (* 1)	±5×10 ⁻⁹ max/day (* 1)
			±1×10 ⁻⁷ max/year (* 1)	±3×10 ⁻⁸ max/year (* 2)	±1×10 ⁻⁷ max/year (* 1)	±8×10 ⁻⁸ max/year (* 1)
	Temp. Charact.	-10~+60°C	±1×10 ⁻⁷ max	±3×10 ⁻⁸ max	±1×10 ⁻⁷ max	±5×10 ⁻⁸ max
	Supply Volt Change	+12V±10%	±6×10 ⁻⁸ max	±3×10 ⁻⁸ max	—	—
		+12V±5%	—	—	±6×10 ⁻⁸ max	±3×10 ⁻⁸ max
Vibration	Tot amp. 1.5mm Freq. 10~55Hz 3planes/30minutes each	±5×10 ⁻⁸ max	±3×10 ⁻⁸ max	±5×10 ⁻⁸ max		
Shock	Natural Drop from 5 cm height, 3planes/3times each	±5×10 ⁻⁸ max	±3×10 ⁻⁶ max	±5×10 ⁻⁸ max		
Frequency Trim Range			±2×10 ⁻⁶ min /+5±3V (by external voltage)	±3×10 ⁻⁷ min (by internal trimmer)	±5×10 ⁻⁷ min (by internal trimmer)	
Case Code			40A-2	40A-1	40A-1	

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

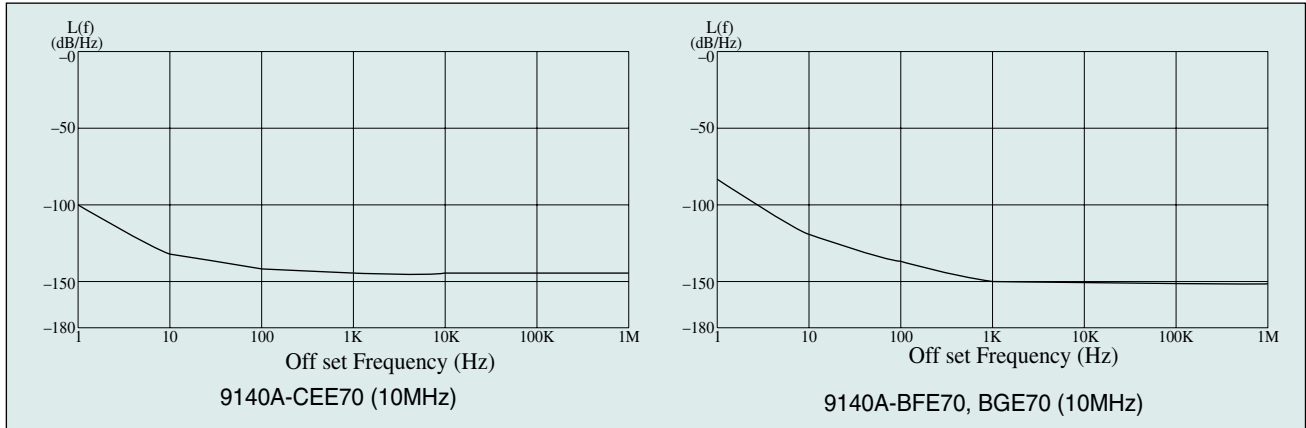
* 1→ 24hour, * 2→ 48hour

Frequency Short Term Stability (example)

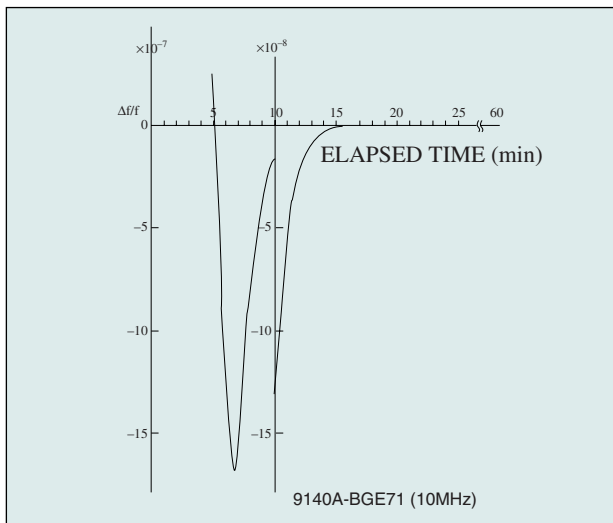


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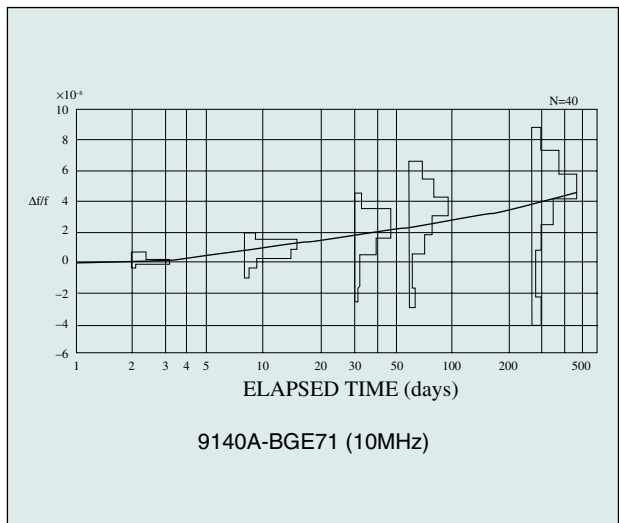
Phase Noise Characteristics (example)



Warm-up Characteristics (example)



Frequency Aging (example)



Dimensions

