

Cost effective Class S OCXO in a 2" x 2" x 3/4" housing with pins and studs on base.

Flight Models: 724Y(RRRR):

1. Frequency: 35 MHz to 100 MHz
2. Frequency stability:
 -20°C to +70°C: ±3.0 ppm max. under all conditions including radiation and aging; 18 year life
 ±0.25 ppm max. any 15°C change in temp. and any 24 hour period
 ±1.5 ppm max. after 30 minute warm-up. Noise and spurious must be met after 10 minutes
3. Output: 0 dBm minimum into 50; ±1.5 dB
4. Output VSWR: 1.5:1 maximum for a 50Ω load
5. Harmonics: -20 dBc
6. Subharmonics: -25 dBc ($f_0 > 60$ MHz)
7. Spurious: Non-harmonically related²: -120 dBc from carrier to 100 kHz;
 -70 dBc >100 kHz under static conditions
8. Allan Variance²: 1×10^{-10} /second under static and constant conditions
9. ssb Noise/Hz:
 (typical; static conditions)

	<u>@ 50 MHz</u>	<u>@ 100 MHz</u>
	-90 dBc at 10 Hz	-85 dBc at 10 Hz
	-120 dBc at 100 Hz	-115 dBc at 100 Hz
	-140 dBc at 1 kHz	-135 dBc at 1 kHz
	-150 dBc at 10 kHz	-145 dBc at 10 kHz
10. Vibration sensitivity²: 1.5×10^{-9} /G worst case axis; (1G sine vibration at 100 Hz)
11. Input voltage: Oscillator and oven: +12 Vdc ±5%
12. Warm-up power: 3.5 Watts maximum; not to exceed 30 minutes
13. Maximum power,
 steady state @ 25°C: 1.5 Watts maximum
14. Voltage control: None

FSCM 27802

Specification Control Drawing No.

724Y(RRRR)

Page 1 of 2

OCXO, $\pm 2.5 \times 10^{-7}$ /15°C
Revision

15. Size: 2" x 2" x 0.75"
- 16A. Configuration: Solder pins on base with two threaded studs 1/4" in length. Package will be vented. Mechanical frequency adjustment not included.
- 16B. Installation Drawing: 724-51-006A
17. Design, Construction and Screening: In accordance with MIL-PRF-55310D, Class S. The crystal will be swept quartz.
18. Radiation¹: Designed to meet 100 krad (Si) total dose
19. Frequency vs. pressure²: 2×10^{-8} 1 ATM to 10^{-5} TORR
20. Group A Testing: 100%
21. Group B Testing: 100% Aging
22. Mechanical Shock²: MIL-STD-202, Test Method 213, Condition C (100 g's, 6 msec)
(survive)
23. Vibration² (survive): 20 grms per MIL-STD-202, Method 214, Test Condition I-F, 3 minutes/axis

NOTES:

- ¹Radiation: based upon die inherently tolerant to 100 krad total dose.
- ²Met by design, not tested.

Engineering Models: 724Y(RRRR)-1:

Engineering models are fit, form, and function representative of Flight Models but of commercial construction, commercial screening, using commercial parts of same generic type as Flight Models, and may not use rad hard die or swept quartz crystals.