

CMOS TCXO

PJ-0A20X Series Rev C

Frequency Range: 10.0 MHz to 52.0 MHz

Operating Conditions and Output Characteristics

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max
Frequency	—	—	10.000 MHz	—	52.000 MHz
Duty Cycle	—	@ $V_{DD}/2$	45/55%	—	55/45%
Logic 0	V_{OL}	@ 600 μ A	—	—	0.2V
Logic 1	V_{OH}	@ 600 μ A	$V_{DD}-0.2V$	—	—
Rise & Fall Time	t_r, t_f	10-90%	—	—	2 ns
Jitter RMS ⁽¹⁾	—	—	—	—	3 psec
Frequency Stability ⁽³⁾	dF/F	Overall conditions including: voltage, calibration, temp., shock, vibration	-2.5 ppm	—	+2.5 ppm
Aging	—	—	—	—	± 1 ppm/yr
Trim Range ⁽⁴⁾	—	$V_{CT}=0$ to 5.0 Volts	-3 ppm	—	+3 ppm

General Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max
Supply Voltage ⁽²⁾	V_{DD}	5V $\pm 5\%$	4.75 V	5.0 V	5.25 V
Supply Current	I_{DD}	No Load	0.0 mA	4mA	8 mA
Output Current	I_O	—	0.0 mA	—	± 25.0 mA
Operating Temperature	T_A	—	-40°C	—	85°C
Storage Temperature	T_S	—	-55°C	—	125°C
Power Dissipation	P_D	—	—	—	42 mW
Lead Temperature	T_L	Soldering, 10 sec.	—	—	300°C
Load	—	—	—	—	15 pf
Start-up Time	t_s	—	—	—	20 ms

Environmental and Mechanical Characteristics

Mechanical Shock	Per MIL-STD-202, Method 213, Condition E
Thermal Shock	Per MIL-STD-833, Method 1011, Condition A
Vibration	0.060" double amplitude 10 Hz to 55 Hz, 35g's 55 Hz to 2000 Hz
Soldering Condition	300°C for 10 seconds
Hermetic Seal	Leak rate less than 1×10^{-8} atm.cc/sec of helium

Footnotes:

- 1) Jitter performance is frequency dependent. Please contact factory for full Wavecrest characterization. RMS jitter bandwidth of 12kHz to 20MHz.
- 2) Internal high frequency power source decoupling.
- 3) Contact factory for other available frequency stability tolerances.
- 4) Optional trim adjustment.

Test Load

